## AD 2 AERODROMES

### RJKN AD 2.1 AERODROME LOCATION INDICATOR AND NAME

# RJKN - TOKUNOSHIMA

### RJKN AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

| | | |
|---|---|---|
| 1 | ARP coordinates and site at AD | *275011N/1285253E*<br>006° /1.0km FM RWY 01 THR |
| 2 | Direction and distance from (city) | 1km W of ASAMA |
| 3 | Elevation/ Reference temperature | 8ft / 32°C(2004-2008) |
| 4 | Geoid undulation at AD ELEV PSN | Nil |
| 5 | MAG VAR/ Annual change | 6°W(2021) / 5'W |
| 6 | AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses | KAGOSHIMA PREF. PUBLIC AP.<br>1-1, Asama, Amagi-cho, Oshima-gun, Kagoshima Pref. 891-8605 JAPAN<br>Tel:0997-85-2238<br>Fax:0997-85-4054 |
| 7 | Types of traffic permitted(IFR/ VFR) | IFR/VFR |
| 8 | Remarks | Nil |

### RJKN AD 2.3 OPERATIONAL HOURS

| | | |
|---|---|---|
| 1 | AD Administration | 2330 - 1030 |
| 2 | Customs and immigration | On request<br>Customs: 099-260-3125<br>Immigration: 099-222-5658 |
| 3 | Health and sanitation | Quarantine(human): On request(099-222-8670)<br>Quarantine(animal, plant): Nil |
| 4 | AIS Briefing Office | Nil |
| 5 | ATS Reporting Office(ARO) | Nil |
| 6 | MET Briefing Office | H24 (FUKUOKA) |
| 7 | ATS | 2330 - 1030<br>Remarks: AFIS provided by Kagoshima Airport Office. |
| 8 | Fuelling | 2330 - 1030 |
| 9 | Handling | 2330 - 1030 |
| 10 | Security | 2330 - 1030 |
| 11 | De-icing | Nil |
| 12 | Remarks | Nil |

## RJKN AD 2.4 HANDLING SERVICES AND FACILITIES

| | | |
|---|---|---|
| 1 | Cargo-handling facilities | Nil |
| 2 | Fuel/ oil types | JET A-1 |
| 3 | Fuelling facilities/ capacity | Fuelling facilities : Fuel truck, Capacity : 24kl / h |
| 4 | De-icing facilities | Nil |
| 5 | Hangar space for visiting aircraft | Nil |
| 6 | Repair facilities for visiting aircraft | Nil |
| 7 | Remarks | Nil |

## RJKN AD 2.5 PASSENGER FACILITIES

| | | |
|---|---|---|
| 1 | Hotels | In the city |
| 2 | Restaurants | Available, not continuous |
| 3 | Transportation | Buses, taxies |
| 4 | Medical facilities | In the city |
| 5 | Bank and Post Office | In the city |
| 6 | Tourist Office | Not available |
| 7 | Remarks | Nil |

## RJKN AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

| | | |
|---|---|---|
| 1 | AD category for fire fighting | CAT : 7 |
| 2 | Rescue equipment | Chemical fire fighting truck x 2 |
| 3 | Capability for removal of disabled aircraft | Nil |
| 4 | Remarks | Nil |

## RJKN AD 2.7 SEASONAL AVAILABILITY-CLEARING

| | | |
|---|---|---|
| 1 | Types of clearing equipment | Not applicable |
| 2 | Clearance priorities | Nil |
| 3 | Remarks | Nil |

## RJKN AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

| | | |
|---|---|---|
| 1 | Apron surface and strength | Apron<br>Surface: Cement-concrete, Strength: PCR 687/R/B/W/T<br>Apron(for light ACFT)<br>Surface: Asphalt-concrete, Strength : PCR 196/F/C/X/T |
| 2 | Taxiway width, surface and strength | T1, T2, P1<br>Width: 23m, Surface : Aspahlt-concrete, Strength: PCR 616/F/C/X/T<br>T3, P2<br>Width: 18m, Surface : Aspahlt-concrete, Strength: PCR 196/F/C/X/T |
| 3 | ACL and elevation | Not available |
| 4 | VOR checkpoints | Nil |
| 5 | INS checkpoints | Nil |
| 6 | Remarks | Nil |

## RJKN AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

| | | |
|---|---|---|
| 1 | Use of aircraft stand ID signs, TWY guide lines and Visual docking/ parking guidance system of aircraft stands | Nil |
| 2 | RWY and TWY markings and LGT | RWY:01/19<br>(Marking)RWY designation, RWY CL, RWY THR, RWY side stripe<br>(LGT)RCLL, REDL, RTHL, RENL<br><br>TWY:<br>(Marking) TWY CL, RWY HLDG PSN (T1-T3), TWY side stripe,<br>(LGT) TWY edge LGT, TWY CL LGT (T1, T2, P1) |
| 3 | Stop bars | Nil |
| 4 | Remarks | (Marking) Overrun area<br>(LGT) Apron flood LGT |

## RJKN AD 2.10 AERODROME OBSTACLES

In Area2 See Obstacle data

In Area3 To be developed

## RJKN AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

| | | |
|---|---|---|
| 1 | Associated MET Office | FUKUOKA |
| 2 | Hours of service<br>MET Office outside hours | H24 (FUKUOKA) |
| 3 | Office responsible for TAF preparation<br>Periods of validity | Nil |
| 4 | Trend forecast<br>Interval of issuance | Nil |
| 5 | Briefing/ consultation provided | Briefing is available upon inquiry at FUKUOKA |
| 6 | Flight documentation<br>Language(s) used | C<br>En |
| 7 | Charts and other information available for briefing or consultation | $S_6$, $U_{85}$, $U_7$, $U_5$, $U_3$, $U_{25}$, $U_2/T_r$, $P_S$, $P_5$, $P_3$, $P_{25}$, $P_{SWE}$, $P_{SWF}$, $P_{SWG}$, $P_{SWI}$, $P_{SWM}$, $P_{SW}$(domestic), E, C, $W_E$, $W_F$, $W_G$, $W_I$, W, N |
| 8 | Supplementary equipment available for providing information | Nil |
| 9 | ATS units provided with information | RADIO |
| 10 | Additional information(limitation of service, etc.) | Nil |

## RJKN AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

| Designations RWY NR | TRUE BRG | Dimensions of RWY(M) | Strength(PCR) and surface of RWY | THR coordinates THR geoid undulation | THR elevation and highest elevation of TDZ of precision APP RWY |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 01 | 006.12° | 2000×45 | PCR 616/F/C/X/T Asphalt-Concrete | Nil | THR ELEV : 17ft |
| 19 | 186.12° | 2000×45 | PCR 616/F/C/X/T Asphalt-Concrete | Nil | THR ELEV : 14ft |

| Slope of RWY | Strip Dimensions(M) | RESA(Overrun) Dimensions(M) | Remarks |
|---|---|---|---|
| 7 | 10 | 11 | 14 |
| See AD2.24 AD chart | 2120x150<br>2120x150 | 45x150<br>44x150 | RWY Grooving: 2000mx30m |

## RJKN AD 2.13 DECLARED DISTANCES

| RWY Designator | TORA (m) | TODA (m) | ASDA (m) | LDA (m) | Remarks |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 01 | 2000 | 2000 | 2000 | 2000 | Nil |
| 19 | 2000 | 2000 | 2000 | 2000 | Nil |

## RJKN AD 2.14 APPROACH AND RUNWAY LIGHTING

| RWY Designator | APCH LGT type LEN INTST | RTHL Color WBAR | PAPI (VASIS) Angle DIST FM THR MEHT | RTZL LEN | RCLL LEN Spacing Color INTST | REDL LEN Spacing Color INTST | RENL Color WBAR | STWL LEN Color |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 01 | Nil | Green<br>- | PAPI<br>3.0°/Left<br>417m<br>61ft | Nil | 2000m<br>30m<br>Coded color<br>(White/Red)<br>LIH | 2000m<br>60m<br>Coded color<br>(White/Yellow)<br>LIH | Red | Nil(*2) |
| 19 | SALS<br>(*1)<br>420m<br>LIH | Green<br>- | PAPI<br>3.0°/LEFT<br>397m<br>61ft | NIL | 2000m<br>30m<br>Coded color<br>(White/Red)<br>LIH | 2000m<br>60m<br>Coded color<br>(white/Yellow)<br>LIH | Red | Nil(*2) |
| Remarks | | | | | | | | |
| 10 | | | | | | | | |
| SALS with RAI(LEN:480m)(*1)<br>Overrun area edge LGT(LEN:60m Color:Red)(*2)<br>RWY THR ID LGT for RWY 01 THR(Color:White) | | | | | | | | |

## RJKN AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

| | | |
|---|---|---|
| 1 | ABN/IBN location, characteristics and hours of operation | ABN: *275003N/1285301E*, White/Green EV4.3sec, HO |
| 2 | LDI location and LGT<br>Anemometer location and LGT | LDI : Nil<br>Anemometer :<br>RWY 01 : 90m FM RWY 01 THR, LGTD<br>RWY 19 : 260m FM RWY 19 THR, LGTD |
| 3 | TWY edge and centerline lighting | TWY edge and center line lights installed, see AD2.9 |
| 4 | Secondary power supply/ switch-over time | Within 15 sec : SALS, PAPI, RAI, ABN, REDL, RENL, RTHL, RCLL, Overrun area edge LGT, TWY CL LGT, TWY edge LGT, WDI LGT, RWY THR ID LGT |
| 5 | Remarks | Nil |

## RJKN AD 2.16 HELICOPTER LANDING AREA

| |
|---|
| Nil |

## RJKN AD 2.17 ATS AIRSPACE

| Designation and lateral limits | | Vertical limits (ft) | Airspace classification | ATS unit call sign Language | Remarks |
|---|---|---|---|---|---|
| 1 | | 2 | 3 | 4 | 6 |
| Tokunoshima Information Zone | Area within a radius of 5nm (9km) of Tokunoshima ARP | 3,000 or below | E | TOKUNOSHIMA RADIO En | |
| Naha ACA | See ROAH attached chart | | E | Naha APP En | |

