

SINGAPORE/Singapore Changi  
RWY 02L/C/R  
KARTO TWO ALPHA ARRIVAL  
KARTO 2A

STANDARD ARRIVAL CHART  
RNAV (GNSS) -  
INSTRUMENT (STAR)

ACC 134.2  
APP 124.05  
119.3  
TWR 118.6 / 118.25

TRANSITION ALTITUDE  
11 000ft  
D-ATIS AP ID-WSSS  
128.025

ELEV, ALT IN FEET  
BEARINGS, TRACKS AND  
RADIALS ARE MAGNETIC  
VAR 0°23'E (2020)

DISTANCES IN NM

**TEKONG**  
DVOR/DME 116.5  
VTK  
01° 24' 55"N  
104° 01' 20" E  
60m

**CAUTION**  
RWY 02R/20L NOT AVAILABLE FOR  
CIVIL USE UNTIL FURTHER ADVISED

FOR APPROACH RWY 02  
EXPECT RADAR VECTORS

**SANAT**  
01° 07' 49" N  
103° 59' 30" E  
Cross 4000ft or abv  
IAS 190kts

**VIMAL**  
01° 09' 42" N  
104° 23' 53" E  
Cross 10000ft or abv

**KEXAS**  
01° 10' 19" N  
104° 48' 18" E  
Cross F160 or b/w  
IAS 220kts

**GUNUD**  
01° 10' 42" N  
105° 06' 18" E  
IAS 250kts

**KARTO**  
01° 11' 24" N  
105° 33' 43" E

**TOMAN**  
01° 21' 47" N  
105° 47' 17" E

**SAMKO**  
01° 05' 30" N  
103° 52' 55" E

**IGNON**  
01° 08' 47" N  
104° 12' 57" E  
Cross 7000ft or abv

A040 - F140  
Max 220kts (IAS)  
1 min

A110 - F160  
Max 220kts (IAS)  
1 min

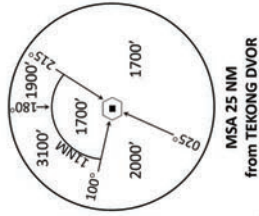
F170 - F310  
Max 250kts (IAS)  
1.5 min

**CAUTION: RWY 02R/20L NOT AVAILABLE FOR CIVIL USE UNTIL  
FURTHER ADVISED**

**NOTE: RADAR REQUIRED**

**NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED**

**NOTE: REFER TO BACK PAGE FOR**  
- FORMAL AND TABULAR DESCRIPTIONS  
- RADIO COM FAILURE PROCEDURES



RADAR ROUTE

NOT TO SCALE

## KARTO 2A (STAR) RNAV GNSS RWY 02L/02C/02R - DESCRIPTIONS

### Formal & Abbreviated Descriptions

| Formal Description                         | Abbreviated Description | Path Terminator | Fly-Over required |
|--------------------------------------------|-------------------------|-----------------|-------------------|
| From TOMAN.                                | TOMAN -                 | IF              | N                 |
| To KARTO, turn right.                      | KARTO [R] -             | TF              | N                 |
| To GUNUD, speed 250kts                     | GUNUD [K250] -          | TF              | N                 |
| To KEXAS at or below FL160, speed 220kts.  | KEXAS [FL160-; K220] -  | TF              | N                 |
| To VIMAL at or above 10000ft, turn left.   | VIMAL [A100+; L] -      | TF              | N                 |
| To IGNON at or above 7000ft, turn right.   | IGNON [A070+; R] -      | TF              | N                 |
| To SANAT at or above 4000ft, speed 190kts. | SANAT [A040+; K190]     | TF              | N                 |

### Tabular Descriptions

| Path Term | Waypoint Name | Fly-Over | Course °M(°T) | Distance (NM) | Turn Direction | Altitude | Speed Limit | Navigation Spec |
|-----------|---------------|----------|---------------|---------------|----------------|----------|-------------|-----------------|
| IF        | TOMAN         | -        | -             | -             | -              | -        | -           | RNAV1           |
| TF        | KARTO         | -        | 232(232.4)    | 17.0          | R              | -        | -           | RNAV1           |
| TF        | GUNUD         | -        | 268(268.4)    | 27.0          | -              | -        | K250        | RNAV1           |
| TF        | KEXAS         | -        | 268(268.4)    | 18.0          | -              | FL160-   | K220        | RNAV1           |
| TF        | VIMAL         | -        | 268(268.4)    | 24.0          | L              | A100+    | -           | RNAV1           |
| TF        | IGNON         | -        | 265(265.4)    | 11.0          | R              | A070+    | -           | RNAV1           |
| TF        | SANAT         | -        | 266(266.4)    | 14.0          | -              | A040+    | K190        | RNAV1           |

### Radio Communications Failure Procedure

|   |                                                                                                                                                                                                                                                                                                                                                                                                     |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>SET TRANSPONDER TO MODE A/C CODE 7600</b>                                                                                                                                                                                                                                                                                                                                                        |
| 2 | <b>When cleared via KARTO 2A by Singapore ATC</b> <p>(a) Maintain last assigned flight level or altitude and proceed on KARTO 2A to SANAT, then direct to SAMKO</p> <p>(b) From SAMKO commence descent and carry out appropriate landing procedure for RWY 02 as close as possible to EAT or ETA</p> <p>(c) If unable to effect a landing, refer to Singapore AIP for missed approach procedure</p> |
| 3 | <b>No clearance or instruction received from Singapore ATC</b> <p>- Refer to Singapore AIP for radio communications failure procedure</p>                                                                                                                                                                                                                                                           |