

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

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.4

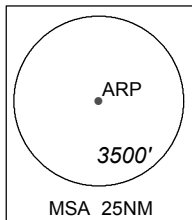
TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02C/20C
KADAR DEPARTURES
KADAR 1A (R02C)
KADAR 3B (R20C)**

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

DISTANCES IN NM



- NOTE:** RADAR REQUIRED
- NOTE:** RNAV-1 NAVIGATION SPECIFICATION
GNSS REQUIRED
- NOTE:** CLOSE-IN OBSTACLES (AIRCRAFT UP TO 80FT)
EXIST ON TAXIWAYS WEST OF RUNWAY 02C
- NOTE:** ACFT UNABLE TO FLY THE SID
PROFILE SHALL INFORM ATC
PRIOR TO DEPARTURE AND TO
EXPECT RADAR VECTORED,
IF NECESSARY
- NOTE:** WHEN TAKEN OFF THE SID,
AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3,
PARAGRAPH 3.3 [A] - FOR RWY 02C MINIMUM CLIMB GRADIENT AND
PARAGRAPH 3.4.1 - FOR RWY 20C MINIMUM CLIMB GRADIENT
- NOTE:** REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

GENERAL INFORMATION

**INITIAL CLIMB
3000FT**

ALL SIDs INCLUDE NOISE PREFERENTIAL ROUTES.

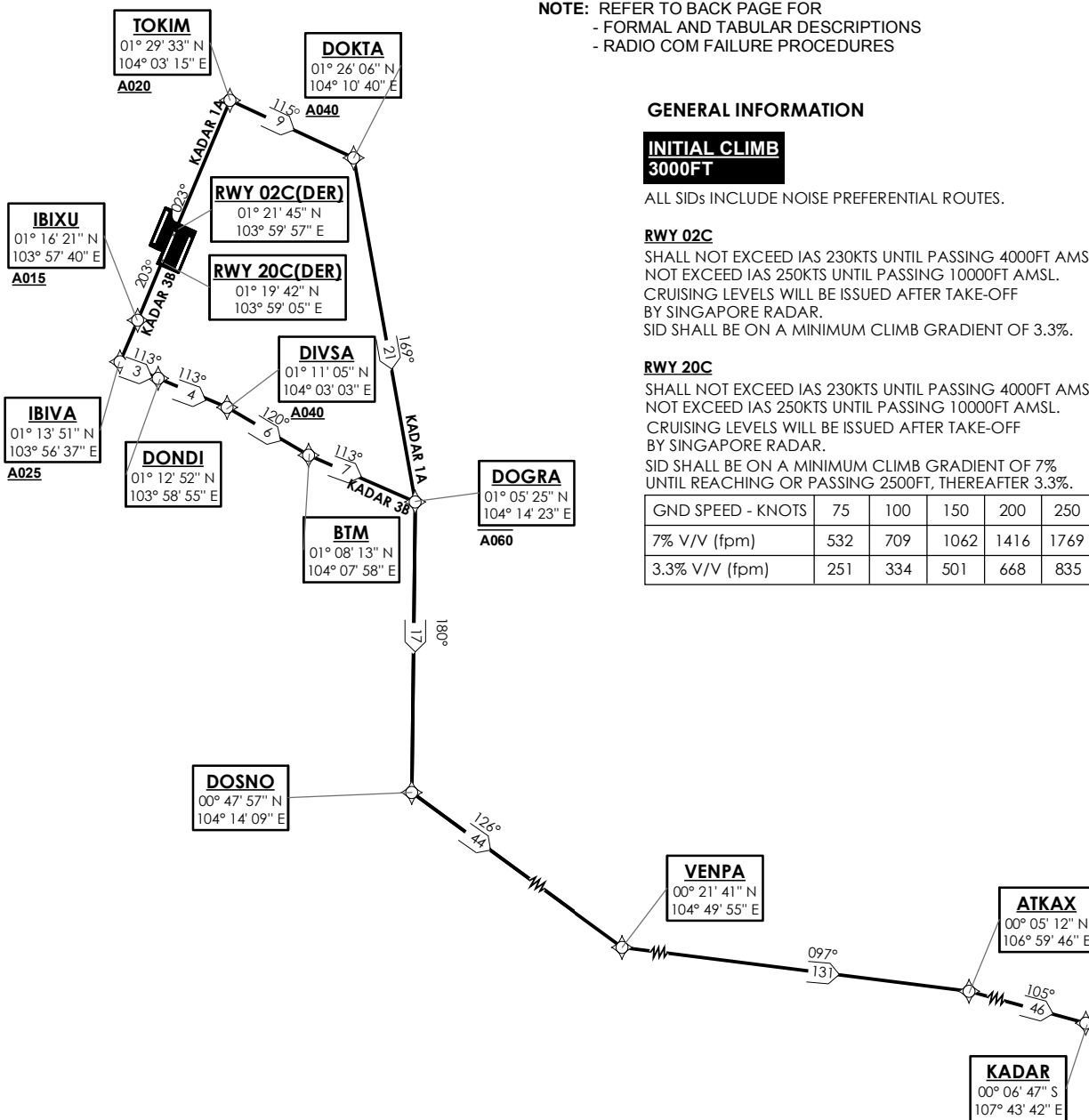
RWY 02C

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 3.3%.