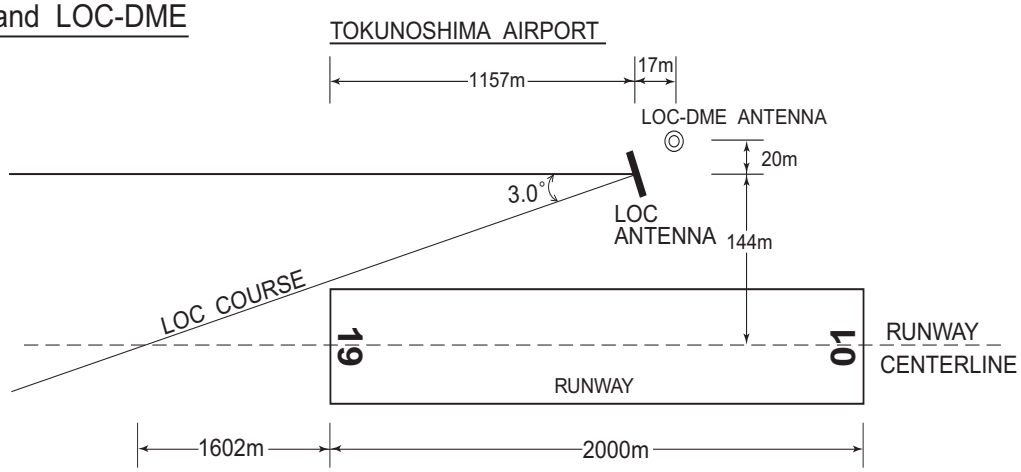
## RJKN AD 2.18 ATS COMMUNICATION FACILITIES

| Service designation | Call sign | Frequency | Hours of operation | Remarks |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| APP | NAHA APPROACH | 124.95MHz<br>280.1MHz | 2330 - 1030 | |
| AFIS | TOKUNOSHIMA RADIO | 122.7MHz | 2330 - 1030 | Operated by Kagoshima Airport Office.<br>Unable contact radial 055°(W-13) beyond 20NM at or BLW 4,000ft. |

## RJKN AD 2.19 RADIO NAVIGATION AND LANDING AIDS

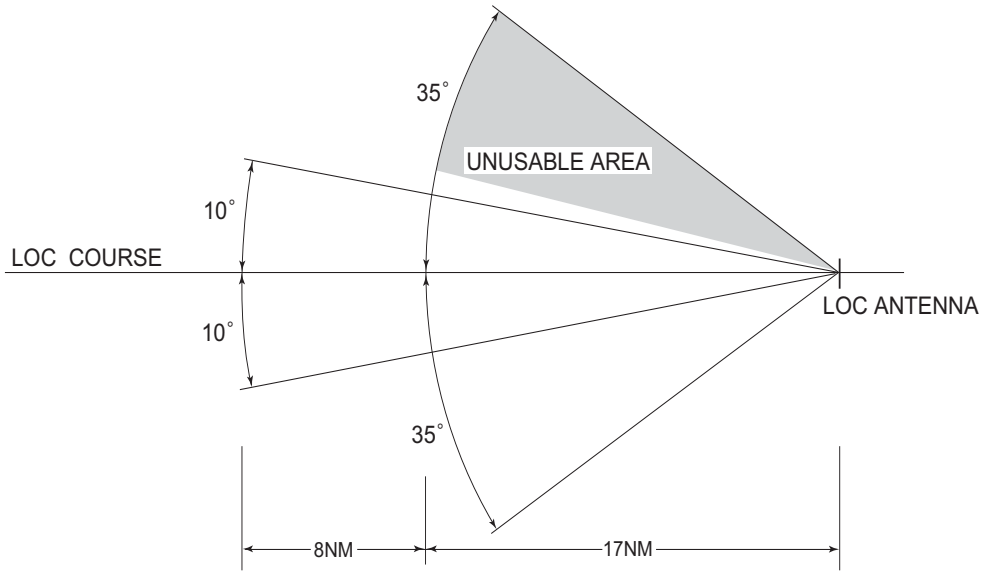
| Type of aid (VOR declination) | ID | Frequency | Hours of operation | Position of transmitting antenna coordinates | Elevation of DME transmitting antenna | Remarks |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| VOR (5°W / 2020) | TKE | 110.45MHz | H24 | *274929.20N/ 1285255.98E* | | VOR unusable :<br>020°-040° beyond 20nm BLW 4000ft.<br>040°-070° beyond 20nm BLW 5000ft.<br>070°-100° beyond 20nm BLW 4000ft.<br>100°-120° beyond 30nm BLW 5000ft.<br>120°-130° beyond 20nm BLW 5000ft.<br>130°-140° beyond 30nm BLW 5000ft. |
| DME | TKE | 1128MHz (CH-41Y) | H24 | *274929.20N/ 1285255.98E* | 51ft | DME unusable :<br>020°-040° beyond 20nm BLW 4000ft.<br>040°-070° beyond 20nm BLW 5000ft.<br>070°-100° beyond 20nm BLW 4000ft.<br>100°-110° beyond 30nm BLW 5000ft.<br>110°-120° beyond 20nm BLW 5000ft.<br>120°-130° beyond 15nm BLW 5000ft.<br>130°-140° beyond 30nm BLW 5000ft. |
| LOC 19 | ITK | 110.1MHz | 2330 - 1030 | *275005.64N/ 1285257.59E* | | LOC : 843m (2756ft) inside FM RWY 01 THR, 144m (472ft) E of RCL, BRG (MAG) 188°.<br>(1)OFFSET angle 3.0°<br>(2) Unusable: beyond 12°east(90Hz) side of course. |
| LOC-DME 19 | ITK | 999MHz (CH-38X) | 2330 - 1030 | *275005.01N/ 1285258.17E* | 27ft | DME : 826m (2710ft) inside FM RWY 01 THR, 164m (538ft) E of RCL. |

## LOC and LOC-DME




REMARKS : 1. LOC OFF SET ANGLE 3.0°
2. LOC beam BRG(MAG) 188°
3. ELEV of LOC-DME 8.2m(27ft)

■ LOC UNUSABLE : BEYOND 12DEGREES EAST(90Hz) SIDE OF COURSE.



## RJKN AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

Nil

2. Taxiing to and from stands

Nil

3. Parking area for small aircraft(General aviation)

Nil

4. Parking area for helicopters

Nil

5. Apron - taxiing during winter conditions

Nil

6. Taxiing - limitations

Nil

7. School and training flights - technical test flights - use of runways

Nil

8. Helicopter traffic - limitation

Nil

9. Removal of disabled aircraft from runways

Nil

## RJKN AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

## RJKN AD 2.22 FLIGHT PROCEDURES

**1.TAKE OFF MINIMA**

| | RWY | ACFT CAT | REDL & RCLL | | REDL or RCLL or RCL Marking | | NIL (DAYTIME ONLY) | |
|---|---|---|---|---|---|---|---|---|
| | | | RVR | VIS | RVR | VIS | RVR | VIS |
| Multi-Engine ACFT with TKOF ALTN AP FILED | 01 | A,B,C,D | - | 400m | - | 400m | - | 500m |
| | 19 | A,B,C,D | - | 400m | - | 400m | - | 500m |
| OTHER | 01 | A,B,C,D | AVBL LDG MINIMA | | | | | |
| | 19 | | | | | | | |

**2.Lost communication procedures for arrival aircraft under radar navigational guidance**
If radio communications with Naha Approach are lost for one minute, squawk Mode A/3 Code 7600 and;
1) Contact Tokunoshima Radio.
2) If unable, proceed in accordance with Visual Flight Rules.
3) If unable, proceed to Tokunoshima VOR at the last assigned altitude, or 3,500 feet whichever is higher, and execute instrument approach.

NOTE: Procedures other than above will be issued when situation requires.

