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

TWR 118.6 / 118.25 APP 120.3 124.05 ACC 134.2

TRANSITION ALTITUDE 11 000ft

D-ATIS AP ID-WSSS 128.6

SINGAPORE/Singapore Changi **RWY 02C** TOMAN DEPARTURES TOMAN 3A

#### ELEV, ALT IN FEET

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

DISTANCES IN NM

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

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION

**GNSS REQUIRED** 

NOTE: CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)

EXIST ON TAXIWAYS WEST OF RUNWAY 02C

NOTE: ACFT UNABLE TO FLY THE SID

PROFILE SHALL INFORM ATC PRIOR TO DEPARTURE AND TO EXPECT RADAR VECTORING,

IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID, AS INSTRUCTED BY ATC,

REFER TO ENR 1.5, SECTION 3,

PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR

- FORMAL AND TABULAR DESCRIPTIONS

- RADIO COM FAILURE PROCEDURES

### **GENERAL INFORMATION**

## **INITIAL CLIMB** 3000FT

ALL SIDS INCLUDE NOISE PREFERENTIAL ROUTES.

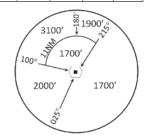
#### RWY 02C

SID SHALL NOT EXCEED IAS 230KTS UNTIL PASSING 4000FT AMSL AND NOT EXCEED IAS 250KTS UNTIL PASSING 10000FT AMSL.

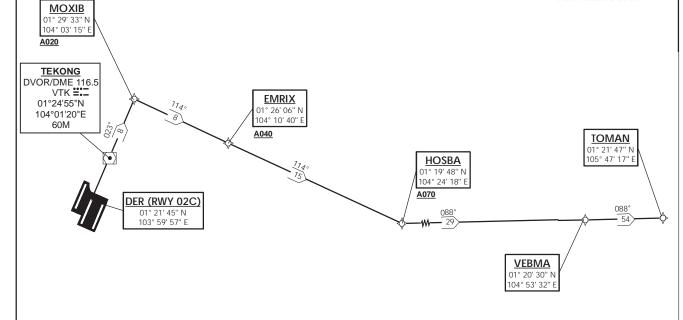
CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF BY SINGAPORE RADAR.

SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 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	



MSA 25 NM from TEKONG DVOR



NOT TO SCALE

# TOMAN 3A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS

**Formal & Abbreviated Descriptions** 

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To MOXIB on course 023° at or above 2000ft, turn right.	MOXIB [M023; A020+; R] -	CF	N
To EMRIX at or above 4000ft.	EMRIX [A040+] -	TF	N
To HOSBA at or above 7000ft, turn left.	HOSBA [A070+; L] -	TF	N
To VEBMA.	VEBMA -	TF	N
To TOMAN.	TOMAN	TF	N

**Tabular Descriptions** 

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Distance (NM)	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	MOXIB	-	023(023.4)	8.0	R	A020+	-	RNAV1
TF	EMRIX	-	114(114.4)	8.0	-	A040+	-	RNAV1
TF	HOSBA	-	114(114.4)	15.0	L	A070+	-	RNAV1
TF	VEBMA	-	088(088.4)	29.0	-	-	-	RNAV1
TF	TOMAN	-	088(088.4)	54.0	-	-	-	RNAV1

**Radio Communications Failure Procedure** 

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE:
	PROCEED DIRECT TO NYLON HOLDING AREA (NHA) CLIMBING TO THE LAST ASSIGNED
	ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE
	PROCEDURE.