

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

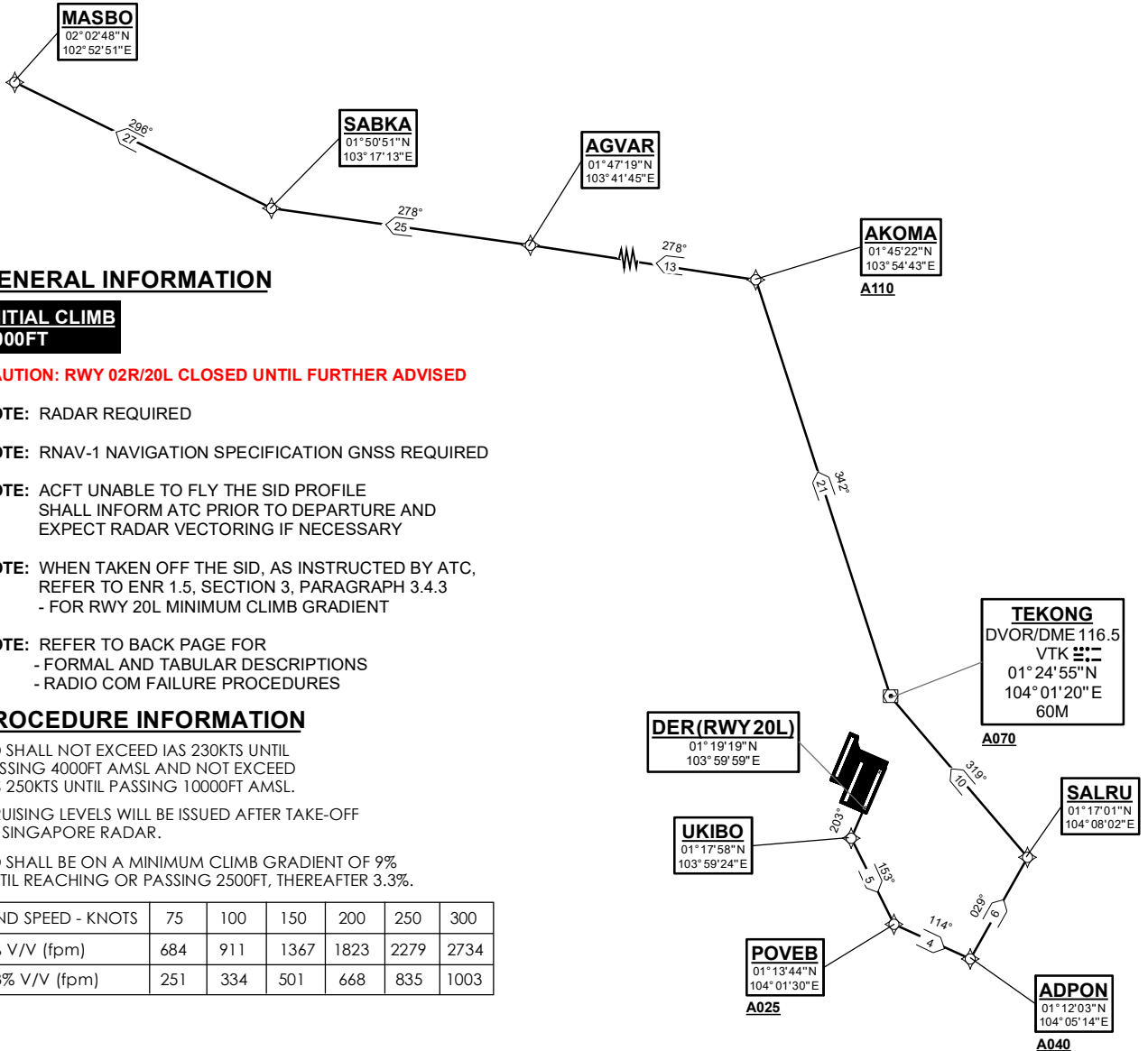
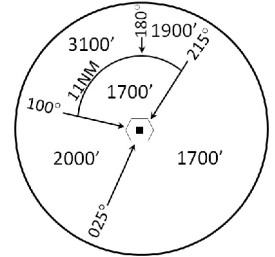
TWR 118.6 / 118.25 APP 120.3 124.05 ACC 133.25	TRANSITION ALTITUDE 11 000ft
	D-ATIS AP ID-WSSS 128.6

**SINGAPORE/Singapore Changi  
RWY 20L  
MASBO DEPARTURES  
MASBO 1D**

ELEV, ALT IN FEET  
BEARINGS, TRACKS AND  
RADIALS ARE MAGNETIC  
VAR 0°23'E (2022)

NOT TO SCALE

DISTANCES IN NM



**GENERAL INFORMATION**

**INITIAL CLIMB  
3000FT**

- CAUTION:** RWY 02R/20L CLOSED UNTIL FURTHER ADVISED
- NOTE:** RADAR REQUIRED
- NOTE:** RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED
- NOTE:** ACFT UNABLE TO FLY THE SID PROFILE SHALL INFORM ATC PRIOR TO DEPARTURE AND EXPECT RADAR VECTORING IF NECESSARY
- NOTE:** WHEN TAKEN OFF THE SID, AS INSTRUCTED BY ATC, REFER TO ENR 1.5, SECTION 3, PARAGRAPH 3.4.3 - FOR RWY 20L MINIMUM CLIMB GRADIENT
- NOTE:** REFER TO BACK PAGE FOR - FORMAL AND TABULAR DESCRIPTIONS - RADIO COM FAILURE PROCEDURES

**PROCEDURE INFORMATION**

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 9% UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
9% V/V (fpm)	684	911	1367	1823	2279	2734
3.3% V/V (fpm)	251	334	501	668	835	1003

21 MAR 2024

**MASBO 1D (SID) RNAV GNSS RWY 20L - DESCRIPTIONS****Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To UKIBO on course 203°, turn left.	UKIBO [M203; L] -	CF	N
To POVEB at or above 2500ft, turn left.	POVEB [A025+; L] -	TF	N
To ADPON at or above 4000ft, turn left.	ADPON [A040+; L] -	TF	N
To SALRU, turn left.	SALRU [L] -	TF	N
To VTK at or above 7000ft, turn right.	VTK [A070+; R] -	TF	N
To AKOMA at or above 11000ft, turn left.	AKOMA [A110+; L] -	TF	N
To AGVAR.	AGVAR -	TF	N
To SABKA, turn right.	SABKA [R] -	TF	N
To MASBO.	MASBO	TF	N

**Tabular Descriptions**

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Distance (NM)	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	UKIBO	-	203(203.4)	1.5	L	-	-	RNAV1
TF	POVEB	-	153(153.4)	5.0	L	A025+	-	RNAV1
TF	ADPON	-	114(114.4)	4.0	L	A040+	-	RNAV1
TF	SALRU	-	029(029.4)	6.0	L	-	-	RNAV1
TF	VTK	-	319(319.4)	10.0	R	A070+	-	RNAV1
TF	AKOMA	-	342(342.4)	21.0	L	A110+	-	RNAV1
TF	AGVAR	-	278(278.4)	13.0	-	-	-	RNAV1
TF	SABKA	-	278(278.4)	25.0	R	-	-	RNAV1
TF	MASBO	-	296(296.4)	27.0	-	-	-	RNAV1

**Radio Communications Failure Procedure**

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