## RJKN AD 2.23 ADDITIONAL INFORMATION

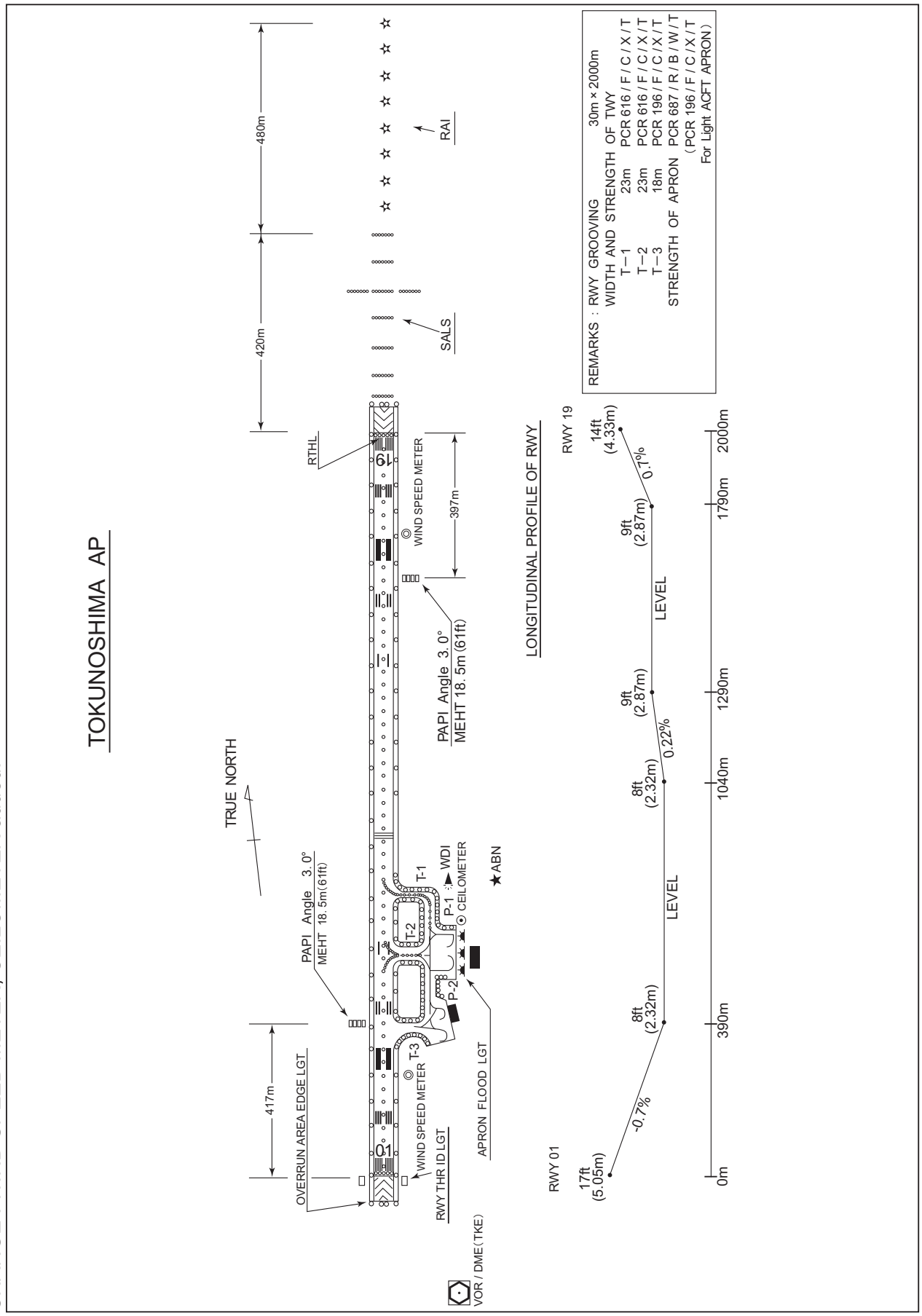
Nil

## RJKN AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome/Heliport Chart
Standard Departure Chart - Instrument (TOKUNOSHIMA)
Standard Departure Chart - Instrument (ANOXA-RNAV)
Standard Departure Chart - Instrument (YUWAN-RNAV)
Standard Arrival Chart - Instrument (SHODA-RNAV, ISENN-RNAV)
Standard Arrival Chart - Instrument (TOROS NORTH,TOROS EAST-RNAV)
Standard Arrival Chart - Instrument (SOTEZ ARRIVAL)
Instrument Approach Chart (LOC Z RWY 19)
Instrument Approach Chart (LOC Y RWY 19)
Instrument Approach Chart (VOR RWY 01)
Instrument Approach Chart (RNP Z RWY 01)
Instrument Approach Chart (RNP Y RWY 01 (AR))
Other Chart (Visual REP)
Other Chart (MVA CHART)

RJKN / TOKUNOSHIMA AD CHART

CHANGE : WIND SPEED METER, CEILOMETER added.



**STANDARD DEPARTURE CHART -INSTRUMENT**

RJKN / TOKUNOSHIMA SID and TRANSITION

TOKUNOSHIMA FIVE DEPARTURE

RWY01 : Climb via TKE R359 to 5.0DME, turn left,...
RWY19 : Climb RWY HDG to 700FT, turn right,...
...direct to TKE VOR/DME.
Cross TKE VOR/DME at or above 3000FT.

Note RWY01 : 4.9% climb gradient required up to 1600FT.
OBST ALT 427FT located at 1.4NM 029˚ FM end of RWY01.
Note RWY19 : No turn before DER.

KUNIG TRANSITION

From over TKE VOR/DME, via TKE R209 to KUNIG or ONC VORTAC.
Cross KUNIG or ONC VORTAC at assigned altitude.

MEKAX TRANSITION

From over TKE VOR/DME, via TKE R025 to 15.0DME, via ONC R026 to MEKAX.
Cross MEKAX at or above 11000FT.

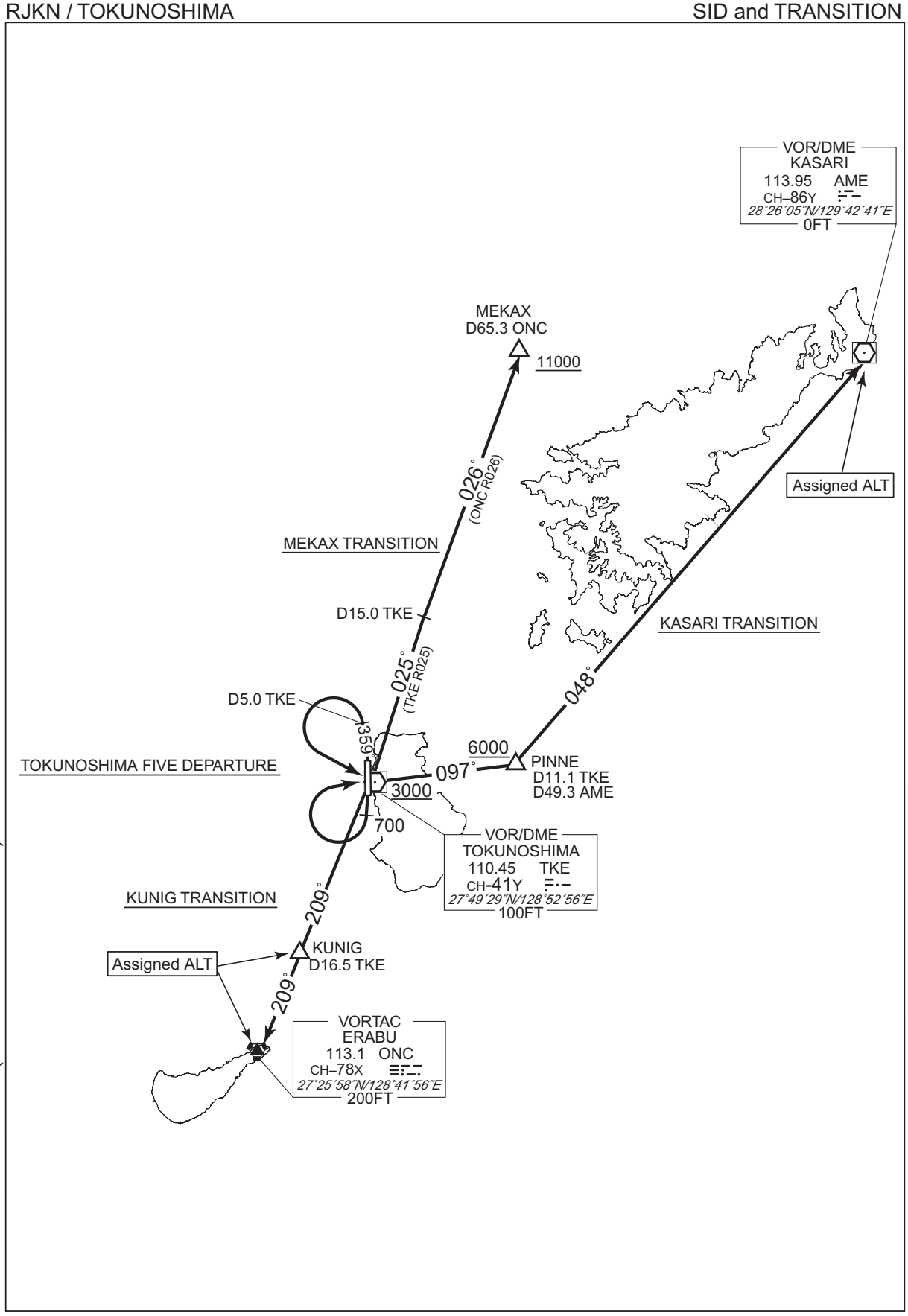
KASARI TRANSITION

From over TKE VOR/DME, via TKE R097 to PINNE, via AME R228 to AME VOR/DME.
Cross PINNE at or above 6000FT, cross AME VOR/DME at assigned altitude.

CHANGE : PROC course(KASARI TRANSITION).

