

ENR 3 ATS ROUTES

ENR 3.1 CONVENTIONAL NAVIGATION ROUTES

| Route Designator<br>{RNP Type}                     |                                           | [Route Usage Notes]              |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|----------------------------------------------------|-------------------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|--------------------|--------------------------------------------------------|------------------------------------------------|
|                                                    | Significant Point<br>Name                 | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                    | Remarks                                                |                                                |
| {RNP Type}                                         | Track<br>MAG<br>↓<br>↑                    | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unit Frequency<br>{Airspace class} Remarks |                                                |
|                                                    |                                           |                                  |        |                            |                       |                         | ↓                               | ↑                  |                                                        |                                                |
| 1                                                  | 2                                         | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                  | 10                                                     |                                                |
| A224                                               |                                           | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| ▲                                                  | JOHOR BAHRU<br>DVOR/DME (VJB)             | 013950N 1033939E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|                                                    |                                           | 196°<br>016°                     | 45.3NM |                            | FL 460<br>5500 FT ALT | 6000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▼                                                  | MERSING DVOR/<br>DME (VMR)<br>(58 DME PU) | 022318N 1035218E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| Route remarks:<br>-<br>Point/Segment Remarks:<br>- |                                           |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                      |                               | [Route Usage Notes]              |        |                            |                       |                         |                                 |                     |                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|---------------------|-------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                     | Significant Point<br>Name     | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                     | Remarks                                               |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                                                          | Track<br>MAG<br>↓<br>↑        | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unitFrequency<br>{Airspace class} Remarks |
|                                                                                                                                                                                                                                                                                                                                                                                     |                               |                                  |        |                            |                       |                         | ↓                               | ↑                   |                                                       |
| 1                                                                                                                                                                                                                                                                                                                                                                                   | 2                             | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                   | 10                                                    |
| A457                                                                                                                                                                                                                                                                                                                                                                                |                               | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                     |                                                       |
| ▲                                                                                                                                                                                                                                                                                                                                                                                   | JOHOR BAHRU<br>DVOR/DME (VJB) | 013950N 1033939E                 |        |                            |                       |                         |                                 |                     |                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                     |                               | 296°<br>116°                     | 25.0NM |                            | FL 460<br>4500 FT ALT | 5000 FT                 | 20                              | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]        |
| △                                                                                                                                                                                                                                                                                                                                                                                   | SABKA                         | 015051N 1031713E                 |        |                            |                       |                         |                                 |                     |                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                     |                               | 296°<br>116°                     | 27.1NM |                            | FL 460<br>4500 FT ALT | 5000 FT                 | 20                              | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]        |
| △                                                                                                                                                                                                                                                                                                                                                                                   | MASBO                         | 020248N 1025251E                 |        |                            |                       |                         |                                 |                     |                                                       |
| Route remarks:                                                                                                                                                                                                                                                                                                                                                                      |                               |                                  |        |                            |                       |                         |                                 |                     |                                                       |
| Flight Planning:<br>Northbound flights landing at WMKK and WMSA are to flight plan via A457.<br>Flights departing from Singapore FIR to destinations north of WMKK and WMSA, refer to Y339.<br>Flights overflying Singapore FIR to destinations north of WMKK and WMSA, refer to Y342.<br>Tolerances of airway infringe WMD222 ASAHAN (activated by NOTAM)<br>– Military activities |                               |                                  |        |                            |                       |                         |                                 |                     |                                                       |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  | [Route Usage Notes]              |        |                            |                       |                         |                                 |                                        |                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|----------------------------------------|--------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Significant Point<br>Name                                        | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                                        | Remarks                                                |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Track<br>MAG<br>↓<br>↑                                           | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                                        | Controlling unit Frequency<br>{Airspace class} Remarks |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  |                                  |        |                            |                       |                         | ↓                               | ↑                                      |                                                        |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2                                                                | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                                      | 10                                                     |
| A464                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                  | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                                        |                                                        |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ARAMA<br>(Delegated Airspace<br>BDRY)                            | 013654N 1030712E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 117°<br>-                        | 14.9NM |                            | FL 460<br>3500 FT ALT | 5500 FT                 | 10                              | Odd <sup>(1)</sup>                     | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| △                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 35DME SJ                                                         | 012954N 1032024E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 118°<br>-                        | 5.0NM  |                            | FL 460<br>3000 FT ALT | 5500 FT                 | 10                              | Odd <sup>(1)</sup>                     | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| △                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | LELIB                                                            | 012729N 1032450E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 117°<br>-                        | 14.6NM |                            | FL 460<br>3000 FT ALT | 5500 FT                 | 10                              | Odd <sup>(1)</sup>                     | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MASNI<br>(WSJC/MMFC FIR<br>BDRY)                                 | 012037N 1033746E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 118°<br>-                        | 15.3NM |                            | FL 460<br>3000 FT ALT | 5500 FT                 | 10                              | Odd <sup>(1)</sup>                     | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SINJON DVOR/DME<br>(SJ)                                          | 011321N 1035115E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 116°<br>294°                     | 2.8NM  |                            | FL 460<br>2000 FT ALT | 6000 FT                 | 10                              | Odd <sup>(1)</sup> Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | AVPIV<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated Airspace<br>BDRY) | 011207N 1035349E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 115°<br>295°                     | 20.0NM |                            | FL 600<br>2000 FT ALT | 5500 FT                 | 10                              | Odd <sup>(1)</sup> Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IRTAD                                                            | 010326N 1041147E                 |        |                            |                       |                         |                                 |                                        |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  | 115°<br>295°                     | 21.2NM |                            | FL 600<br>2000 FT ALT | 5500 FT                 | 10                              | Odd <sup>(1)</sup> Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TANJUNGPINANG<br>VOR/DME (TPG)                                   | 005413N 1043052E                 |        |                            |                       |                         |                                 |                                        |                                                        |
| Route remarks:<br><br>Singapore ACC FREQ:<br>P133.25 MHz S135.8 MHz<br>Flight Planning Instructions:<br>Arrivals into Changi on A464 to flight plan via A464 – ARAMA – TEBUN. After TEBUN, to join the TEBUN STAR. When traffic permits, ATC will offer LELIB 3B for WSSS RWY 20.<br>Arrivals into Batam and Tanjungpinang on A464 to flight plan via A464 – ARAMA – GUNAN. After GUNAN to join the GUNAN STAR (refer to Indonesia AIP WIDD AD 2.24 or WIDN AD 2.24 respectively).<br>Flights above FL370 between AVPIV and TPG VOR/DME, see AIP Indonesia ENR2.1. |                                                                  |                                  |        |                            |                       |                         |                                 |                                        |                                                        |
