

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

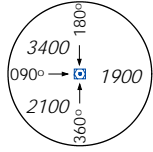
TWR 118.6 / 118.25
APP 120.3 / 124.05
ACC 133.8 / 127.3

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 20R/C
MERSING DEPARTURES
VMR 1V (R20R), VMR 1X (R20C)
RNAV_(GNSS)
(AIR DEFENCE EXERCISE SIDs)**

ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 31°E (2005)



MSA 25nm
from **TEKONG DVOR**

DISTANCES IN NM

NOTE: RADAR REQUIRED

- NOTE: REFER TO BACK PAGE FOR
- A) CONVENTIONAL PROCEDURES
 - B) RADIO COM FAILURE PROCEDURES
 - C) CROSS REFERENCE FROM NAVAID

GENERAL INFORMATION

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

INITIAL DEPARTURE CLIMB ALTITUDE IS 3000FT OR AS DIRECTED BY ATC.

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

RWY 20C/R

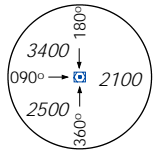
DEPARTURES SHALL BE ON A MINIMUM NET CLIMB GRADIENT OF 5% UNTIL REACHING OR PASSING 400FT, THEREAFTER 3.3%.

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

THE RESTRICTION TO CROSS SUDPO OR SUNVA AT OR ABOVE 2000FT IS APPLICABLE BETWEEN 2301/1100 UTC.

ALL DEPARTURE AIRCRAFT ON RWY 20C/R ISSUED WITH HEADING INSTRUCTIONS BY ATC SHALL ALSO CROSS 8 DME VTK AT OR ABOVE 2000FT BTN 2301/1100 UTC.

IF THE HEIGHT RESTRICTION CANNOT BE COMPLIED WITH, THE PILOT-IN-COMMAND OF AN AIRCRAFT DEPARTURE ON RWY 20C/R SHALL INFORM ATC DURING THE TIME WHEN THE AIRCRAFT COMMENCES TAXIING TO THE HOLDING POINT FOR DEPARTURE.



MSA 25nm
from **SINJON DVOR**

VMR
02° 23' 18" N
103° 52' 18" E

NOT TO SCALE

AKOMA
01° 45' 22" N
103° 54' 43" E

NITAD
01° 32' 57" N
104° 01' 54" E

**VTK
TEKONG**
DVOR/DME 116.5
VTK
01° 24' 55" N
104° 01' 20" E
60M
Cross 7000ft or abv

RWY20R(DER)
01° 20' 47" N
103° 58' 35" E

RWY 20C(DER)
01° 19' 35" N
103° 59' 02" E

SUNVA
01° 17' 56" N
103° 57' 22" E
Cross 2000ft or abv

SINJON
DVOR/DME 113.5
SJ
01° 13' 21" N
103° 51' 15" E
60M

SABUG
01° 15' 54" N
104° 03' 12" E
Cross 4000ft or abv

SUSIN
01° 12' 29" N
103° 58' 08" E

SUDPO
01° 17' 31" N
103° 58' 08" E
Cross 2000ft or abv

(A) BASIC RNAV DEPARTURES

For non-RNP1/P-RNAV approved aircraft or whose RNP1/P-RNAV capability have been degraded

MERSING DEPARTURES

STANDARD DEPARTURE INSTRUMENT (SID)	RUNWAY	TAKE OFF INSTRUCTIONS	DEPARTURE INSTRUCTIONS
MERSING ONE XRAY DEPARTURE (VMR 1X)	20C	CLIMB STRAIGHT AHEAD TO SUDPO. AT SUDPO TURN LEFT AND TRACK 180° TO SUSIN. CROSS SUDPO AT OR ABOVE 2 000FT. CROSS SABUG AT OR ABOVE 4 000FT, THEN FOLLOW DEPARTURE INSTRUCTIONS.	AT SUSIN TURN LEFT TO SABUG, THEN TRACK 348° TO VTK DVOR/DME. CROSS VTK DVOR/DME AT OR ABOVE 7 000FT. FROM VTK DVOR/DME, TRACK 004° TO NITAD THEN TURN LEFT AND TRACK 330° TO AKOMA. AT AKOMA, TURN RIGHT AND TRACK 356° TO VMR DVOR/DME
MERSING ONE VICTOR DEPARTURE (VMR 1V)	20R	CLIMB STRAIGHT AHEAD TO SUNVA. AT SUNVA, TURN LEFT AND TRACK 172° TO SUSIN. CROSS SUNVA AT OR ABOVE 2 000FT. CROSS SABUG AT OR ABOVE 4 000FT, THEN FOLLOW DEPARTURE INSTRUCTIONS.	

(B) RADIO COMMUNICATIONS FAILURE PROCEDURE

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON: (a) RWY 20C/R PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA(SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.

(C) RADIAL AND DME FROM VOR/DME

WAY POINTS	VTK VOR/DME	SJ VOR/DME
AKOMA	VTK R-342.0/D21.4	SJ R-006.2/D32.0
NITAD	VTK R-004.1/D8.0	SJ R-028.7/D22.2
SABUG	VTK R-168.2/D9.2	SJ R-078.1/D12.2
SUDPO	VTK R-203.4/D8.0	SJ R-059.0/D8.0
SUNVA	VTK R-209.7/D8.0	SJ R-053.3/D7.6
SUSIN	VTK R-194.5/D12.8	SJ R-097.2/D6.9
VMR	VTK R-351.2/D58.8	SJ R-000.9/D69.6