**STANDARD DEPARTURE CHART -INSTRUMENT**

RJKN / TOKUNOSHIMA SID and TRANSITION



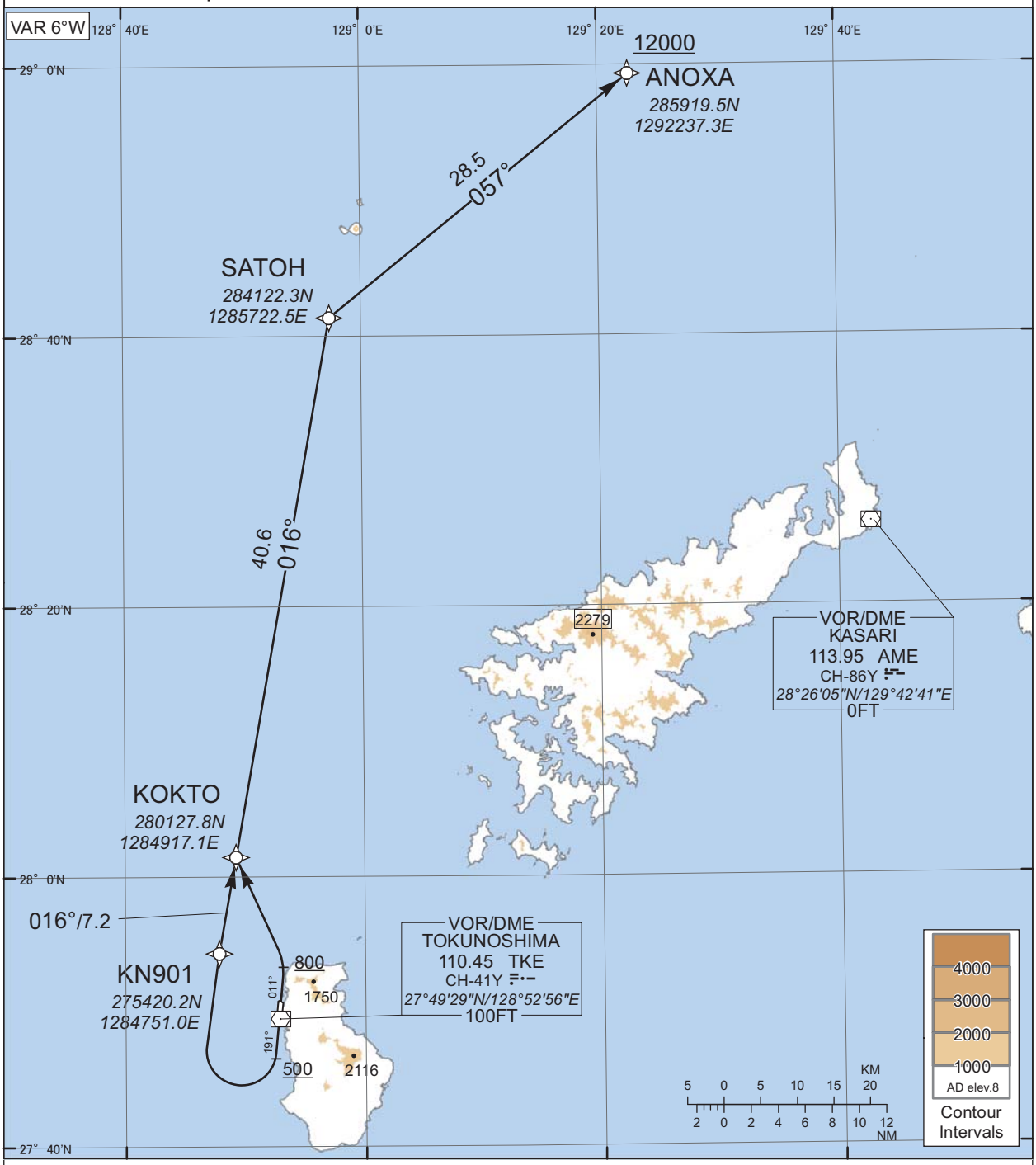

CHANGE : PROC course(KASARI TRANSITION).

STANDARD DEPARTURE CHART -INSTRUMENT

RJKN / TOKUNOSHIMA — RNAV SID

| ANOXA TWO DEPARTURE | RNP1 |
|---|---|

Note GNSS required.




CHANGE : Navigation Specification(Basic RNP1→RNP1).

RWY01 : Climb on HDG011° at or above 800FT, turn left direct to KOKTO, to SATOH, to ANOXA at or above 12000FT.

RWY19 : Climb on HDG191° at or above 500FT, turn right direct to KN901, to KOKTO, to SATOH, to ANOXA at or above 12000FT.

Note RWY01 : 6.1% climb gradient required up to 800FT.
OBST ALT 460FT located at 1.4NM 029° FM end of RWY01.

**STANDARD DEPARTURE CHART -INSTRUMENT**

RJKN / TOKUNOSHIMA RNAV SID

## ANOXA TWO DEPARTURE

### RWY01

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | VA | - | - | 011 (005.1) | -6.1 | - | - | +800 | - | - | RNP1 |
| 002 | DF | KOKTO | - | - | -6.1 | - | L | - | - | - | RNP1 |
| 003 | TF | SATOH | - | 016 (010.1) | -6.1 | 40.6 | - | - | - | - | RNP1 |
| 004 | TF | ANOXA | - | 057 (050.8) | -6.1 | 28.5 | - | +12000 | - | - | RNP1 |

### RWY19

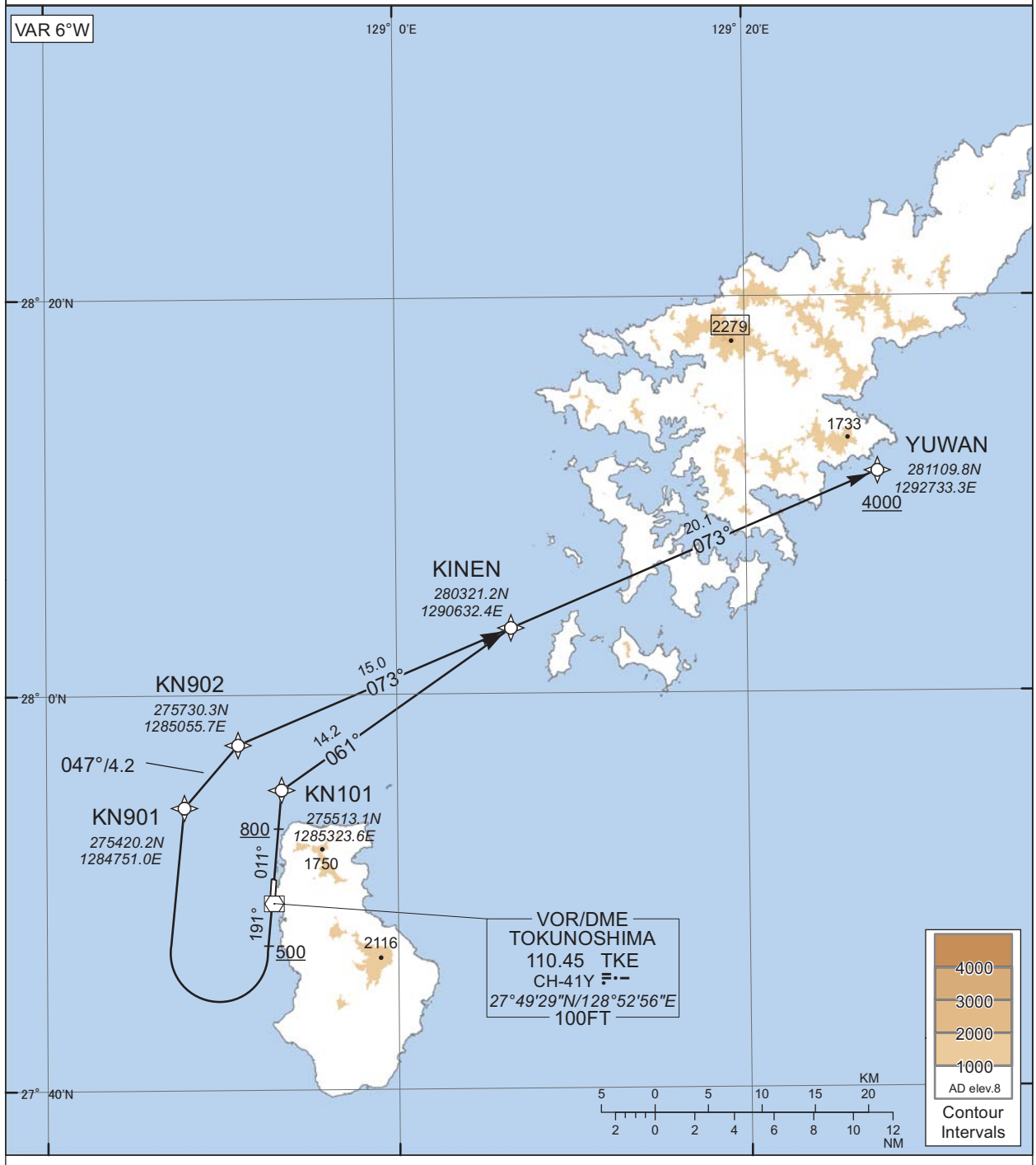
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | VA | - | - | 191 (185.1) | -6.1 | - | - | +500 | - | - | RNP1 |
| 002 | DF | KN901 | - | - | -6.1 | - | R | - | - | - | RNP1 |
| 003 | TF | KOKTO | - | 016 (010.1) | -6.1 | 7.2 | - | - | - | - | RNP1 |
| 004 | TF | SATOH | - | 016 (010.1) | -6.1 | 40.6 | - | - | - | - | RNP1 |
| 005 | TF | ANOXA | - | 057 (050.8) | -6.1 | 28.5 | - | +12000 | - | - | RNP1 |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART -INSTRUMENT

RJKN / TOKUNOSHIMA — RNAV SID

| YUWAN TWO DEPARTURE | RNP1 |
|---|---|
| Note GNSS required. | |




CHANGE : Navigation Specification(Basic RNP1→RNP1).

RWY01 : Climb on HDG011° at or above 800FT, direct to KN101, to KINEN, to YUWAN at or above 4000FT.

RWY19 : Climb on HDG191° at or above 500FT, turn right direct to KN901, to KN902, to KINEN, to YUWAN at or above 4000FT.

Note RWY01 : 6.1% climb gradient required up to 800FT.
OBST ALT 460FT located at 1.4NM 029° FM end of RWY01.