| Point/Segment Remarks:<br>-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                  |                                  |        |                            |                       |                         |                                 |                                        |                                                        |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                       |                                                      | [Route Usage Notes]              |         |       |                            |                |                         |                                 |                     |                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------|---------|-------|----------------------------|----------------|-------------------------|---------------------------------|---------------------|---------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                      | Significant Point<br>Name                            | Significant Point<br>Coordinates |         |       |                            |                |                         |                                 | Remarks             |                                                               |
| {RNP Type}                                                                                                                                                                                                                                                                                           |                                                      | Track<br>MAG                     | Dist NM | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unit Frequency<br>{Airspace class} Remarks        |
|                                                                                                                                                                                                                                                                                                      |                                                      | ↓<br>↑                           |         |       |                            |                |                         | ↓                               | ↑                   |                                                               |
| 1                                                                                                                                                                                                                                                                                                    |                                                      | 2                                | 3       | 4     | 5                          | 6              | 7                       | 8                               | 9                   | 10                                                            |
| A576                                                                                                                                                                                                                                                                                                 |                                                      | Route availability:<br>(1) H24   |         |       |                            |                |                         |                                 |                     |                                                               |
| ▲                                                                                                                                                                                                                                                                                                    | REKOP<br>(50 DME SJ)<br>(Delegated airspace<br>BDRY) | 013306N 1030521E                 |         |       |                            |                |                         |                                 |                     |                                                               |
|                                                                                                                                                                                                                                                                                                      |                                                      | 112°<br>292°                     | 16.1NM  |       | FL 460<br>6500 FT ALT      | 7000 FT        |                         | Odd <sup>(1)</sup>              | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup> |
| △                                                                                                                                                                                                                                                                                                    | PIMOK                                                | 012648N 1032008E                 |         |       |                            |                |                         |                                 |                     |                                                               |
|                                                                                                                                                                                                                                                                                                      |                                                      | 113°<br>293°                     | 18.6NM  |       | FL 460<br>6500 FT ALT      | 7000 FT        |                         | Odd <sup>(1)</sup>              |                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup> |
| ▲                                                                                                                                                                                                                                                                                                    | BONSU<br>(FIR BDRY)                                  | 011928N 1033710E                 |         |       |                            |                |                         |                                 |                     |                                                               |
|                                                                                                                                                                                                                                                                                                      |                                                      | 113°<br>293°                     | 15.4NM  |       | FL 460<br>6500 FT ALT      | 7000 FT        |                         | Odd <sup>(1)</sup>              |                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup> |
| ▲                                                                                                                                                                                                                                                                                                    | SINJON DVOR/DME<br>(SJ)                              | 011321N 1035115E                 |         |       |                            |                |                         |                                 |                     |                                                               |
| <u>Route remarks:</u><br><br>15 min longitudinal separation.<br>RMK: AVBL for southbound FLT only BTN PIMOK and SJ DVOR/DME.<br>Southbound FLT landing at WSSS are to flight plan via ATS Route A464.<br>Singapore ACC FREQ:<br>P133.25MHz S135.8MHz (westbound)<br>P134.4MHz S128.1MHz (southbound) |                                                      |                                  |         |       |                            |                |                         |                                 |                     |                                                               |
| <u>Point/Segment Remarks:</u><br>(2) 5NM either side of a rhumb line joining MDN and SJ, funnelling out at 7.5° to a width of 15NM either side of track                                                                                                                                              |                                                      |                                  |         |       |                            |                |                         |                                 |                     |                                                               |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                              |                                                                  | [Route Usage Notes]              |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
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|                                                                                                                                                                                                                                             | Significant Point<br>Name                                        | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                    | Remarks                                                |                                                                     |
| {RNP Type}                                                                                                                                                                                                                                  | Track<br>MAG<br>↓<br>↑                                           | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unit Frequency<br>{Airspace class} Remarks |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  |                                  |        |                            |                       |                         | ↓                               | ↑                  |                                                        |                                                                     |
| 1                                                                                                                                                                                                                                           | 2                                                                | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                  | 10                                                     |                                                                     |
| B338                                                                                                                                                                                                                                        |                                                                  | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
| ▲                                                                                                                                                                                                                                           | MERSING DVOR/<br>DME (VMR)                                       | 022318N 1035218E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 171°<br>351°                     | 38.1NM |                            | FL 460<br>3500 FT ALT | 4000 FT                 |                                 | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>       |
| △                                                                                                                                                                                                                                           | 20DME PU                                                         | 014530N 1035812E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 171°<br>351°                     | 20.7NM |                            | FL 460<br>3500 FT ALT | 4000 FT                 |                                 | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>       |
| ▲                                                                                                                                                                                                                                           | TEKONG DVOR/DME<br>(VTK)                                         | 012455N 1040120E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 154°<br>334°                     | 10.3NM |                            | FL 460<br>3500 FT ALT | 4000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)(3)(4)</sup> |
| ▲                                                                                                                                                                                                                                           | ENVUM<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated airspace<br>BDRY) | 011535N 1040552E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 154°<br>334°                     | 13.5NM |                            | FL 600<br>3500 FT ALT | 4000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>       |
| ▲                                                                                                                                                                                                                                           | IRTAD                                                            | 010326N 1041147E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 154°<br>334°                     | 7.9NM  |                            | FL 600<br>3500 FT ALT | 4000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>       |
| ▲                                                                                                                                                                                                                                           | AKVOM                                                            | 005620N 1041514E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 154°<br>334°                     | 8.1NM  |                            | FL 600<br>3500 FT ALT | 4000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>       |
| ▲                                                                                                                                                                                                                                           | IDMAS                                                            | 004900N 1041848E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
