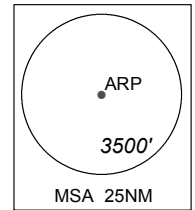


**STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)**TWR 118.6 / 118.25
APP 120.3
ACC 133.25TRANSITION ALTITUDE
11 000ftD-ATIS AP ID-WSSS
128.6**SINGAPORE/Singapore Changi
RWY 02L/20R
AROSO DEPARTURES
AROSO 2E (R02L)
AROSO 4F (R20R)**ELEV, ALT IN FEET
BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 26°E (2015)

DISTANCES IN NM



AROSO
02°08'46"N
103°24'21"E

NOTE: RADAR REQUIRED**NOTE:** ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTORED,
IF NECESSARY**NOTE:** RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED**NOTE:** REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

AKMET
01°53'55"N
103°43'39"E
A110

AKOMA
01°45'22"N
103°54'43"E
A070
For AROSO 2E only

GENERAL INFORMATION**INITIAL CLIMB
3000FT**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

RWY 02LSHALL 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 DIVSA 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 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

RWY02L(DER)
01°23'05"N
104°59'33"E

RWY20R(DER)
01°20'47"N
103°58'35"E

LEDOX
01°16'42"N
103°56'51"E
A015

LETGO
01°14'11"N
103°55'48"E
A025

ATRUM
01°32'56"N
104°00'57"E

TOPOM
01°29'55"N
104°02'27"E
A020

TEKONG
DVOR/DME 116.5
VTK
01°24'55"N
104°01'20"E
60M
A070
For AROSO 4F only

DOSPA
01°14'59"N
104°04'41"E

DIVSA
01°11'05"N
104°03'03"E
A040

NOT TO SCALE

28 FEB 2019

AROS0 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 AKMET at or above 11000ft. To AROS0.	TOPOM [M023; A020+; L] -	CF	N
	ATRUM -	TF	N
	AKOMA [A070+; L] -	TF	N
	AKMET [A110+] -	TF	N
	AROS0	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °(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	AKMET	-	308(307.5)	-0.5	-	A110+	-	RNAV1
TF	AROS0	-	308(307.5)	-0.5	-	-	-	RNAV1

AROS0 4F (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 LETGO at or above 2500ft, turn left. To DIVSA at or above 4000ft, speed 230kts, turn left. To DOSPA, turn left. To VTK at or above 7000ft. To AKOMA, turn left. To AKMET at or above 11000ft. To AROS0.	LEDOX [M203; A015+] -	CF	N
	LETGO [A025+; L] -	TF	N
	DIVSA [A040+; K230; L] -	TF	N
	DOSPA [L] -	TF	N
	VTK [A070+] -	TF	N
	AKOMA [L] -	TF	N
	AKMET [A110+] -	TF	N
	AROS0	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °(T)	Magnetic Variation	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	LEDOX	-	203(202.5)	-0.5	-	A015+	-	RNAV1
TF	LETGO	-	203(202.5)	-0.5	L	A025+	-	RNAV1
TF	DIVSA	-	113(112.5)	-0.5	L	A040+	K230	RNAV1
TF	DOSPA	-	023(022.5)	-0.5	L	-	-	RNAV1
TF	VTK	-	342(341.5)	-0.5	-	A070+	-	RNAV1
TF	AKOMA	-	342(341.5)	-0.5	L	-	-	RNAV1
TF	AKMET	-	308(307.5)	-0.5	-	A110+	-	RNAV1
TF	AROS0	-	308(307.5)	-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.