STANDARD DEPARTURE CHART -INSTRUMENT

RJKN / TOKUNOSHIMA RNAV SID

## YUWAN TWO DEPARTURE

### RWY01

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | VA | - | - | 011 (005.1) | -6.1 | - | - | +800 | - | - | RNP1 |
| 002 | DF | KN101 | - | - | -6.1 | - | - | - | - | - | RNP1 |
| 003 | TF | KINEN | - | 061 (054.9) | -6.1 | 14.2 | - | - | - | - | RNP1 |
| 004 | TF | YUWAN | - | 073 (067.1) | -6.1 | 20.1 | - | +4000 | - | - | RNP1 |

### RWY19

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | VA | - | - | 191 (185.1) | -6.1 | - | - | +500 | - | - | RNP1 |
| 002 | DF | KN901 | - | - | -6.1 | - | R | - | - | - | RNP1 |
| 003 | TF | KN902 | - | 047 (040.6) | -6.1 | 4.2 | - | - | - | - | RNP1 |
| 004 | TF | KINEN | - | 073 (066.9) | -6.1 | 15.0 | - | - | - | - | RNP1 |
| 005 | TF | YUWAN | - | 073 (067.1) | -6.1 | 20.1 | - | +4000 | - | - | RNP1 |

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

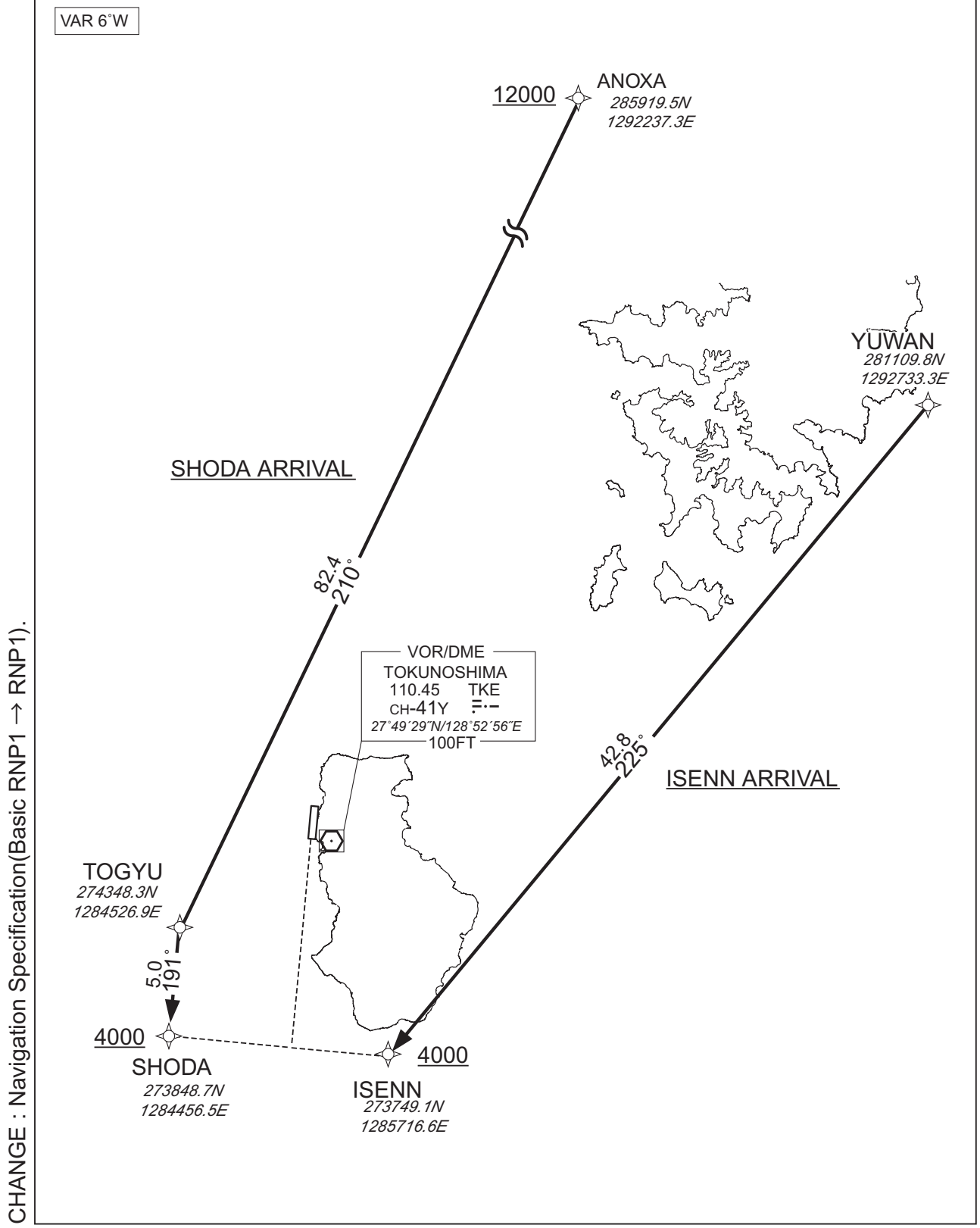
**STANDARD ARRIVAL CHART - INSTRUMENT**

RJKN / TOKUNOSHIMA

RNAV STAR RWY01

| SHODA ARRIVAL<br>ISENN ARRIVAL | RNP1 |
|---|---|

Note GNSS required.



**STANDARD ARRIVAL CHART - INSTRUMENT**

RJKN / TOKUNOSHIMA RNAV STAR RWY01

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

## SHODA ARRIVAL

From ANOXA at or above 12000FT, to TOGYU, to SHODA at or above 4000FT.

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | ANOXA | - | - | -6.1 | - | - | +12000 | - | - | RNP1 |
| 002 | TF | TOGYU | - | 210 (203.6) | -6.1 | 82.4 | - | - | - | - | RNP1 |
| 003 | TF | SHODA | - | 191 (185.1) | -6.1 | 5.0 | - | +4000 | - | - | RNP1 |

## ISENN ARRIVAL

From YUWAN, to ISENN at or above 4000FT.

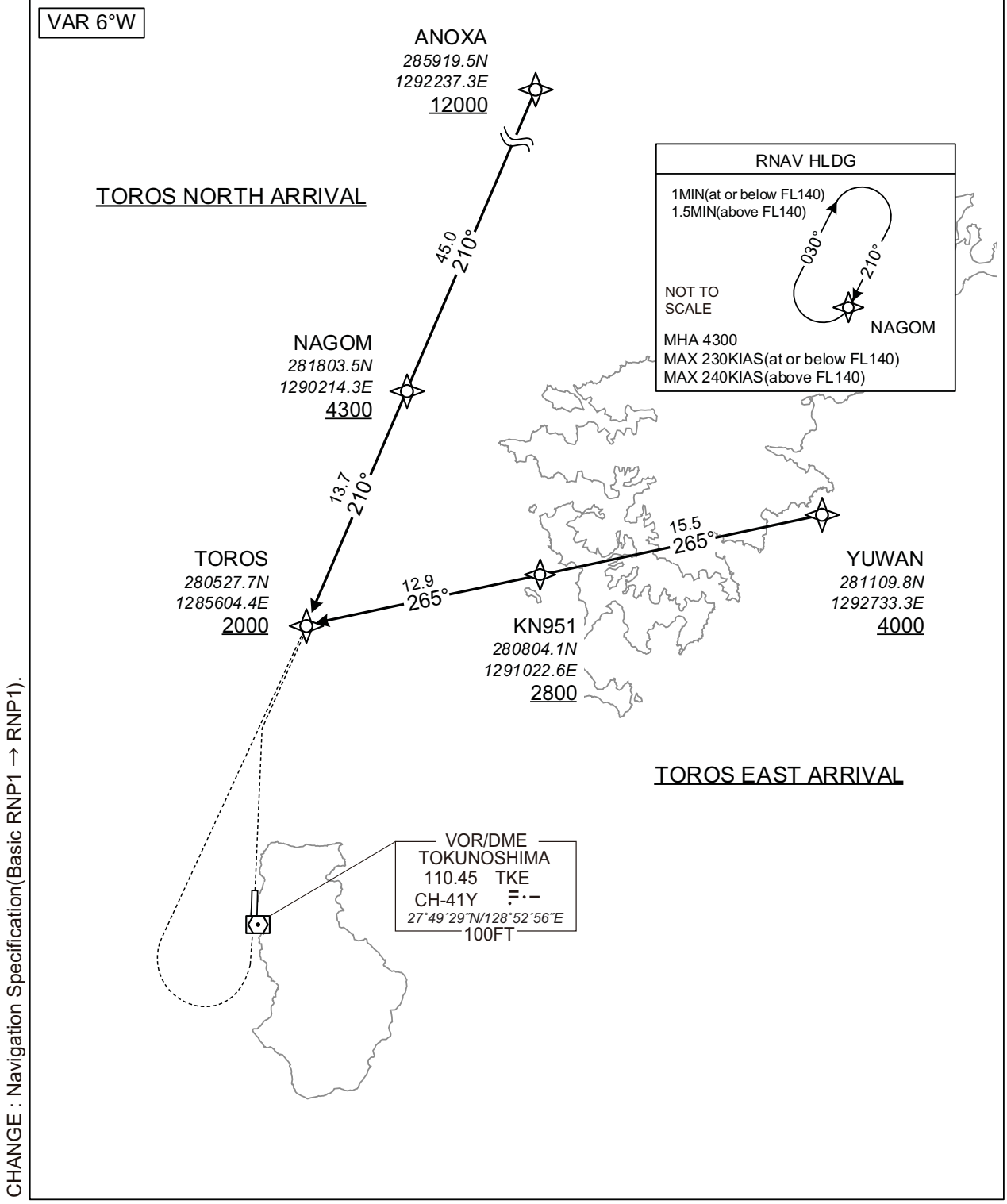
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | YUWAN | - | - | -6.1 | - | - | - | - | - | RNP1 |
| 002 | TF | ISENN | - | 225 (218.9) | -6.1 | 42.8 | - | +4000 | - | - | RNP1 |

**STANDARD ARRIVAL CHART - INSTRUMENT**

RJKN / TOKUNOSHIMA RNAV STAR

| TOROS NORTH ARRIVAL<br>TOROS EAST ARRIVAL | RNP1 |
|---|---|

Note GNSS required.




CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT

RJKN / TOKUNOSHIMA RNAV STAR

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

## TOROS NORTH ARRIVAL

From ANOXA at or above 12000FT, to NAGOM at or above 4300FT, to TOROS at or above 2000FT.

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | ANOXA | - | - | -6.2 | - | - | +12000 | - | - | RNP1 |
| 002 | TF | NAGOM | - | 210 (203.5) | -6.2 | 45.0 | - | +4300 | - | - | RNP1 |
| 003 | TF | TOROS | - | 210 (203.4) | -6.2 | 13.7 | - | +2000 | - | - | RNP1 |

## TOROS EAST ARRIVAL

From YUWAN at or above 4000FT, to KN951 at or above 2800FT, to TOROS at or above 2000FT.