|                                                                                                                                                                                                                                             |                                                                  | 153°<br>333°                     | 73.6NM |                            | FL 600<br>3500 FT ALT | 4000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>       |
| ▲                                                                                                                                                                                                                                           | ANITO                                                            | 001700S 1045200E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
| <u>Route remarks:</u><br>Flights above FL370 between ENVUM and ANITO, see AIP Indonesia ENR2.1.                                                                                                                                             |                                                                  |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |
| <u>Point/Segment Remarks:</u><br>(2) Segment from MERSING to VTK use:<br>P133.8MHz<br>S127.3MHz<br>(3) Kuala Lumpur/Singapore FIR boundary approximately 1.2NM north of VTK<br>(4) Segment from VTK to ANITO use:<br>P134.4MHz<br>S128.1MHz |                                                                  |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                                     |

| Route Designator<br>{RNP Type} |                                                                  | [Route Usage Notes]               |         |       |                                              |                |                         |                                             |                     |                                                                  |
|--------------------------------|------------------------------------------------------------------|-----------------------------------|---------|-------|----------------------------------------------|----------------|-------------------------|---------------------------------------------|---------------------|------------------------------------------------------------------|
|                                | Significant Point<br>Name                                        | Significant Point<br>Coordinates  |         |       |                                              |                |                         |                                             | Remarks             |                                                                  |
| {RNP Type}                     |                                                                  | Track<br>MAG<br>↓<br>↑            | Dist NM | (COP) | Upper limit<br>Lower limit                   | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels<br>↓      ↑ |                     | Controlling unit Frequency<br>{Airspace class} Remarks           |
| 1                              |                                                                  | 2                                 | 3       | 4     | 5                                            | 6              | 7                       | 8                                           | 9                   | 10                                                               |
| B469                           |                                                                  | Route availability:<br>(1)    H24 |         |       |                                              |                |                         |                                             |                     |                                                                  |
| ▲                              | PEKAN DVOR/DME<br>(VPK)                                          | 032259N 1032524E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{155^{\circ}}{335^{\circ}}$ | 14.9NM  |       | $\frac{\text{FL } 460}{7500 \text{ FT ALT}}$ | 8000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| △                              | PADLI                                                            | 030918N 1033133E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{155^{\circ}}{335^{\circ}}$ | 17.1NM  |       | $\frac{\text{FL } 460}{7500 \text{ FT ALT}}$ | 8000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| ▲                              | 90DME PU<br>(Delegated Airspace<br>BDRY)                         | 025341N 1033836E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{155^{\circ}}{335^{\circ}}$ | 11.0NM  |       | $\frac{\text{FL } 460}{7500 \text{ FT ALT}}$ | 8000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| ▲                              | BIKTA                                                            | 024337N 1034308E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{155^{\circ}}{335^{\circ}}$ | 22.2NM  |       | $\frac{\text{FL } 460}{7500 \text{ FT ALT}}$ | 8000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| ▲                              | MERSING DVOR/<br>DME (VMR)                                       | 022318N 1035218E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{176^{\circ}}{356^{\circ}}$ | 27.9NM  |       | $\frac{\text{FL } 460}{3000 \text{ FT ALT}}$ | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| △                              | 30DME PU                                                         | 015520N 1035405E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{176^{\circ}}{356^{\circ}}$ | 9.9NM   |       | $\frac{\text{FL } 460}{2000 \text{ FT ALT}}$ | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| △                              | AKOMA                                                            | 014522N 1035443E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{176^{\circ}}{356^{\circ}}$ | 10.0NM  |       | $\frac{\text{FL } 460}{2000 \text{ FT ALT}}$ | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)(3)</sup> |
| △                              | 10DME PU                                                         | 013523N 1035522E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{176^{\circ}}{356^{\circ}}$ | 10.0NM  |       | $\frac{\text{FL } 460}{\text{GND}}$          | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup>    |
| ▲                              | PAPA UNIFORM<br>DVOR/DME (PU)                                    | 012524N 1035600E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{201^{\circ}}{021^{\circ}}$ | 12.9NM  |       | $\frac{\text{FL } 460}{3000 \text{ FT ALT}}$ | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup>    |
| ▲                              | SINJON DVOR/DME<br>(SJ)                                          | 011321N 1035115E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{156^{\circ}}{336^{\circ}}$ | 2.2NM   |       | $\frac{\text{FL } 460}{2000 \text{ FT ALT}}$ | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup>    |
| ▲                              | ATLIR<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated Airspace<br>BDRY) | 011120N 1035208E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | $\frac{158^{\circ}}{338^{\circ}}$ | 13.5NM  |       | $\frac{\text{FL } 600}{2000 \text{ FT ALT}}$ | 4000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup>    |
| ▲                              | OMDUD                                                            | 005847N 1035714E                  |         |       |                                              |                |                         |                                             |                     |                                                                  |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                             |                           | [Route Usage Notes]              |       |                            |                |                         |                                 |                     |                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------|-------|----------------------------|----------------|-------------------------|---------------------------------|---------------------|---------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                            | Significant Point<br>Name | Significant Point<br>Coordinates |       |                            |                |                         |                                 |                     | Remarks                                                       |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                 | Track<br>MAG<br>↓<br>↑    | Dist NM                          | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unit Frequency<br>{Airspace class} Remarks        |
|                                                                                                                                                                                                                                                                                                                                            |                           |                                  |       |                            |                |                         | ↓                               | ↑                   |                                                               |
| 1                                                                                                                                                                                                                                                                                                                                          | 2                         | 3                                | 4     | 5                          | 6              | 7                       | 8                               | 9                   | 10                                                            |
|                                                                                                                                                                                                                                                                                                                                            | 158°<br>338°              | 14.5NM                           |       | FL 600<br>2000 FT ALT      | 4000 FT        | 10                      | Odd <sup>(1)</sup>              | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup> |
| ▲                                                                                                                                                                                                                                                                                                                                          | BAVAL                     | 004518N 1040242E                 |       |                            |                |                         |                                 |                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                            | 156°<br>336°              | 27.0NM                           |       | FL 600<br>2000 FT ALT      | 5000 FT        | 10                      | Odd <sup>(1)</sup>              | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup> |
| ▲                                                                                                                                                                                                                                                                                                                                          | POSOG                     | 002024N 1041323E                 |       |                            |                |                         |                                 |                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                            | 156°<br>336°              | 53.5NM                           |       | FL 600<br>2000 FT ALT      | 4000 FT        | 10                      | Odd <sup>(1)</sup>              | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(3)</sup> |
| ▲                                                                                                                                                                                                                                                                                                                                          | ENPUX                     | 002859S 1043434E                 |       |                            |                |                         |                                 |                     |                                                               |
| <u>Route remarks:</u><br>Flight Planning Instructions:<br>Flights overflying Singapore FIR to destinations in Jakarta FIR and beyond to flight plan via B470 ANITO.<br><br><u>Point/Segment Remarks:</u><br>(2) Segment from VPK to AKOMA use:<br>P133.8MHz<br>S127.3MHz<br>(3) Segment from AKOMA to ENPUX use:<br>P134.4MHz<br>S128.1MHz |                           |                                  |       |                            |                |                         |                                 |                     |                                                               |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                  | [Route Usage Notes]              |         |       |                            |                |                         |                                             |         |                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------|---------|-------|----------------------------|----------------|-------------------------|---------------------------------------------|---------|------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Significant Point<br>Name                                        | Significant Point<br>Coordinates |         |       |                            |                |                         |                                             | Remarks |                                                |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                  | Track<br>MAG<br>↓<br>↑           | Dist NM | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels<br>↓      ↑ |         | Controlling unit<br>{Airspace class} Remarks   |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  | 2                                | 3       | 4     | 5                          | 6              | 7                       | 8                                           | 9       | 10                                             |
