

STANDARD INSTRUMENT  
DEPARTURES (SID)  
CHART

|     |                              |
|-----|------------------------------|
| TWR | 131.4                        |
| APP | 120.3                        |
| ACC | 133.8/134.4/133.25/<br>134.2 |

|                     |
|---------------------|
| TRANSITION ALTITUDE |
| 11 000ft            |

|        |            |
|--------|------------|
| D-ATIS | AP ID-WSSS |
|        | 128.6      |

SINGAPORE/Singapore Changi  
RWY 02R/20L  
CHANGI DEPARTURE (RADAR)  
CHA 1C (R02R)  
CHA 1D (R20L)

ELEV, ALT IN FEET

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

DISTANCES IN NM

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

NOTE: RADAR REQUIRED

NOTE: ACFT UNABLE TO COMPLY WITH CLIMB GRADIENT  
RESTRICTION SHALL INFORM ATC DURING THE TIME  
ACFT COMMENCES TAXIING TO HOLDING POINT FOR  
DEPARTURE

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

GENERAL INFORMATION

INITIAL CLIMB  
3000FT

ACFT ON DEPARTURE SHALL NOT EXCEED IAS 230KTS  
UNTIL PASSING 4000FT AMSL AND NOT EXCEED IAS 250KTS  
UNTIL PASSING 10000FT AMSL.

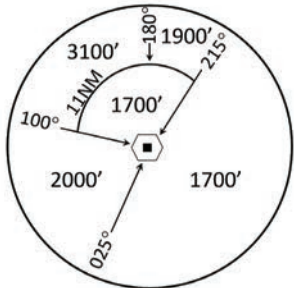
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF  
BY SINGAPORE RADAR.

ACFT ON DEPARTURE **02R** SHALL BE ON A MINIMUM CLIMB GRADIENT  
OF 5% UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

|                   |     |     |     |      |      |      |
|-------------------|-----|-----|-----|------|------|------|
| GND SPEED - KNOTS | 75  | 100 | 150 | 200  | 250  | 300  |
| 5% V/V (fpm)      | 380 | 506 | 760 | 1013 | 1266 | 1519 |
| 3.3% V/V (fpm)    | 251 | 334 | 501 | 668  | 835  | 1003 |

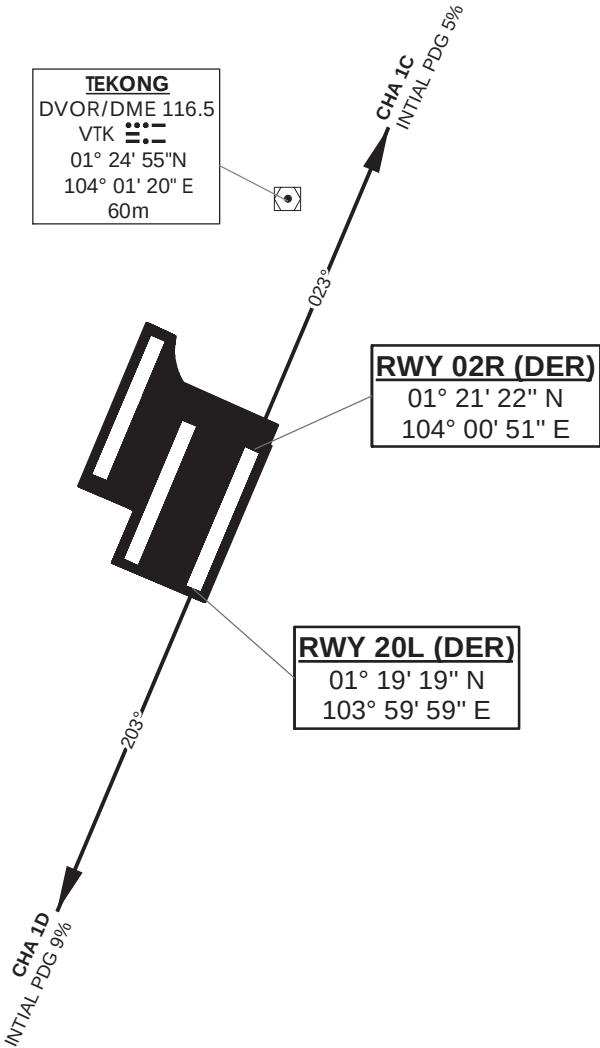
ACFT ON DEPARTURE **20L** SHALL BE ON A MINIMUM CLIMB GRADIENT  
OF 9% UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

|                   |     |     |      |      |      |      |
|-------------------|-----|-----|------|------|------|------|
| GND SPEED - KNOTS | 75  | 100 | 150  | 200  | 250  | 300  |
| 9% V/V (fpm)      | 684 | 911 | 1367 | 1823 | 2279 | 2734 |
| 3.3% V/V (fpm)    | 251 | 334 | 501  | 668  | 835  | 1003 |



MSA 25 NM  
from TEKONG DVOR

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



NOT TO SCALE

CHA 1C SID (RADAR) RWY 02R - DESCRIPTIONS

Formal & Abbreviated Descriptions

| Formal Description                                                                                                                    | Abbreviated Description | Path Terminator |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|
| Climb heading 023°, Gradient 5% to 2500ft, thence 3.3%. Expect radar vectors to the planned ATS route or waypoints listed in table A. | -                       | VA              |

Tabular Descriptions

| Path Terminator | Turn Direction | Course °M (°T) | Altitude | Speed Limit |
|-----------------|----------------|----------------|----------|-------------|
| VA              | -              | 023 (023.4)    | A030     | -           |

CHA 1D SID (RADAR) RWY 20L - DESCRIPTIONS

Formal & Abbreviated Descriptions

| Formal Description                                                                                                                    | Abbreviated Description | Path Terminator |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|
| Climb heading 203°, Gradient 9% to 2500ft, thence 3.3%. Expect radar vectors to the planned ATS route or waypoints listed in table A. | -                       | VA              |

Tabular Descriptions

| Path Terminator | Turn Direction | Course °M (°T) | Altitude | Speed Limit |
|-----------------|----------------|----------------|----------|-------------|
| VA              | -              | 203 (203.4)    | A030     | -           |

Table A

| Planned ATS Routes                           | Expect Radar Vectors to the waypoints listed below and thereafter to join the respective planned ATS Route |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------|
| A457                                         | AKOMA DCT SABKA DCT MASBO                                                                                  |
| B470                                         | VIRET DCT ANITO                                                                                            |
| G580 / M646 / L625 / T21 - L504 / T21 - M774 | VEBMA DCT TOMAN                                                                                            |
| L762                                         | VIBOG DCT BISOV DCT MIBEL                                                                                  |
| B469 / M751 / M771 / L642 / M753             | AKOMA DCT VMR                                                                                              |
| T24 - M635                                   | VIRET DCT GURES DCT IDBUD                                                                                  |
| W26                                          | VIRET DCT GURES DCT IKIRO DCT KIRDA                                                                        |
| R469                                         | VIBOG DCT TAROS                                                                                            |
| Y513                                         | AKOMA DCT AKMET DCT AROSO                                                                                  |

RADIO COMMUNICATIONS FAILURE PROCEDURE

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | SET TRANSPONDER TO MODE A/C CODE 7600                                                                                                                                                                                                                                                                                                                                                                                           |
| 2 | COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:<br><br>RWY 02R - PROCEED DIRECT TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.<br><br>RWY 20L - PROCEED DIRECT TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE. |