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | YUWAN | - | - | -6.2 | - | - | +4000 | - | - | RNP1 |
| 002 | TF | KN951 | - | 265 (258.5) | -6.2 | 15.5 | - | +2800 | - | - | RNP1 |
| 003 | TF | TOROS | - | 265 (258.4) | -6.2 | 12.9 | - | +2000 | - | - | RNP1 |

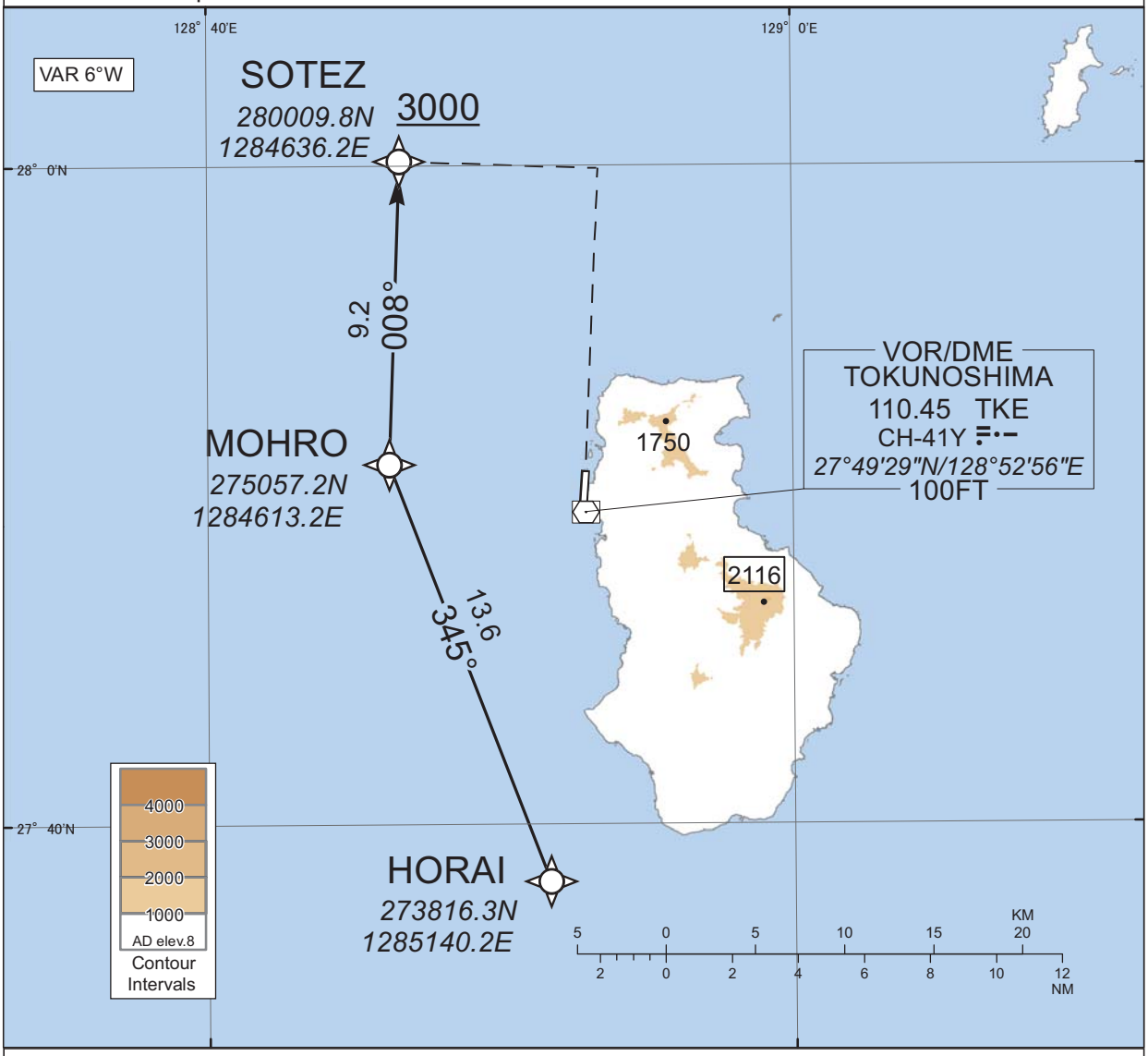
| Path | Waypoint Identifier | Inbound Course °M(°T) | Magnetic Variation | Outbound Time (MIN) | Turn Direction | Minimum Altitude (FT) | Maximum Altitude (FT) | Speed (KIAS) | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|
| Hold | NAGOM | 210 (203.4) | -6.2 | 1.0 (-14000)<br>1.5 (+14001) | R | 4300 | - | -230 (-14000)<br>-240 (+14001) | RNP1 |

**STANDARD ARRIVAL CHART - INSTRUMENT**

RJKN / TOKUNOSHIMA — RNAV STAR RWY19

| SOTEZ ARRIVAL | RNP1 |
|---|---|

Note GNSS required.




From HORAI, to MOHRO, to SOTEZ at or above 3000FT.

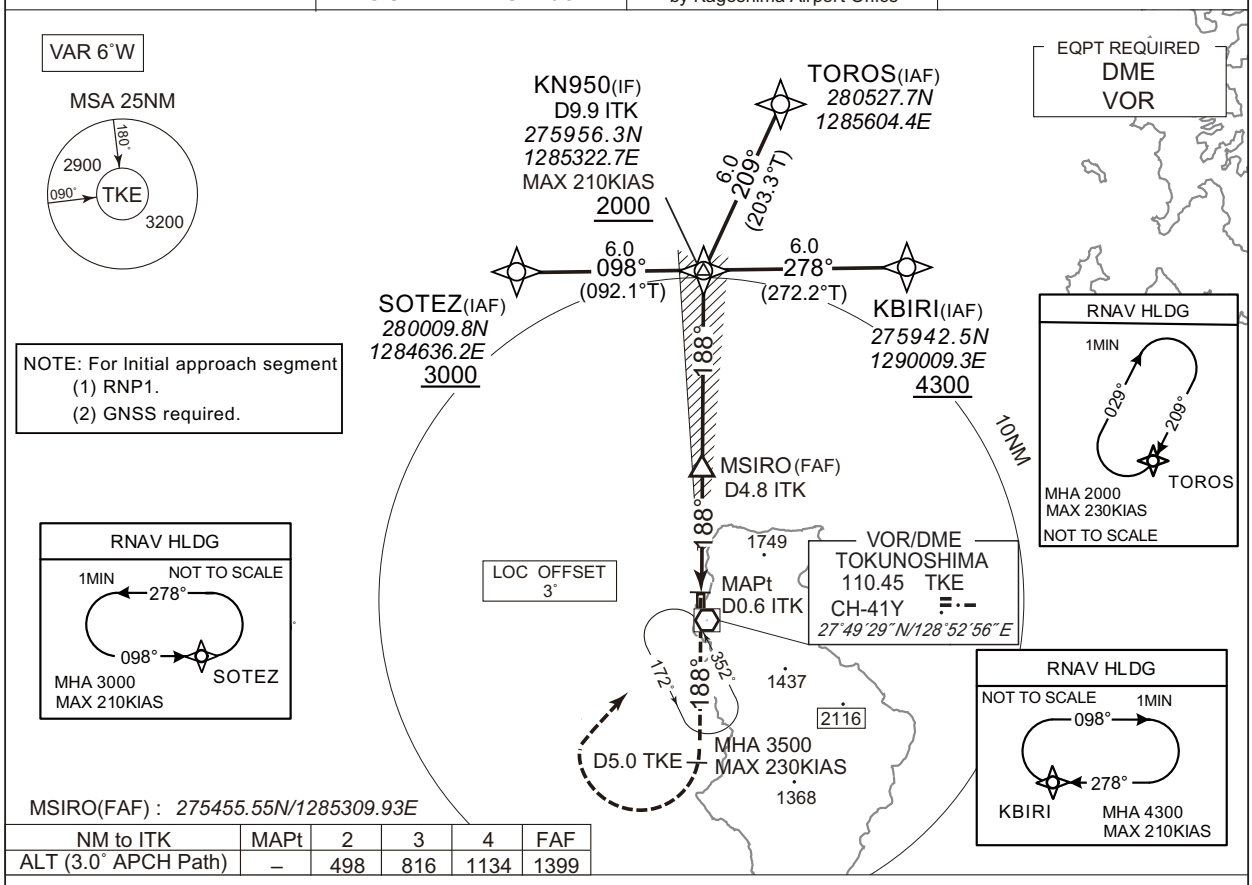
| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | Vertical Angle | Navigation Specification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | HORAI | - | - | -6.1 | - | - | - | - | - | RNP1 |
| 002 | TF | MOHRO | - | 345 (339.2) | -6.1 | 13.6 | - | - | - | - | RNP1 |
| 003 | TF | SOTEZ | - | 008 (002.1) | -6.1 | 9.2 | - | +3000 | - | - | RNP1 |

CHANGE : Navigation Specification(Basic RNP1→RNP1).

**INSTRUMENT APPROACH CHART**

RJKN / TOKUNOSHIMA — LOC Z RWY19

| NAHA APP | LOC | TOKUNOSHIMA RADIO | RADAR AVBL |
|---|---|---|---|
| 124.95 – 280.1 | 110.1 ITK<br>LOC – DME CH-38X | 122.7<br>AFIS provided by Kagoshima Airport Office | |



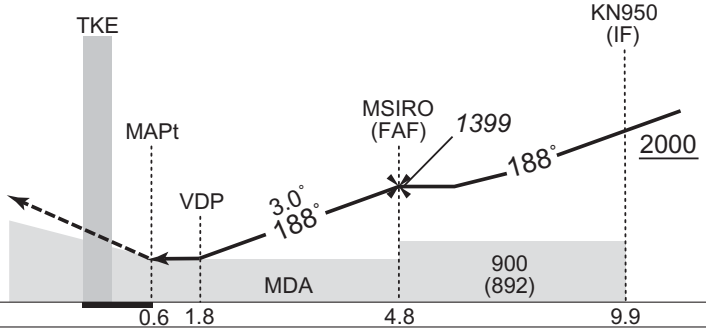

MSIRO(FAF) : *275455.55N/1285309.93E*

| NM to ITK | MAPt | 2 | 3 | 4 | FAF |
|---|---|---|---|---|---|
| ALT (3.0° APCH Path) | – | 498 | 816 | 1134 | 1399 |

MISSED APPROACH

Climb via TKE R188 to 5.0DME,
turn right, direct to TKE VOR/DME
and hold at 3500FT.
Contact NAHA APP.

