

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

TWR 118.6 / 118.25
APP 120.3
ACC 134.4

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

**SINGAPORE/Singapore Changi
RWY 02L/20R
KADAR DEPARTURES
KADAR 1E (R02L)
KADAR 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 VECTORING,
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.

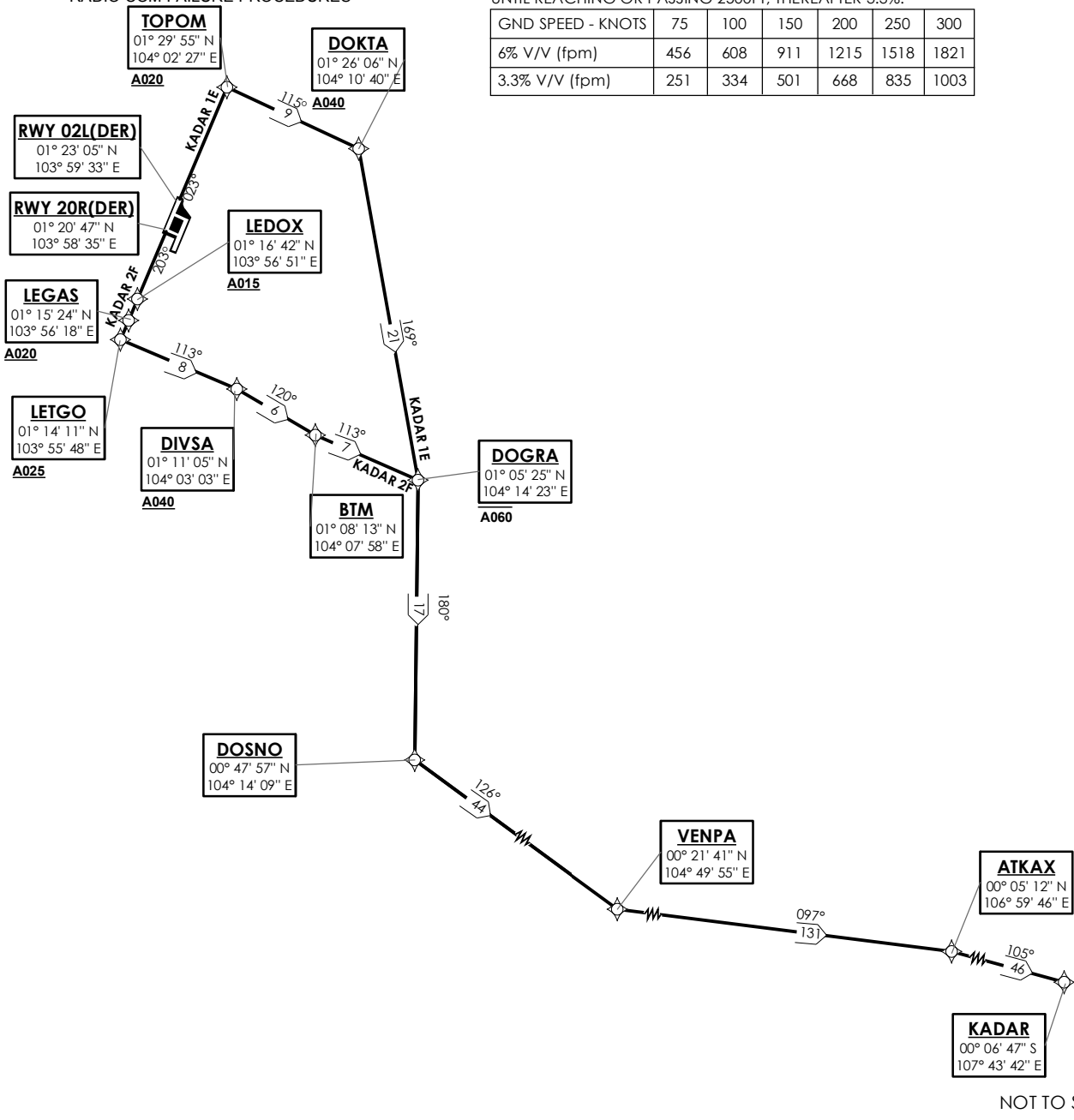
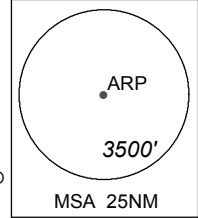
RWY 02L

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 PASSING 4000FT AMSL
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 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 |



KADAR 1E (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 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. | TOPOM [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 | TOPOM | - | 023(022.5) | -0.5 | R | A020+ | - | RNAV1 |
| TF | DOKTA | - | 115(114.5) | -0.5 | R | A040+ | - | RNAV1 |
| TF | DOGRA | - | 169(168.5) | -0.5 | R | A060- | - | RNAV1 |
| TF | DOSNO | - | 180(179.5) | -0.5 | L | - | - | RNAV1 |
| TF | VENPA | - | 126(125.5) | -0.5 | L | - | - | RNAV1 |
| TF | ATKAX | - | 097(096.5) | -0.5 | R | - | - | RNAV1 |
| TF | KADAR | - | 105(104.5) | -0.5 | - | - | - | RNAV1 |

KADAR 2F (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 LEGAS at or above 2000ft. To LETGO at or above 2500ft, turn left. 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. | LEDOX [M203; A015+] - | CF | N |
| | LEGAS [A020+] - | TF | N |
| | LETGO [A025+; L] - | 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 | LEDOX | - | 203(202.5) | -0.5 | - | A015+ | - | RNAV1 |
| TF | LEGAS | - | 203(202.5) | -0.5 | - | A020+ | - | RNAV1 |
| TF | LETGO | - | 203(202.5) | -0.5 | L | A025+ | - | RNAV1 |
| TF | DIVSA | - | 113(112.5) | -0.5 | R | A040+ | - | RNAV1 |
| TF | BTM | - | 120(119.5) | -0.5 | L | - | - | RNAV1 |
| TF | DOGRA | - | 113(112.5) | -0.5 | R | A060- | - | RNAV1 |
| TF | DOSNO | - | 180(179.5) | -0.5 | L | - | - | RNAV1 |
| TF | VENPA | - | 126(125.5) | -0.5 | L | - | - | RNAV1 |
| TF | ATKAX | - | 097(096.5) | -0.5 | R | - | - | RNAV1 |
| TF | KADAR | - | 105(104.5) | -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. |