

STANDARD DEPARTURE CHART -  
INSTRUMENT (SID)

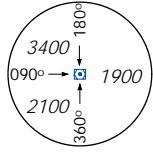
TWR 118.6 / 118.25  
APP 120.3 / 124.05  
ACC 133.8 / 127.3

TRANSITION ALTITUDE  
11 000ft

D-ATIS AP ID-WSSS  
128.6

SINGAPORE/Singapore Changi  
RWY 02C/20C  
MERSING DEPARTURES  
VMR 3A (R02C), VMR 4B (R20C)  
RNAV<sub>(GNSS)</sub>  
(VMR 3A WILL ALSO BE ASSIGNED  
DURING AIR DEFENCE EXERCISES)

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



DISTANCES IN NM

MSA 25nm  
from TEKONG DVOR

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 02L/C

FOR MINIMUM CLIMB GRADIENT CRITERIA :  
RWY 02L - SEE ENR 1.5-4  
RWY 02C - SEE ENR 1.5-4

RWY 20C/R

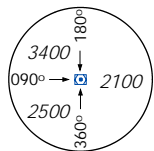
DEPARTURES SHALL BE ON A MINIMUM NET CLIMB GRADIENT OF 5%  
UNTIL REACHING OR PASSING 400FT, THEREAFTER 3.3%.

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  
Cross 7000ft or abv  
For VMR 3A only

**VTK**  
TEKONG  
DVOR/DME 116.5  
VTK   
01° 24' 55" N  
104° 01' 20" E  
60M  
Cross 7000ft or abv  
For VMR 4B only

**TOKIM**  
01° 29' 33" N  
104° 03' 15" E  
Cross 2000ft or abv

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

**RWY 02C(DER)**  
01° 21' 52" N  
104° 00' 00" E

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

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

**SUSIN**  
01° 12' 29" N  
103° 58' 08" E

**SABUG**  
01° 15' 54" N  
104° 03' 12" E  
Cross 4000ft 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	REMARKS
MERSING THREE ALPHA DEPARTURE (VMR 3A)	02C	CLIMB STRAIGHT AHEAD TO TOKIM. CROSS TOKIM AT OR ABOVE 2000FT. AT TOKIM TURN LEFT AND TRACK 332° TO AKOMA THEN FOLLOW DEPARTURE INSTRUCTIONS.	AT AKOMA, TURN RIGHT AND TRACK 356° TO VMR DVOR/DME. CROSS AKOMA AT OR ABOVE 7 000FT.	THIS SID WILL ALSO BE ASSIGNED DURING AIR DEFENCE EXERCISE.
MERSING FOUR BRAVO DEPARTURE (VMR 4B)	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 342° TO AKOMA THEN TURN RIGHT AND TRACK 356° TO VMR DVOR/DME	

**(B) RADIO COMMUNICATIONS FAILURE PROCEDURE**

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:  (a) RWY 02C- PROCEED STRAIGHT AHEAD TO NYLON HOLDING AREA(NHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.  (b) RWY 20C- 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
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
SUSIN	VTK R-194.5/D12.8	SJ R-097.2/D6.9
TOKIM	VTK R-022.7/D5.0	SJ R-036.7/D20.1
VMR	VTK R-351.2/D58.8	SJ R-000.9/D69.6