Timing not authorized for defining the MAPt.




| | | | | |
|---|---|---|---|---|
| DME to ITK | 0.6 | 1.8 | 4.8 | 9.9 |
| NM to THR | 0 | 1.2 | 4.2 | 9.2 |

Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 14 AD elev. 8

| CAT | | | CIRCLING | |
|---|---|---|---|---|
| | MDA(H) | CMV | MDA(H) | VIS |
| A | 430 (422) | 900 | 730 (722) | 1600 |
| B | | 1000 | 990 (982) | |
| C | | | 1190 (1182) | 2400 |
| D | | 1400 | 1480 (1472) | 3200 |

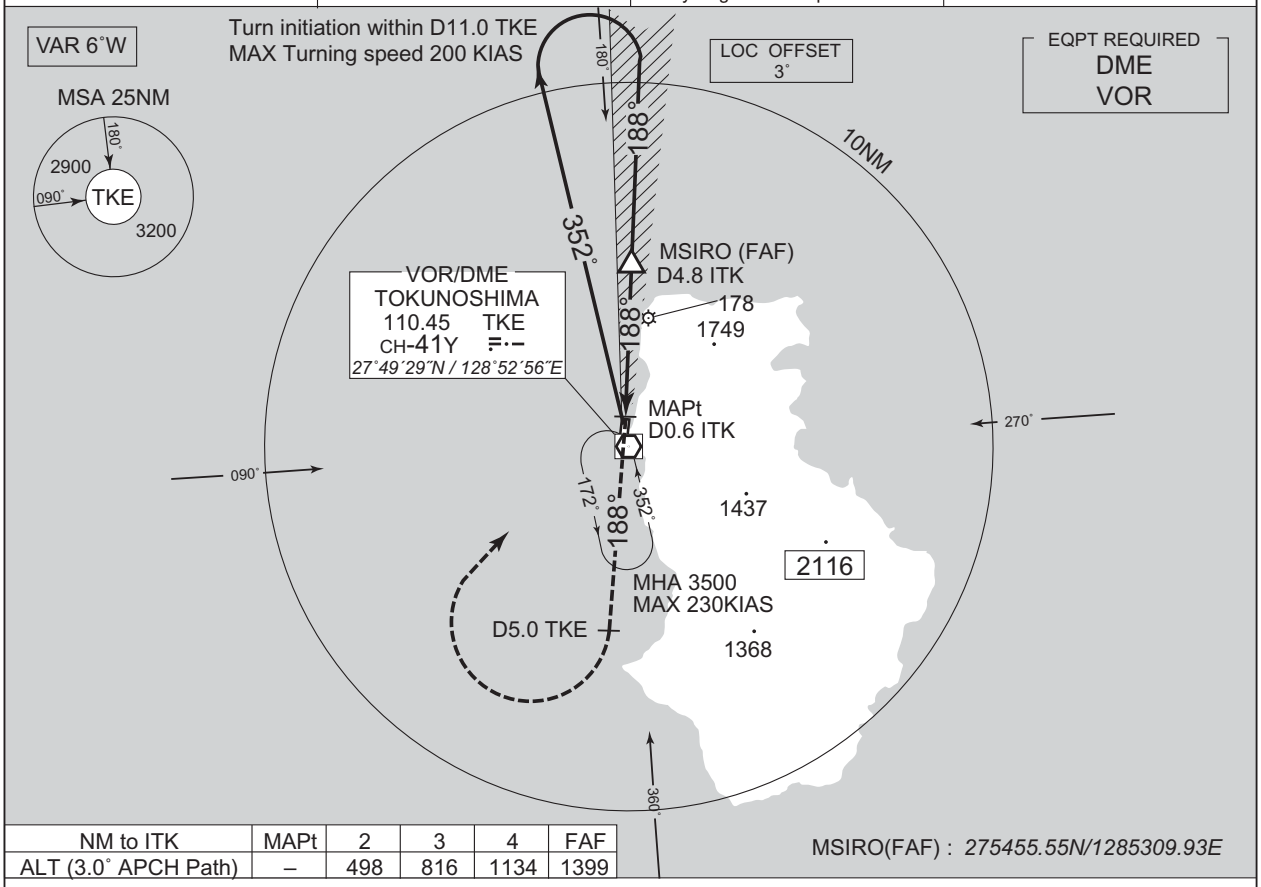
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to WEST side of RWY only.

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

**INSTRUMENT APPROACH CHART**

RJKN / TOKUNOSHIMA — LOC Y RWY19

| NAHA APP | LOC | TOKUNOSHIMA RADIO | RADAR AVBL |
|---|---|---|---|
| 124.95 – 280.1 | 110.1 ITK ⠭.⎯<br>LOC – DME CH-38X | 122.7<br>AFIS provided by Kagoshima Airport Office | |




| NM to ITK | MAPt | 2 | 3 | 4 | FAF |
|---|---|---|---|---|---|
| ALT (3.0˚ APCH Path) | – | 498 | 816 | 1134 | 1399 |

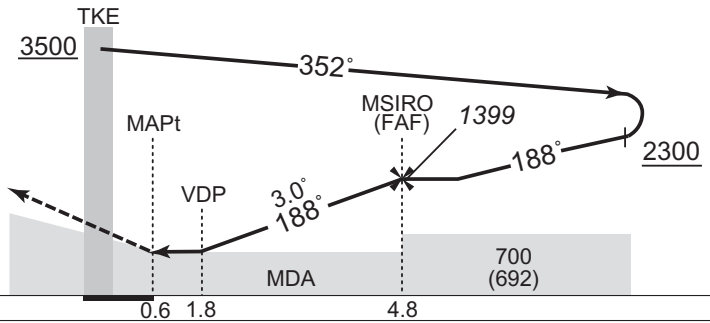
MSIRO(FAF) : *275455.55N/1285309.93E*

Turn initiation within D11.0 TKE

MISSED APPROACH

Climb via TKE R188 to 5.0DME,
turn right, direct to TKE VOR/DME
and hold at 3500FT.
Contact NAHA APP.

Timing not authorized for defining the MAPt.




| | | | |
|---|---|---|---|
| DME to ITK | 0.6 | 1.8 | 4.8 |
| NM to THR | 0 | 1.2 | 4.2 |

Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 14 AD elev. 8

| CAT | | | CIRCLING | |
|---|---|---|---|---|
| | MDA(H) | CMV | MDA(H) | VIS |
| A | 430 (422) | 900 | 730 (722) | 1600 |
| B | | 1000 | 990 (982) | |
| C | | | 1190 (1182) | 2400 |
| D | | 1400 | 1480 (1472) | 3200 |

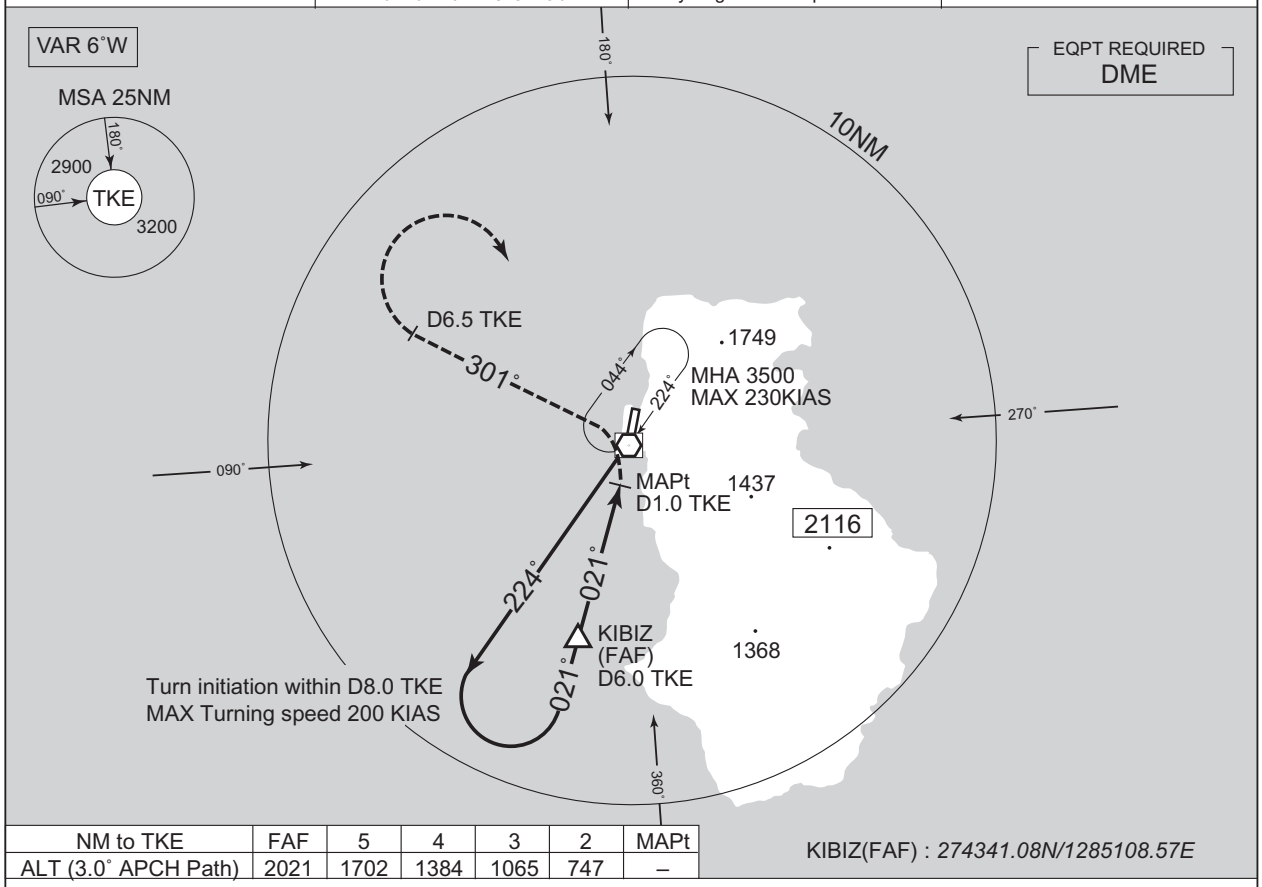
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to WEST side of RWY only.