| B470                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  | Route availability:<br>(1) H24   |         |       |                            |                |                         |                                             |         |                                                |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SINJON DVOR/DME<br>(SJ)                                          | 011321N 1035115E                 |         |       |                            |                |                         |                                             |         |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  | 145°<br>-                        | 2.2NM   |       | FL 460<br>2000 FT ALT      | 3000 FT        | 10                      | Odd <sup>(1)</sup>                          |         | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | VEPGA<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated airspace<br>BDRY) | 011131N 1035232E                 |         |       |                            |                |                         |                                             |         |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  | 146°<br>-                        | 16.0NM  |       | FL 600<br>2000 FT ALT      | 3000 FT        | 10                      | Odd <sup>(1)</sup>                          |         | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IRPUG                                                            | 005813N 1040127E                 |         |       |                            |                |                         |                                             |         |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  | 146°<br>-                        | 11.9NM  |       | FL 600<br>2000 FT ALT      | 3000 FT        | 10                      | Odd <sup>(1)</sup>                          |         | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | UDONI                                                            | 004818N 1040806E                 |         |       |                            |                |                         |                                             |         |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  | 146°<br>-                        | 78.5NM  |       | FL 600<br>2000 FT ALT      | 5000 FT        | 10                      | Odd <sup>(1)</sup>                          |         | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ANITO                                                            | 001700S 1045200E                 |         |       |                            |                |                         |                                             |         |                                                |
| <u>Route remarks:</u><br>Unidirectional route (southbound) for flights from Singapore FIR to Jakarta FIR and beyond.<br>For flights to these destination aerodromes: WICC, WIHH, WIIL, WAHH, WAHS - FL300, FL320, FL340, FL360, FL380 and FL400 are available<br>Flight Planning Instructions:<br>All departures from WIDD and WIDN to WIKK, WIIL, WIHH, WICA, WAHH, WAHI to flight plan via KIRDA W26 PKP B470 or ANITO B470.<br>Singapore ACC FREQ:<br>P134.4MHz S128.1MHz<br>Flights above FL370 from VEPGA to ANITO, see AIP Indonesia ENR 2.1. |                                                                  |                                  |         |       |                            |                |                         |                                             |         |                                                |
| <u>Point/Segment Remarks:</u><br>-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                  |                                  |         |       |                            |                |                         |                                             |         |                                                |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                          |                           | [Route Usage Notes]              |        |                            |                        |                         |                                 |                     |                                                        |                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------|--------|----------------------------|------------------------|-------------------------|---------------------------------|---------------------|--------------------------------------------------------|---------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                         | Significant Point<br>Name | Significant Point<br>Coordinates |        |                            |                        |                         |                                 |                     | Remarks                                                |                                                               |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                              | Track<br>MAG<br>↓<br>↑    | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT         | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unit Frequency<br>{Airspace class} Remarks |                                                               |
|                                                                                                                                                                                                                                                                                                                                                         |                           |                                  |        |                            |                        |                         | ↓                               | ↑                   |                                                        |                                                               |
| 1                                                                                                                                                                                                                                                                                                                                                       | 2                         | 3                                | 4      | 5                          | 6                      | 7                       | 8                               | 9                   | 10                                                     |                                                               |
| G219                                                                                                                                                                                                                                                                                                                                                    |                           | Route availability:<br>(1) H24   |        |                            |                        |                         |                                 |                     |                                                        |                                                               |
| ▲                                                                                                                                                                                                                                                                                                                                                       | NIVAM                     | 023650N 1040228E                 |        |                            |                        |                         |                                 |                     |                                                        |                                                               |
|                                                                                                                                                                                                                                                                                                                                                         |                           | 180°<br>000°                     | 41.7NM |                            | FL 460<br>10500 FT ALT | 11000 FT                |                                 | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup> |
| △                                                                                                                                                                                                                                                                                                                                                       | 30VTK<br>(30 DME VTK)     | 015454N 1040159E                 |        |                            |                        |                         |                                 |                     |                                                        |                                                               |
|                                                                                                                                                                                                                                                                                                                                                         |                           | 181°<br>001°                     | 29.8NM |                            | FL 460<br>3000 FT ALT  | 4000 FT                 |                                 | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup> |
| ▲                                                                                                                                                                                                                                                                                                                                                       | TEKONG DVOR/DME<br>(VTK)  | 012455N 1040120E                 |        |                            |                        |                         |                                 |                     | (3)                                                    |                                                               |
| <u>Route remarks:</u><br>Singapore ACC FREQ:<br>P123.7 MHz, S127.3 MHz                                                                                                                                                                                                                                                                                  |                           |                                  |        |                            |                        |                         |                                 |                     |                                                        |                                                               |
| <u>Point/Segment Remarks:</u><br>(2) Lateral Limits:<br>The eastern and western airway sectors are enclosed by a line joining<br>023705N 1041200E<br>015610N 1041200E<br>015100N 1041442E<br>012454N 1041442E<br>012454N 1035620E<br>023705N 1035729E<br>023705N 1041200E.<br>(3) Singapore/Kuala Lumpur FIR boundary approximately 1.2NM north of VTK. |                           |                                  |        |                            |                        |                         |                                 |                     |                                                        |                                                               |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                  | [Route Usage Notes]               |         |       |                            |                |                         |                                             |                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------|---------|-------|----------------------------|----------------|-------------------------|---------------------------------------------|----------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Significant Point<br>Name                                        | Significant Point<br>Coordinates  |         |       |                            |                |                         |                                             | Remarks                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | {RNP Type}                                                       | Track<br>MAG<br>↓<br>↑            | Dist NM | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels<br>↓      ↑ | Controlling unit<br>{Airspace class} Remarks |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                | 2                                 | 3       | 4     | 5                          | 6              | 7                       | 8      9                                    | 10                                           |
| G334                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                  | Route availability:<br>(1)    H24 |         |       |                            |                |                         |                                             |                                              |
| △                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | IDEMO                                                            | 025431N 1040603E                  |         |       |                            |                |                         |                                             |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  | 095°<br>275°                      | 22.4NM  |       | FL 285<br>FL 240           | FL 250         | 20                      | Odd <sup>(1)</sup> Even <sup>(1)</sup>      | [Class A]                                    |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | KIBOL<br>(WMFC/WSJC FIR<br>BDRY)                                 | 025224N 1042818E                  |         |       |                            |                |                         |                                             |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  | 097°<br>277°                      | 42.5NM  |       | FL 285<br>FL 240           | FL 250         | 20                      | Odd <sup>(1)</sup> Even <sup>(1)</sup>      | [Class A]                                    |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EMSUX<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated Airspace<br>BDRY) | 024647N 1051026E                  |         |       |                            |                |                         |                                             |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  | 095°<br>275°                      | 33.7NM  |       | FL 285<br>FL 240           | FL 250         | 20                      | Odd <sup>(1)</sup> Even <sup>(1)</sup>      | [Class A - ABV FL150]                        |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | IRSAB<br>(Delegated Airspace<br>BDRY)                            | 024349N 1054359E                  |         |       |                            |                |                         |                                             |                                              |
