

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

TWR 118.6 / 118.25
APP 120.3
ACC 133.25

TRANSITION ALTITUDE
11 000ft

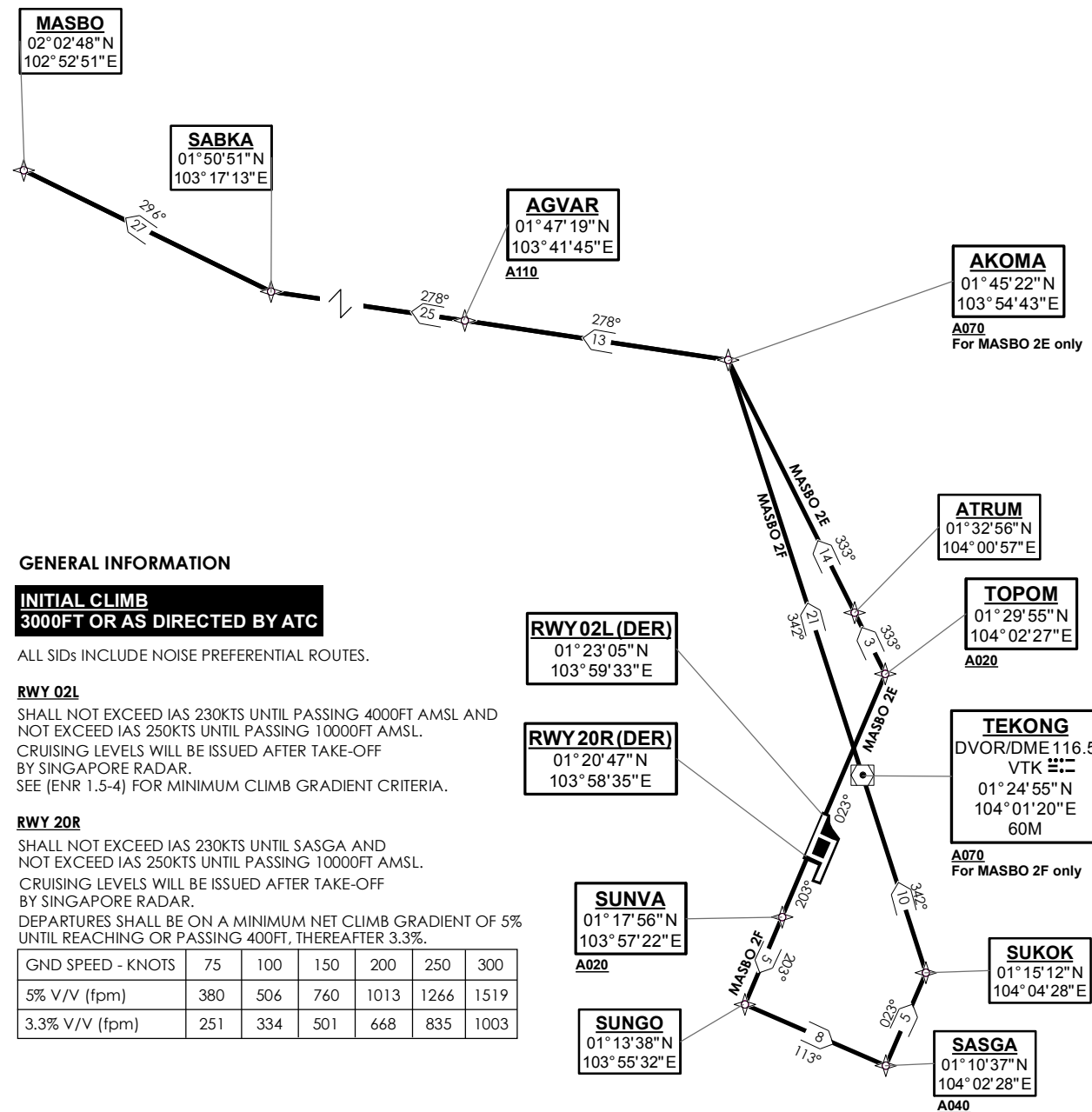
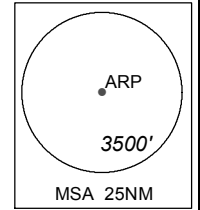
D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/20R
MASBO DEPARTURES
MASBO 2E (R02L)
MASBO 2F (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 SASGA 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 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

NOT TO SCALE

MASBO 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 left. To ATRUM. To AKOMA at or above 7000ft, turn left. To AGVAR at or above 11000ft. To SABKA, turn right. To MASBO.	TOPOM [M023; A020+; L] -	CF	N
	ATRUM -	TF	N
	AKOMA [A070+; L] -	TF	N
	AGVAR [A110+] -	TF	N
	SABKA [R] -	TF	N
	MASBO	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	L	A020+	-	RNAV1
TF	ATRUM	-	333(332.5)	-0.5	-	-	-	RNAV1
TF	AKOMA	-	333(332.5)	-0.5	L	A070+	-	RNAV1
TF	AGVAR	-	278(277.5)	-0.5	-	A110+	-	RNAV1
TF	SABKA	-	278(277.5)	-0.5	R	-	-	RNAV1
TF	MASBO	-	296(295.5)	-0.5	-	-	-	RNAV1

MASBO 2F (SID) RNAV GNSS RWY 20R - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To SUNVA on course 203° at or above 2000ft. To SUNGO, turn left. To SASGA at or above 4000ft, speed 230kts, turn left. To SUKOK, turn left. To VTK at or above 7000ft. To AKOMA, turn left. To AGVAR at or above 11000ft. To SABKA, turn right. To MASBO.	SUNVA [M203; A020+] -	CF	N
	SUNGO [L] -	TF	N
	SASGA [A040+; K230; L] -	TF	N
	SUKOK [L] -	TF	N
	VTK [A070+] -	TF	N
	AKOMA [L] -	TF	N
	AGVAR [A110+] -	TF	N
	SABKA [R] -	TF	N
	MASBO	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	SUNVA	-	203(202.5)	-0.5	-	A020+	-	RNAV1
TF	SUNGO	-	203(202.5)	-0.5	L	-	-	RNAV1
TF	SASGA	-	113(113.3)	-0.5	L	A040+	K230	RNAV1
TF	SUKOK	-	023(023.6)	-0.5	L	-	-	RNAV1
TF	VTK	-	342(341.5)	-0.5	-	A070+	-	RNAV1
TF	AKOMA	-	342(341.5)	-0.5	L	-	-	RNAV1
TF	AGVAR	-	278(277.5)	-0.5	-	A110+	-	RNAV1
TF	SABKA	-	278(277.5)	-0.5	R	-	-	RNAV1
TF	MASBO	-	296(295.5)	-0.5	-	-	-	RNAV1

RADIO COMMUNICATIONS FAILURE PROCEDURE

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