RWY 20C

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 7%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

| | | | | | | |
|-------------------|-----|-----|------|------|------|------|
| GND SPEED - KNOTS | 75 | 100 | 150 | 200 | 250 | 300 |
| 7% V/V (fpm) | 532 | 709 | 1062 | 1416 | 1769 | 2123 |
| 3.3% V/V (fpm) | 251 | 334 | 501 | 668 | 835 | 1003 |



KADAR 1A (SID) RNAV GNSS RWY 02C - DESCRIPTIONS

Formal & Abbreviated Descriptions

| Formal Description | Abbreviated Description | Path Terminator | Fly-Over required |
|---|--------------------------|-----------------|-------------------|
| To TOKIM on course 023° at or above 2000ft, turn right. To DOKTA at or above 4000ft, turn right. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To ATKAX, turn right. To KADAR. | TOKIM [M023; A020+; R] - | CF | N |
| | DOKTA [A040+; R] - | TF | N |
| | DOGRA [A060-; R] - | TF | N |
| | DOSNO [L] - | TF | N |
| | VENPA [L] - | TF | N |
| | ATKAX [R] - | TF | N |
| | KADAR | TF | N |

Tabular Descriptions

| Path Term | Waypoint Name | Fly-Over | Course °M(°T) | Magnetic Variation | Turn Direction | Altitude | Speed Limit | Navigation Spec |
|-----------|---------------|----------|---------------|--------------------|----------------|----------|-------------|-----------------|
| CF | TOKIM | - | 023(023.4) | -0.4 | R | A020+ | - | RNAV1 |
| TF | DOKTA | - | 115(115.4) | -0.4 | R | A040+ | - | RNAV1 |
| TF | DOGRA | - | 169(169.4) | -0.4 | R | A060- | - | RNAV1 |
| TF | DOSNO | - | 180(180.4) | -0.4 | L | - | - | RNAV1 |
| TF | VENPA | - | 126(126.4) | -0.4 | L | - | - | RNAV1 |
| TF | ATKAX | - | 097(097.4) | -0.4 | R | - | - | RNAV1 |
| TF | KADAR | - | 105(105.4) | -0.4 | - | - | - | RNAV1 |

KADAR 3B (SID) RNAV GNSS RWY 20C - DESCRIPTIONS

Formal & Abbreviated Descriptions

| Formal Description | Abbreviated Description | Path Terminator | Fly-Over required |
|--|-------------------------|-----------------|-------------------|
| To IBIXU on course 203° at or above 1500ft. To IBIVA at or above 2500ft, turn left. To DONDI. To DIVSA at or above 4000ft, turn right. To BTM, turn left. To DOGRA at or below 6000ft, turn right. To DOSNO, turn left. To VENPA, turn left. To ATKAX, turn right. To KADAR. | IBIXU [M203; A015+] - | CF | N |
| | IBIVA [A025+; L] - | TF | N |
| | DONDI - | TF | N |
| | DIVSA [A040+; R] - | TF | N |
| | BTM [L] - | TF | N |
| | DOGRA [A060-; R] - | TF | N |
| | DOSNO [L] - | TF | N |
| | VENPA [L] - | TF | N |
| | ATKAX [R] - | TF | N |
| | KADAR | TF | N |

Tabular Descriptions

| Path Term | Waypoint Name | Fly-Over | Course °M(°T) | Magnetic Variation | Turn Direction | Altitude | Speed Limit | Navigation Spec |
|-----------|---------------|----------|---------------|--------------------|----------------|----------|-------------|-----------------|
| CF | IBIXU | - | 203(203.4) | -0.4 | - | A015+ | - | RNAV1 |
| TF | IBIVA | - | 203(203.4) | -0.4 | L | A025+ | - | RNAV1 |
| TF | DONDI | - | 113(113.4) | -0.4 | - | - | - | RNAV1 |
| TF | DIVSA | - | 113(113.4) | -0.4 | R | A040+ | - | RNAV1 |
| TF | BTM | - | 120(120.4) | -0.4 | L | - | - | RNAV1 |
| TF | DOGRA | - | 113(113.4) | -0.4 | R | A060- | - | RNAV1 |
| TF | DOSNO | - | 180(180.4) | -0.4 | L | - | - | RNAV1 |
| TF | VENPA | - | 126(126.4) | -0.4 | L | - | - | RNAV1 |
| TF | ATKAX | - | 097(097.4) | -0.4 | R | - | - | RNAV1 |
| TF | KADAR | - | 105(105.4) | -0.4 | - | - | - | RNAV1 |

RADIO COMMUNICATIONS FAILURE PROCEDURE

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