| <u>Route remarks:</u><br>10 min longitudinal separation between RNAV-equipped aircraft applying Mach Number Technique.<br>15 min longitudinal separation between other aircraft.<br>Singapore ACC FREQ:<br>P134.7MHz S134.15MHz<br>Flight Planning Instructions:<br>Non-PBN and Non-RVSM equipped aircraft on ATS route G334:<br>1. To destinations other than WMKK to flight plan via G334-KIBOL-VPK.<br>Alternative route to G334 for non-PBN equipped aircraft to destinations within WMFC may flight plan via G580-HOSBA-VJB-A457.<br>2. For departure from WMFC to flight plan via VPK-KIBOL-G334.<br>Alternative route to G334 for non-PBN equipped aircraft for departure from WMFC may flight plan via A464-TOPOR-W534-VJB-HOSBA-G580. |                                                                  |                                   |         |       |                            |                |                         |                                             |                                              |
| <u>Point/Segment Remarks:</u><br>-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                  |                                   |         |       |                            |                |                         |                                             |                                              |

| Route Designator<br>{RNP Type} |                                                                  | [Route Usage Notes]              |         |       |                            |                |                         |                                             |                     |                                                                  |
|--------------------------------|------------------------------------------------------------------|----------------------------------|---------|-------|----------------------------|----------------|-------------------------|---------------------------------------------|---------------------|------------------------------------------------------------------|
|                                | Significant Point<br>Name                                        | Significant Point<br>Coordinates |         |       |                            |                |                         |                                             |                     | Remarks                                                          |
| {RNP Type}                     |                                                                  | Track<br>MAG<br>↓<br>↑           | Dist NM | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels<br>↓      ↑ |                     | Controlling unit Frequency<br>{Airspace class} Remarks           |
| 1                              |                                                                  | 2                                | 3       | 4     | 5                          | 6              | 7                       | 8                                           | 9                   | 10                                                               |
| G579                           |                                                                  | Route availability:<br>(1) H24   |         |       |                            |                |                         |                                             |                     |                                                                  |
| ▲                              | JOHOR BAHRU<br>DVOR/DME (VJB)                                    | 013950N 1033939E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | 162°<br>342°                     | 10.3NM  |       | FL 460<br>6500 FT ALT      | 7000 FT        | 3                       | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| ▲                              | GUMPU                                                            | 013000N 1034243E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | 152°<br>332°                     | 4.1NM   |       | FL 460<br>2000 FT ALT      | 7000 FT        | 3                       | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)(3)</sup> |
| △                              | LAPOL                                                            | 012622N 1034435E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | 153°<br>333°                     | 6.1NM   |       | FL 460<br>2000 FT ALT      | 11000 FT       | 3                       | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| △                              | LEGOL                                                            | 012053N 1034723E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | 152°<br>332°                     | 8.4NM   |       | FL 460<br>2000 FT ALT      | 3000 FT        | 3                       | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)</sup>    |
| ▲                              | SINJON DVOR/DME<br>(SJ)                                          | 011321N 1035115E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | -<br>346°                        | 2.2NM   |       | FL 460<br>2000 FT ALT      | 4000 FT        | 10                      |                                             | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(2)(4)</sup> |
| ▲                              | OLNUB<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated airspace<br>BDRY) | 011110N 1035147E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | -<br>348°                        | 12.2NM  |       | FL 600<br>2000 FT ALT      | 4000 FT        | 10                      |                                             | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>    |
| ▲                              | EMSIB                                                            | 005911N 1035419E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | -<br>348°                        | 15.8NM  |       | FL 600<br>2000 FT ALT      | 5000 FT        | 10                      |                                             | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>    |
| ▲                              | REMES                                                            | 004342N 1035735E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | -<br>349°                        | 10.0NM  |       | FL 600<br>2000 FT ALT      | 5000 FT        | 10                      |                                             | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>    |
| ▲                              | UXATI                                                            | 003348N 1035933E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | -<br>349°                        | 17.7NM  |       | FL 600<br>2000 FT ALT      | 5000 FT        | 10                      |                                             | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>    |
| ▲                              | REPOV                                                            | 001623N 1040300E                 |         |       |                            |                |                         |                                             |                     |                                                                  |
|                                |                                                                  | -<br>348°                        | 51.1NM  |       | FL 600<br>2000 FT          | 5000 FT        | 10                      |                                             | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150] <sup>(4)</sup>    |
| ▲                              | PARDI                                                            | 003400S 1041300E                 |         |       |                            |                |                         |                                             |                     |                                                                  |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | [Route Usage Notes]              |         |       |                            |                |                         |                                 |         |                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|---------|-------|----------------------------|----------------|-------------------------|---------------------------------|---------|--------------------------------------------------------------|
| Significant Point<br>Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | Significant Point<br>Coordinates |         |       |                            |                |                         |                                 | Remarks |                                                              |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | Track<br>MAG<br><br>↓<br>↑       | Dist NM | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels |         | Controlling unit<br>{Airspace class}<br>Frequency<br>Remarks |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                  |         |       |                            |                |                         | ↓                               | ↑       |                                                              |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 2                                | 3       | 4     | 5                          | 6              | 7                       | 8                               | 9       | 10                                                           |
| <p><u>Route remarks:</u></p> <p>Unidirectional route (Northbound) for flights from Jakarta FIR to Singapore FIR and beyond. FL310, FL330, FL350, FL370, FL390, FL410 can be assigned as flight levels for inbounds to Singapore.</p> <p>Flight Planning Instructions for Direct Routing Operations (DRO):</p> <p>All aircraft operating at FL290 to FL600 (both inclusive) via PARDI should flight plan using the direct route PARDI DCT PU.</p> <p>Singapore ACC FREQ:</p> <p>P134.4MHz S128.1MHz</p> <p>Flights above FL370 from PARDI to OLNUB, see AIP Indonesia ENR2.1</p> <p><u>Point/Segment Remarks:</u></p> <p>(2) Bidirectional route between SJ and VJB.</p> <p>(3) Kuala Lumpur/Singapore FIR boundary is approximately 2NM south of GUMPU.</p> <p>(4) Unidirectional route from PARDI to SJ.</p> |  |                                  |         |       |                            |                |                         |                                 |         |                                                              |

| Route Designator<br>{RNP Type}                                                                                                                 |                                       | [Route Usage Notes]               |         |       |                            |                |                         |                                             |                     |                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------|---------|-------|----------------------------|----------------|-------------------------|---------------------------------------------|---------------------|--------------------------------------------------------|
|                                                                                                                                                | Significant Point<br>Name             | Significant Point<br>Coordinates  |         |       |                            |                |                         |                                             | Remarks             |                                                        |
| {RNP Type}                                                                                                                                     |                                       | Track<br>MAG<br>↓<br>↑            | Dist NM | (COP) | Upper limit<br>Lower limit | MNM FLT<br>ALT | Lateral<br>limits<br>NM | Direction of<br>cruising levels<br>↓      ↑ |                     | Controlling unit Frequency<br>{Airspace class} Remarks |
| 1                                                                                                                                              |                                       | 2                                 | 3       | 4     | 5                          | 6              | 7                       | 8                                           | 9                   | 10                                                     |
| G580                                                                                                                                           |                                       | Route availability:<br>(1)    H24 |         |       |                            |                |                         |                                             |                     |                                                        |
| ▲                                                                                                                                              | SINJON DVOR/DME<br>(SJ)               | 011321N 1035115E                  |         |       |                            |                |                         |                                             |                     |                                                        |
|                                                                                                                                                |                                       | 079°<br>259°                      | 33.7NM  |       | FL 460<br>2000 FT ALT      | 3000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                              | HOSBA                                 | 011948N 1042417E                  |         |       |                            |                |                         |                                             |                     |                                                        |
