

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

TWR 118.6 / 118.25  
APP 120.3  
ACC 134.2

TRANSITION ALTITUDE  
11 000ft

D-ATIS AP ID-WSSS  
128.6

**SINGAPORE/Singapore Changi  
RWY 02L/20R  
TOMAN DEPARTURES  
TOMAN 2E (R02L)  
TOMAN 3F (R20R)**

**ELEV, ALT IN FEET**  
BEARINGS, TRACKS AND  
RADIALS ARE MAGNETIC  
VAR 26°E (2015)

DISTANCES IN NM  
**NOTE:** RADAR REQUIRED

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

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

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

**GENERAL INFORMATION**

**INITIAL CLIMB**  
**3000FT OR AS DIRECTED BY ATC**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

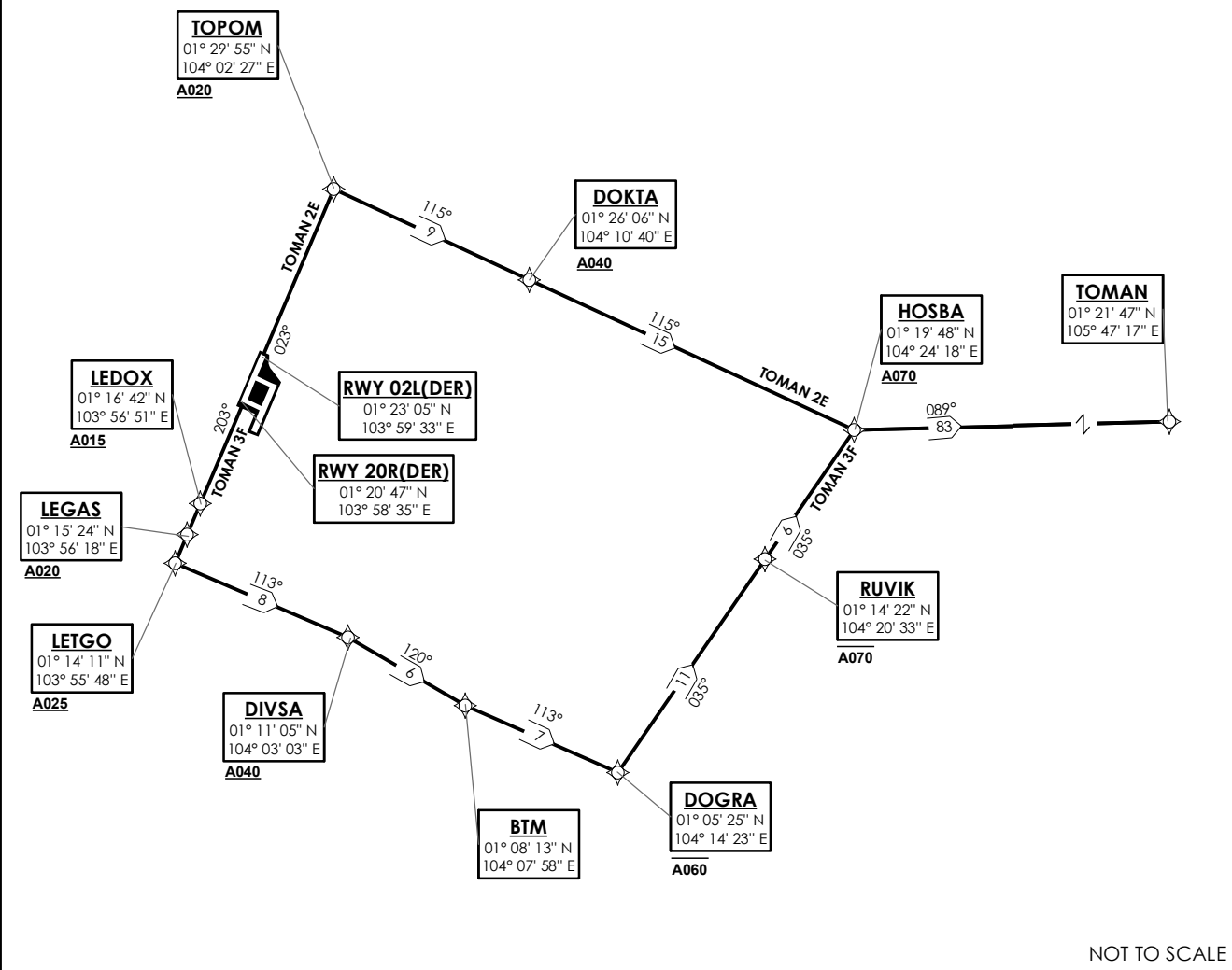
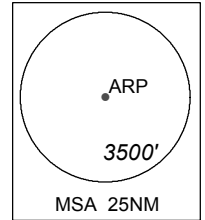
**RWY 02L**

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.  
SEE (ENR 1.5-4) FOR MINIMUM CLIMB GRADIENT CRITERIA.

**RWY 20R**

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.  
DEPARTURES SHALL BE ON A MINIMUM NET CLIMB GRADIENT OF 6%  
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
6% V/V (fpm)	456	608	911	1215	1518	1821
3.3% V/V (fpm)	251	334	501	668	835	1003



NOT TO SCALE

**TOMAN 2E (SID) RNAV GNSS RWY 02L - DESCRIPTIONS**

**Formal & Abbreviated Descriptions**

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

**Tabular Descriptions**

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	TOPOM	-	023(022.5)	-0.5	R	A020+	-	RNAV1
TF	DOKTA	-	115(114.5)	-0.5	-	A040+	-	RNAV1
TF	HOSBA	-	115(114.5)	-0.5	L	A070+	-	RNAV1
TF	TOMAN	-	089(088.5)	-0.5	-	-	-	RNAV1

**TOMAN 3F (SID) RNAV GNSS RWY 20R - DESCRIPTIONS**

**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To LEDOX on course 203° at or above 1500ft. To LEGAS at or above 2000ft. To LETGO at or above 2500ft, turn left. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn left. To RUVIK at or below 7000ft. To HOSBA at or above 7000ft, turn right. To TOMAN.	LEDOX [M203; A015+] -	CF	N
	LEGAS [A020+] -	TF	N
	LETGO [A025+; L] -	TF	N
	DIVSA [A040+; R] -	TF	N
	BTM [L] -	TF	N
	DOGRA [A060-; L] -	TF	N
	RUVIK [A070-] -	TF	N
	HOSBA [A070+; R] -	TF	N
	TOMAN	TF	N

**Tabular Descriptions**

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	LEDOX	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	LEGAS	-	203(202.5)	-0.5	-	A020+	-	RNAV1
TF	LETGO	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	R	A040+	-	RNAV1
TF	BTM	-	120(119.5)	-0.5	L	-	-	RNAV1
TF	DOGRA	-	113(112.5)	-0.5	L	A060-	-	RNAV1
TF	RUVIK	-	035(034.5)	-0.5	-	A070-	-	RNAV1
TF	HOSBA	-	035(034.5)	-0.5	R	A070+	-	RNAV1
TF	TOMAN	-	089(088.5)	-0.5	-	-	-	RNAV1

**RADIO COMMUNICATIONS FAILURE PROCEDURE**

1	<b>SET TRANSPONDER TO MODE A/C CODE 7600</b>
2	<b>COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE ON:</b>  <b>RWY 02L -</b> 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 20R -</b> PROCEED STRAIGHT AHEAD TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.