

**STANDARD DEPARTURE CHART  
RNAV (GNSS) -  
INSTRUMENT (SID)**

TWR 118.6 / 118.25  
APP 120.3  
124.05  
ACC 133.25

TRANSITION ALTITUDE  
11 000ft

D-ATIS AP ID-WSSS  
128.6

**SINGAPORE/Singapore Changi  
RWY 20L  
VOVOS DEPARTURES  
VOVOS 1D**

**ELEV, ALT IN FEET**

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

DISTANCES IN NM

**GENERAL INFORMATION**

**INITIAL CLIMB  
3000FT**

**CAUTION: RWY 02R/20L CLOSED UNTIL FURTHER ADVISED**

**NOTE:** RADAR REQUIRED

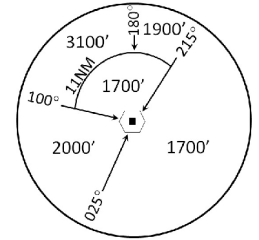
**NOTE:** RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

**NOTE:** ACFT UNABLE TO FLY THE SID PROFILE  
SHALL INFORM ATC PRIOR TO DEPARTURE AND  
EXPECT RADAR VECTORING IF NECESSARY

**NOTE:** WHEN TAKEN OFF THE SID, AS INSTRUCTED BY ATC,  
REFER TO ENR 1.5, SECTION 3, PARAGRAPH 3.4.3  
- FOR RWY 20L MINIMUM CLIMB GRADIENT

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

**NOTE:** VOVOS SID WILL NOT BE AVAILABLE FOR  
FLIGHT PLANNING UNTIL FURTHER ADVISED



MSA 25 NM  
from TEKONG DVOR

**PROCEDURE INFORMATION**

SID 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.

SID 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 |

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

**DER (RWY 20L)**  
01° 19' 19"N  
103° 59' 59"E

**UKIBO**  
01° 17' 58"N  
103° 59' 24"E

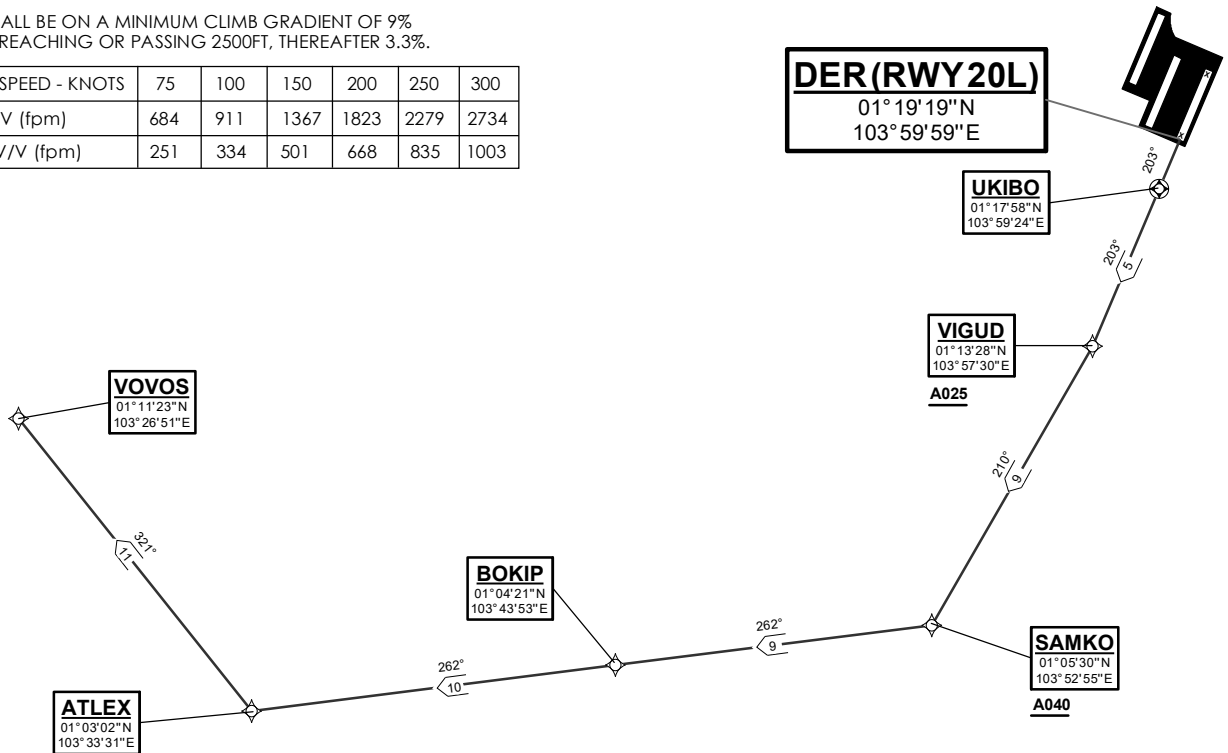
**VIGUD**  
01° 13' 28"N  
103° 57' 30"E  
A025

**SAMKO**  
01° 05' 30"N  
103° 52' 55"E  
A040

**BOKIP**  
01° 04' 21"N  
103° 43' 53"E

**VOVOS**  
01° 11' 23"N  
103° 26' 51"E

**ATLEX**  
01° 03' 02"N  
103° 33' 31"E



NOT TO SCALE

**VOVOS 1D (SID) RNAV GNSS RWY 20L - DESCRIPTIONS**

**Formal & Abbreviated Descriptions**

| Formal Description                       | Abbreviated Description | Path Terminator | Fly-Over required |
|--|-------------------------|-----------------|-------------------|
| To UKIBO on course 203°.                 | UKIBO [M203] -          | CF              | N                 |
| To VIGUD at or above 2500ft, turn right. | VIGUD [A025+; R] -      | TF              | N                 |
| To SAMKO at or above 4000ft, turn right. | SAMKO [A040+; R] -      | TF              | N                 |
| To BOKIP.                                | BOKIP -                 | TF              | N                 |
| To ATLEX, turn right.                    | ATLEX [R] -             | TF              | N                 |
| To VOVOS.                                | VOVOS                   | TF              | N                 |

**Tabular Descriptions**

| Path Term | Waypoint Name | Fly-Over | Course °M(°T) | Distance (NM) | Turn Direction | Altitude | Speed Limit | Navigation Spec |
|-----------|---------------|----------|---------------|---------------|----------------|----------|-------------|-----------------|
| CF        | UKIBO         | Y        | 203(203.4)    | 1.5           | -              | -        | -           | RNAV1           |
| TF        | VIGUD         | -        | 203(203.4)    | 5.0           | R              | A025+    | -           | RNAV1           |
| TF        | SAMKO         | -        | 210(210.4)    | 9.0           | R              | A040+    | -           | RNAV1           |
| TF        | BOKIP         | -        | 262(262.4)    | 9.0           | -              | -        | -           | RNAV1           |
| TF        | ATLEX         | -        | 262(262.4)    | 10.0          | R              | -        | -           | RNAV1           |
| TF        | VOVOS         | -        | 321(321.4)    | 11.0          | -              | -        | -           | RNAV1           |

**Radio Communications Failure Procedure**

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