|                                                                                                                                                |                                       | 088°<br>268°                      | 6.5NM   |       | FL 460<br>6500 FT ALT      | 7000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                              | DOWON<br>(WSJC/WIIF FIR<br>BDRY)      | 011957N 1043048E                  |         |       |                            |                |                         |                                             |                     |                                                        |
|                                                                                                                                                |                                       | 088°<br>268°                      | 76.6NM  |       | FL 600<br>6500 FT ALT      | 7000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                              | TOMAN                                 | 012147N 1054717E                  |         |       |                            |                |                         |                                             |                     |                                                        |
|                                                                                                                                                |                                       | 088°<br>268°                      | 26.8NM  |       | FL 600<br>6500 FT ALT      | 7000 FT        | 10                      | Odd <sup>(1)</sup>                          | Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                              | DODSO<br>(Delegated Airspace<br>BDRY) | 012225N 1061402E                  |         |       |                            |                |                         |                                             |                     |                                                        |
| <u>Route remarks:</u><br>Singapore ACC FREQ:<br>P134.2MHz S133.35MHz<br>Flights above FL370 between DOWON and DODSO, see AIP Indonesia ENR2.1. |                                       |                                   |         |       |                            |                |                         |                                             |                     |                                                        |
| <u>Point/Segment Remarks:</u><br>-                                                                                                             |                                       |                                   |         |       |                            |                |                         |                                             |                     |                                                        |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                           |                            | [Route Usage Notes]              |        |                            |                  |                         |                                 |                    |                                                       |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------|--------|----------------------------|------------------|-------------------------|---------------------------------|--------------------|-------------------------------------------------------|-----------|
|                                                                                                                                                                                                                                                                                                                          | Significant Point<br>Name  | Significant Point<br>Coordinates |        |                            |                  |                         |                                 |                    | Remarks                                               |           |
| {RNP Type}                                                                                                                                                                                                                                                                                                               | Track<br>MAG<br><br>↓<br>↑ | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT   | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unitFrequency<br>{Airspace class} Remarks |           |
|                                                                                                                                                                                                                                                                                                                          |                            |                                  |        |                            |                  |                         | ↓                               | ↑                  |                                                       |           |
| 1                                                                                                                                                                                                                                                                                                                        | 2                          | 3                                | 4      | 5                          | 6                | 7                       | 8                               | 9                  | 10                                                    |           |
| R208                                                                                                                                                                                                                                                                                                                     |                            | Route availability:<br>(1) H24   |        |                            |                  |                         |                                 |                    |                                                       |           |
| ▲                                                                                                                                                                                                                                                                                                                        | IGARI                      | 065612N 1033506E                 |        |                            |                  |                         |                                 |                    |                                                       |           |
|                                                                                                                                                                                                                                                                                                                          |                            | 197°<br>017°                     | 73.9NM |                            | FL 460<br>FL 240 | FL 250                  | 20                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                   | [Class A] |
| ▲                                                                                                                                                                                                                                                                                                                        | IKUKO<br>(FIR BDRY)        | 054512N 1031324E                 |        |                            |                  |                         |                                 |                    |                                                       |           |
| <u>Route remarks:</u><br>Portion of R208 within the Singapore FIR to be released to Lumpur ACC daily subject to coordination BTN Singapore ACC and Lumpur ACC. 15 min longitudinal separation.<br>Singapore ACC FREQ:<br>P127.3MHz, S123.7MHz<br>Lumpur ACC FREQ:<br>P132.6MHz<br><br><u>Point/Segment Remarks:</u><br>- |                            |                                  |        |                            |                  |                         |                                 |                    |                                                       |           |

| Route Designator<br>{RNP Type}                                                                                                                 |                           | [Route Usage Notes]              |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|--------------------|--------------------------------------------------------|------------------------------------------------|
|                                                                                                                                                | Significant Point<br>Name | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                    | Remarks                                                |                                                |
| {RNP Type}                                                                                                                                     | Track<br>MAG<br>↓<br>↑    | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unit Frequency<br>{Airspace class} Remarks |                                                |
|                                                                                                                                                |                           |                                  |        |                            |                       |                         | ↓                               | ↑                  |                                                        |                                                |
| 1                                                                                                                                              | 2                         | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                  | 10                                                     |                                                |
| R469                                                                                                                                           |                           | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| ▲                                                                                                                                              | TAROS                     | 004200N 1021612E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|                                                                                                                                                |                           | 072°<br>252°                     | 56.6NM |                            | FL 600<br>9500 FT ALT | 10000 FT                | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                              | ASUNA                     | 005948N 1030954E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|                                                                                                                                                |                           | 082°<br>262°                     | 20.2NM |                            | FL 600<br>5500 FT ALT | 6000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                              | BOBAG                     | 010230N 1032954E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|                                                                                                                                                |                           | 082°<br>262°                     | 23.2NM |                            | FL 600<br>5500 FT ALT | 6000 FT                 | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                              | SAMKO                     | 010530N 1035255E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| <u>Route remarks:</u><br>Singapore ACC FREQ:<br>P133.25MHz S135.8MHz<br>Flights above FL370 between TAROS and SAMKO, see AIP Indonesia ENR2.1. |                           |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| <u>Point/Segment Remarks:</u><br>-                                                                                                             |                           |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |

| Route Designator<br>{RNP Type}                                                                                                                        |                                | [Route Usage Notes]              |         |                            |                       |                         |                                 |                                           |                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------|---------|----------------------------|-----------------------|-------------------------|---------------------------------|-------------------------------------------|--------------------------------------------------------|
|                                                                                                                                                       | Significant Point<br>Name      | Significant Point<br>Coordinates |         |                            |                       |                         |                                 |                                           | Remarks                                                |
| {RNP Type}                                                                                                                                            | Track<br>MAG<br>↓<br>↑         | Dist NM                          | (COP)   | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                                           | Controlling unit Frequency<br>{Airspace class} Remarks |
|                                                                                                                                                       |                                |                                  |         |                            |                       |                         | ↓                               | ↑                                         |                                                        |
| 1                                                                                                                                                     | 2                              | 3                                | 4       | 5                          | 6                     | 7                       | 8                               | 9                                         | 10                                                     |
