

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

TWR 118.6 / 118.25  
APP 120.3  
124.05  
ACC 133.25

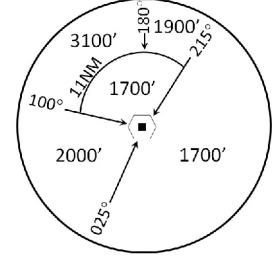
TRANSITION ALTITUDE  
11 000ft

D-ATIS AP ID-WSSS  
128.6

**SINGAPORE/Singapore Changi**  
**RWY 02R**  
**AROSO DEPARTURES (RADAR)**  
**AROSO 1C**

**ELEV, ALT IN FEET**  
BEARINGS, TRACKS AND  
RADIALS ARE MAGNETIC  
VAR 0°23'E (2020)

DISTANCES IN NM



MSA 25 NM  
from TEKONG DVOR

**AROSO**  
02°08'46"N  
103°24'21"E

307°  
24

**AKMET**  
01°53'55"N  
103°43'39"E  
**A110**

307°  
14

**AKOMA**  
01°45'22"N  
103°54'43"E  
**A070**

**EXPECT RADAR vectors**  
to waypoint **AKOMA**

**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 3.5  
- FOR RWY 02R 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 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

**DER(RWY02R)**  
01°21'22"N  
104°00'51"E

**TEKONG**  
DVOR/DME 116.5  
VTK  
01°24'55"N  
104°01'20"E  
60M

NOT TO SCALE

**AROSO 1C (SID) RNAV GNSS RWY 02R - DESCRIPTIONS**

**Formal & Abbreviated Descriptions**

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
Climb heading 023°, Gradient 5% to 2500ft, thence 3.3%. Expect radar vectors to waypoint AKOMA.	-	VA	N
To AKOMA at or above 7000ft.	AKOMA [A070+] -	DF	N
To AKMET at or above 11000ft.	AKMET [A110+] -	TF	N
To AROSO.	AROSO	TF	N

**Tabular Descriptions**

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Distance (NM)	Turn Direction	Altitude	Speed Limit	Navigation Spec
VA	-	-	023(023.4)	-	-	A030	-	-
DF	AKOMA	-	-	-	-	A070+	-	RNAV1
TF	AKMET	-	307(307.4)	14.0	-	A110+	-	RNAV1
TF	AROSO	-	307(307.4)	24.0	-	-	-	RNAV1

**Radio Communications Failure Procedure**

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