

**STANDARD DEPARTURE CHART -
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 20R/20C
BOBAG DEPARTURES**
BOG 1V (R20R), BOG 1X (R20C)
RNAV (GNSS)
(AIR DEFENCE EXERCISE SIDs)

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

DISTANCES IN NM

NOTE: RADAR REQUIRED

NOTE: REFER TO BACK PAGE FOR

- A) BASIC RNAV DEPARTURES
- 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.

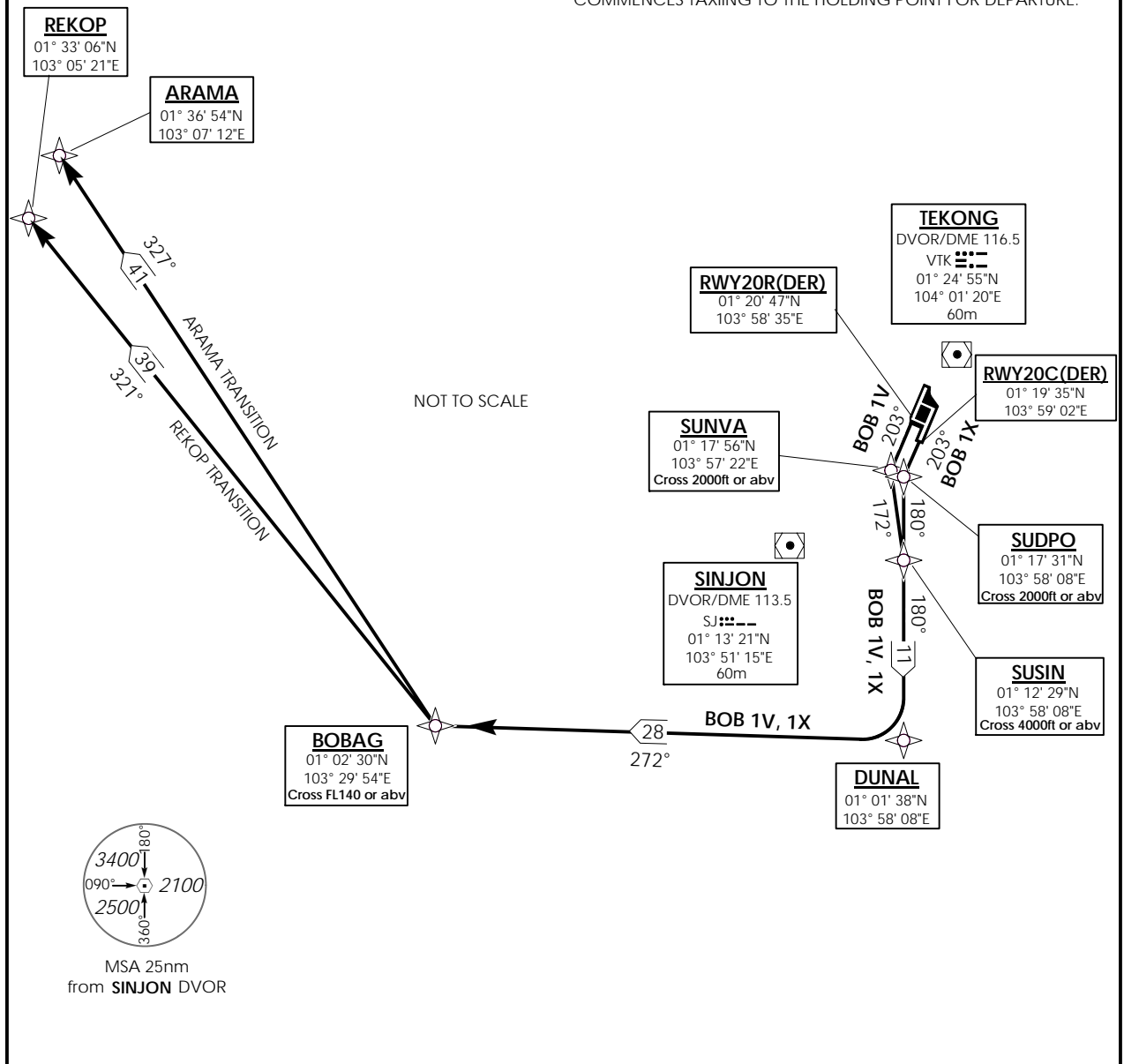
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF BY SINGAPORE RADAR.

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.



(A) BASIC RNAV DEPARTURES

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

BOBAG DEPARTURES

STANDARD DEPARTURE INSTRUMENT (SID)	RUNWAY	TAKE OFF INSTRUCTIONS	DEPARTURE INSTRUCTIONS
BOBAG ONE XRAY DEPARTURE (BOG 1X)	20C	CLIMB STRAIGHT AHEAD TO SUDPO. AT SUDPO TURN LEFT AND TRACK 180° TO SUSIN. CROSS SUDPO AT OR ABOVE 2000FT. CROSS SUSIN AT OR ABOVE 4000FT, THEN FOLLOW DEPARTURE INSTRUCTIONS.	AT SUSIN TRACK 180° TO DUNAL THEN TURN RIGHT AND TRACK 272° TO BOBAG. CROSS BOBAG AT OR ABOVE FL140. FROM BOBAG, FOLLOW THE APPROPRIATE TRANSITION ROUTE TO JOIN THE ATS ROUTE.
BOBAG ONE VICTOR DEPARTURE (BOG 1V)	20R	CLIMB STRAIGHT AHEAD TO SUNVA. AT SUNVA TURN LEFT AND TRACK 172° TO SUSIN. CROSS SUNVA AT OR ABOVE 2000FT. CROSS SUSIN AT OR ABOVE 4000FT, 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 VTK / SJ DVOR/DME

WAYPOINTS	VTK VOR/DME	SJ VOR/DME
ARAMA	VTK R-282.4/D55.5	SJ R-298.0/D50.0
BOBAG	VTK R-234.7/D38.6	SJ R-243.2/D24.0
DUNAL	VTK R-187.9/D23.4	SJ R-149.4/D13.5
REKOP	VTK R-278.3/D56.6	SJ R-293.1/D50.0
SAMKO	VTK R-203.5/D21.1	SJ R-168.0/D8.0
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