| W22                                                                                                                                                   |                                | Route availability:<br>(1) H24   |         |                            |                       |                         |                                 |                                           |                                                        |
| ▲                                                                                                                                                     | TUSNU                          | 003403N 1022109E                 |         |                            |                       |                         |                                 |                                           |                                                        |
|                                                                                                                                                       |                                | 081°<br>261°                     | 131.5NM |                            | FL 600<br>6000 FT ALT |                         | 10                              | Odd <sup>(1)</sup><br>Even <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                                                                                                                                                     | TANJUNGPINANG<br>VOR/DME (TPG) | 005413N 1043052E                 |         |                            |                       |                         |                                 |                                           |                                                        |
| <u>Route remarks:</u><br>Singapore ACC FREQ:<br>P133.25MHz S135.8MHz<br>Flights above FL370 between TUSNU and TPG VOR/DME, see AIP Indonesia ENR 2.1. |                                |                                  |         |                            |                       |                         |                                 |                                           |                                                        |
| <u>Point/Segment Remarks:</u><br>-                                                                                                                    |                                |                                  |         |                            |                       |                         |                                 |                                           |                                                        |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                           |                                | [Route Usage Notes]              |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|---------------------|--------------------------------------------------------|------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Significant Point<br>Name      | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                     | Remarks                                                |                                                |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                                                                                                                               | Track<br>MAG<br>↓<br>↑         | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unit Frequency<br>{Airspace class} Remarks |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                  |        |                            |                       |                         | ↓                               | ↑                   |                                                        |                                                |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2                              | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                   | 10                                                     |                                                |
| W24                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                     |                                                        |                                                |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ENPUX                          | 002859S 1043434E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                | 357°<br>177°                     | 82.9NM |                            | FL 600<br>6000 FT ALT |                         | 10                              | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TANJUNGPINANG<br>VOR/DME (TPG) | 005413N 1043052E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
| <u>Route remarks:</u><br>Singapore ACC FREQ:<br>P134.4MHz S128.1MHz<br>Flight Planning Instructions:<br>All departures from WIDD and WIDN to WIPP to flight plan via ENPUX W24 NIPES PLB.<br>All departures from WIDD and WIDN to WILL to flight plan via ENPUX W24 PLB W21 TERKA.<br>All departures from WIDD and WIDN to WIJJ to flight plan via ENPUX W24 NIPES JMB.<br>Flights above FL370 between ENPUX and TPG VOR/DME, see AIP Indonesia ENR 2.1. |                                |                                  |        |                            |                       |                         |                                 |                     |                                                        |                                                |
| <u>Point/Segment Remarks:</u><br>-                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |                                  |        |                            |                       |                         |                                 |                     |                                                        |                                                |

| Route Designator<br>{RNP Type}                                                                                                                                                                                                                                                                                                                                                   |                                 | [Route Usage Notes]              |        |                            |                       |                         |                                 |                    |                                                       |                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|--------------------|-------------------------------------------------------|------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                  | Significant Point<br>Name       | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                    | Remarks                                               |                                                |
| {RNP Type}                                                                                                                                                                                                                                                                                                                                                                       | Track<br>MAG<br><br>↓<br>—<br>↑ | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unitFrequency<br>{Airspace class} Remarks |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                                  |        |                            |                       |                         | ↓                               | ↑                  |                                                       |                                                |
| 1                                                                                                                                                                                                                                                                                                                                                                                | 2                               | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                  | 10                                                    |                                                |
| W26                                                                                                                                                                                                                                                                                                                                                                              |                                 | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                    |                                                       |                                                |
| ▲                                                                                                                                                                                                                                                                                                                                                                                | TANJUNGPINANG<br>VOR/DME (TPG)  | 005413N 1043052E                 |        |                            |                       |                         |                                 |                    |                                                       |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                  |                                 | 152°<br>332°                     | 61.0NM |                            | FL 600<br>6000 FT ALT |                         | 10                              | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                   | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                                                                                                                                                                                                                                                                                | KIRDA                           | 000009N 1045934E                 |        |                            |                       |                         |                                 |                    |                                                       |                                                |
| <u>Route remarks:</u><br>Singapore ACC FREQ:<br>P134.4MHz S128.1MHz<br>Flight Planning Instructions:<br>All departures from WIDD and WIDN to WIKK to flight plan via KIRDA W26 PKP.<br>All departures from WIDD and WIDN to WIII, WIHH, WICA, WAHH, WAHI to flight plan via KIRDA W26 PKP B470.<br>Flights above FL370 between TPG VOR/DME and KIRDA, see AIP Indonesia ENR 2.1. |                                 |                                  |        |                            |                       |                         |                                 |                    |                                                       |                                                |
| <u>Point/Segment Remarks:</u><br>-                                                                                                                                                                                                                                                                                                                                               |                                 |                                  |        |                            |                       |                         |                                 |                    |                                                       |                                                |

| Route Designator<br>{RNP Type}                                                                                       |                                                | [Route Usage Notes]              |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|---------------------|--------------------------------------------------------|------------------------------------------------|
|                                                                                                                      | Significant Point<br>Name                      | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                     | Remarks                                                |                                                |
| {RNP Type}                                                                                                           | Track<br>MAG<br>↓<br>↑                         | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unit Frequency<br>{Airspace class} Remarks |                                                |
|                                                                                                                      |                                                |                                  |        |                            |                       |                         | ↓                               | ↑                   |                                                        |                                                |
| 1                                                                                                                    | 2                                              | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                   | 10                                                     |                                                |
| W401                                                                                                                 |                                                | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                     |                                                        |                                                |
| ▲                                                                                                                    | HOSBA<br>(R079/34 DME SJ)<br>(R103/24 DME VTK) | 011948N 1042417E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|                                                                                                                      |                                                | 294°<br>114°                     | 27.6NM |                            | FL 245<br>2000 FT ALT | 7000 FT                 | 5                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                    | OMKOM                                          | 013112N 1035910E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|                                                                                                                      |                                                | 266°<br>086°                     | 9.5NM  |                            | FL 245<br>2000 FT ALT | 3000 FT                 | 3                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| △                                                                                                                    | ALFA                                           | 013033N 1034942E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|                                                                                                                      |                                                | 265°<br>085°                     | 7.0NM  |                            | FL 245<br>3000 FT ALT | 6000 FT                 | 3                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                                                                                                                    | GUMPU                                          | 013000N 1034243E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|                                                                                                                      |                                                | 262°<br>082°                     | 18.1NM |                            | FL 245<br>3000 FT ALT | 6000 FT                 | 3                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| △                                                                                                                    | LELIB                                          | 012729N 1032450E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
|                                                                                                                      |                                                | 262°<br>082°                     | 4.8NM  |                            | FL 245<br>3000 FT ALT | 6000 FT                 | 3                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| △                                                                                                                    | PIMOK                                          | 012648N 1032008E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                |
| <u>Route remarks:</u><br>Controlling Authority: Singapore ACC<br>Airspace below airway controlled by Johor Approach. |                                                |                                  |        |                            |                       |                         |                                 |                     |                                                        |                                                |
| <u>Point/Segment Remarks:</u><br>-                                                                                   |                                                |                                  |        |                            |                       |                         |                                 |                     |                                                        |                                                |

| Route Designator<br>{RNP Type}                                                                                 |                                                                  | [Route Usage Notes]              |        |                            |                       |                         |                                 |                     |                                                        |                                                             |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|---------------------|--------------------------------------------------------|-------------------------------------------------------------|
|                                                                                                                | Significant Point<br>Name                                        | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                     | Remarks                                                |                                                             |
| {RNP Type}                                                                                                     | Track<br>MAG<br><br>↓<br>↑                                       | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                     | Controlling unit Frequency<br>{Airspace class} Remarks |                                                             |
|                                                                                                                |                                                                  |                                  |        |                            |                       |                         | ↓                               | ↑                   |                                                        |                                                             |
| 1                                                                                                              | 2                                                                | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                   | 10                                                     |                                                             |
| W407                                                                                                           |                                                                  | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                     |                                                        |                                                             |
| ▲                                                                                                              | TEKONG DVOR/DME<br>(VTK)                                         | 012455N 1040120E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                             |
|                                                                                                                |                                                                  | 203°<br>023°                     | 12.7NM |                            | FL 250<br>3000 FT ALT | 4000 FT                 | 3                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150]              |
| ▲                                                                                                              | SAPEX<br>(WSJC/WIIF FIR<br>BDRY)<br>(Delegated Airspace<br>BDRY) | 011316N 1035617E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                             |
|                                                                                                                |                                                                  | 203°<br>023°                     | 8.4NM  |                            | FL 250<br>3000 FT ALT | 4000 FT                 | 3                               | Even <sup>(1)</sup> | Odd <sup>(1)</sup>                                     | [Class A - ABV FL150]<br>[Class B - BLW FL150]<br>[Class C] |
| ▲                                                                                                              | SAMKO                                                            | 010530N 1035255E                 |        |                            |                       |                         |                                 |                     |                                                        |                                                             |
| <u>Route remarks:</u><br>Singapore APP FREQ:<br>P124.6MHz S132.15MHz<br><br><u>Point/Segment Remarks:</u><br>- |                                                                  |                                  |        |                            |                       |                         |                                 |                     |                                                        |                                                             |

| Route Designator<br>{RNP Type} |                               | [Route Usage Notes]              |        |                            |                       |                         |                                 |                    |                                                        |
|--------------------------------|-------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|--------------------|--------------------------------------------------------|
|                                | Significant Point<br>Name     | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                    | Remarks                                                |
| {RNP Type}                     | Track<br>MAG<br>↓<br>↑        | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unit Frequency<br>{Airspace class} Remarks |
|                                |                               |                                  |        |                            |                       |                         | ↓                               | ↑                  |                                                        |
| 1                              | 2                             | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                  | 10                                                     |
| W534                           |                               | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                    |                                                        |
| △                              | TOPOR                         | 014412N 1025330E                 |        |                            |                       |                         |                                 |                    |                                                        |
|                                |                               | 275°<br>095°                     | 46.5NM |                            | FL 460<br>4500 FT ALT | 5000 FT                 | 8                               | Odd <sup>(1)</sup> | [Class A - ABV FL150]<br>[Class B - BLW FL150]         |
| ▲                              | JOHOR BAHRU<br>DVOR/DME (VJB) | 013950N 1033939E                 |        |                            |                       |                         |                                 |                    |                                                        |
| Route remarks:<br>-            |                               |                                  |        |                            |                       |                         |                                 |                    |                                                        |
| Point/Segment Remarks:<br>-    |                               |                                  |        |                            |                       |                         |                                 |                    |                                                        |

| Route Designator<br>{RNP Type} |                               | [Route Usage Notes]              |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|--------------------------------|-------------------------------|----------------------------------|--------|----------------------------|-----------------------|-------------------------|---------------------------------|--------------------|--------------------------------------------------------|------------------------------------------------|
|                                | Significant Point<br>Name     | Significant Point<br>Coordinates |        |                            |                       |                         |                                 |                    | Remarks                                                |                                                |
| {RNP Type}                     | Track<br>MAG<br><br>↓<br>↑    | Dist NM                          | (COP)  | Upper limit<br>Lower limit | MNM FLT<br>ALT        | Lateral<br>limits<br>NM | Direction of<br>cruising levels |                    | Controlling unit Frequency<br>{Airspace class} Remarks |                                                |
|                                |                               |                                  |        |                            |                       |                         | ↓                               | ↑                  |                                                        |                                                |
| 1                              | 2                             | 3                                | 4      | 5                          | 6                     | 7                       | 8                               | 9                  | 10                                                     |                                                |
| W651                           |                               | Route availability:<br>(1) H24   |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| ▲                              | JOHOR BAHRU<br>DVOR/DME (VJB) | 013950N 1033939E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
|                                |                               | 114°<br>294°                     | 21.3NM |                            | FL 200<br>2500 FT ALT | 3000 FT                 | 3                               | Odd <sup>(1)</sup> | Even <sup>(1)</sup>                                    | [Class A - ABV FL150]<br>[Class B - BLW FL150] |
| ▲                              | OMKOM                         | 013112N 1035910E                 |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| Route remarks:                 |                               |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| -                              |                               |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| Point/Segment Remarks:         |                               |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |
| -                              |                               |                                  |        |                            |                       |                         |                                 |                    |                                                        |                                                |