CHANGE : Description of RADAR Service. Missed APCH PROC.

**INSTRUMENT APPROACH CHART**

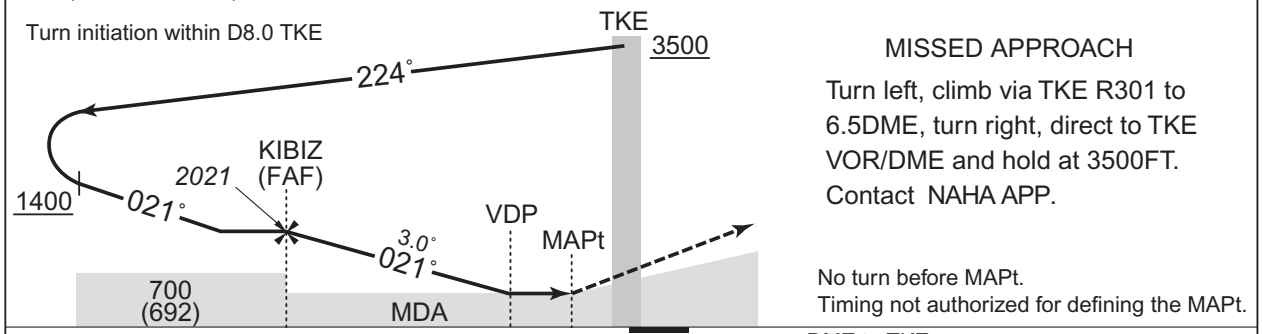
RJKN / TOKUNOSHIMA VOR RWY01

| NAHA APP | TOKUNOSHIMA VOR/DME | TOKUNOSHIMA RADIO | RADAR AVBL |
|---|---|---|---|
| 124.95 – 280.1 | 110.45 TKE<br>CH-41Y<br>*27˚49´29˝N / 128˚52´56˝E* | 122.7<br>AFIS provided<br>by Kagoshima Airport Office | |




| NM to TKE | FAF | 5 | 4 | 3 | 2 | MAPt |
|---|---|---|---|---|---|---|
| ALT (3.0˚ APCH Path) | 2021 | 1702 | 1384 | 1065 | 747 | – |

KIBIZ(FAF) : *274341.08N/1285108.57E*




MISSED APPROACH

Turn left, climb via TKE R301 to 6.5DME, turn right, direct to TKE VOR/DME and hold at 3500FT. Contact NAHA APP.

No turn before MAPt.
Timing not authorized for defining the MAPt.

Missed APCH climb gradient MNM 4.0%

| MINIMA | THR elev. 17 | | AD elev. 8 | |
|---|---|---|---|---|
| CAT | | | CIRCLING | |
| | MDA(H) | CMV | MDA(H) | VIS |
| A | 490 (482) | 1500 | 730 (722) | 1600 |
| B | | | 990 (982) | |
| C | | 2000 | 1190 (1182) | 2400 |
| D | | | 1480 (1472) | 3200 |

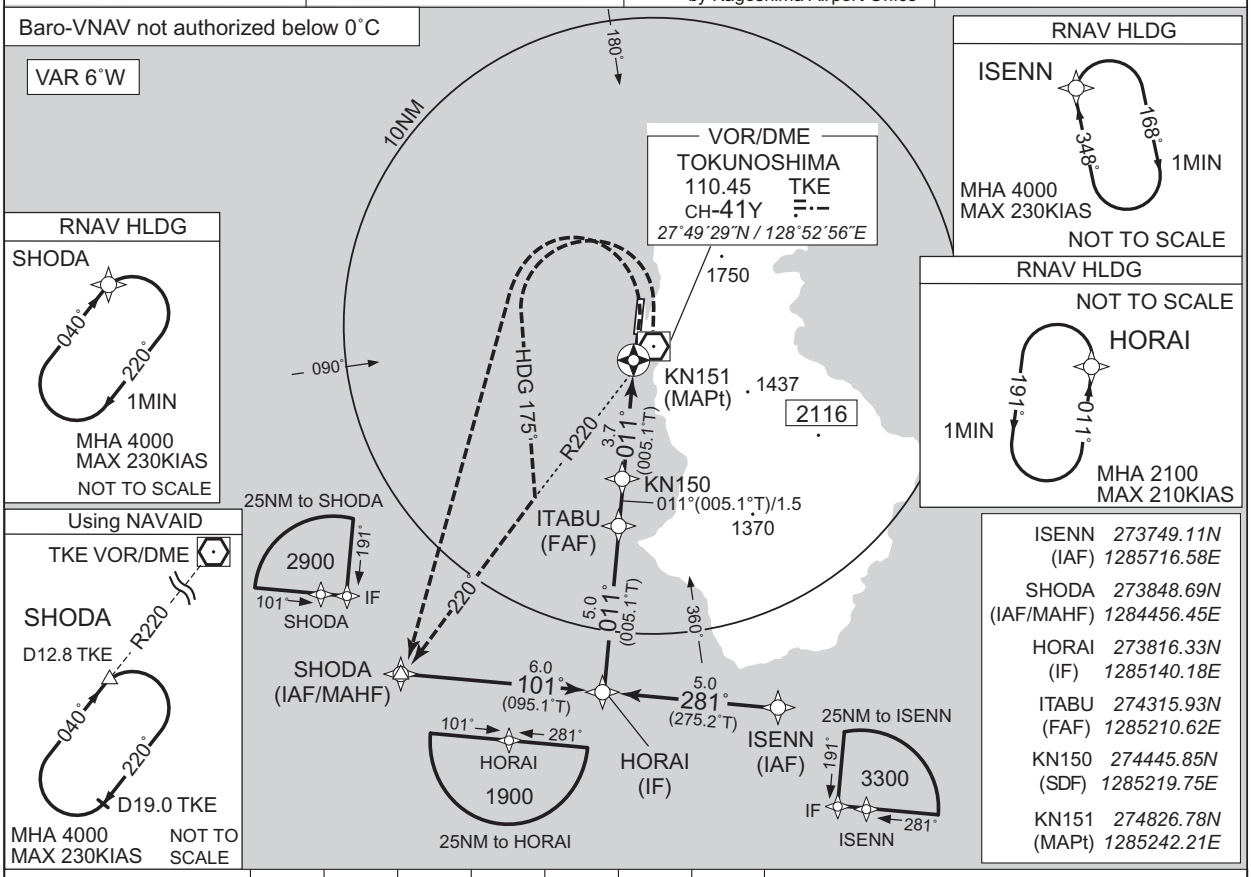
MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to WEST side of RWY only.

CHANGE : Description of RADAR Service. Missed APCH PROC.

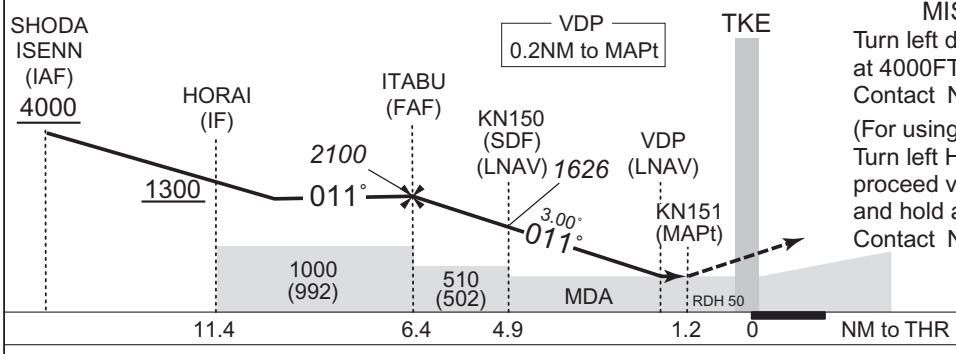
**INSTRUMENT APPROACH CHART**

RJKN / TOKUNOSHIMA RNP Z RWY01

| NAHA APP | RNP APCH | TOKUNOSHIMA RADIO | RADAR AVBL |
|---|---|---|---|
| 124.95 - 280.1 | | 122.7<br>AFIS provided<br>by Kagoshima Airport Office | |




| NM to Next Fix | FAF | 5 | 4 | 3 | 2 | 1 | MAPt |
|---|---|---|---|---|---|---|---|
| ALT (3.0˚ APCH Path) | 2100 | 2040 | 1722 | 1403 | 1085 | 766 | – |




MISSED APPROACH
Turn left direct to SHODA and hold at 4000FT.
Contact NAHA APP.
(For using VOR/DME)
Turn left HDG 175˚ to intercept and proceed via TKE R220 to SHODA and hold at 4000FT.
Contact NAHA APP.

Missed APCH climb gradient MNM 5.0%

| MINIMA | THR elev. 17 | | AD elev. 8 | | | |
|---|---|---|---|---|---|---|
| CAT | LNAV/VNAV | | LNAV | | CIRCLING | |
| | DA(H) | CMV | MDA(H) | CMV | MDA(H) | VIS |
| A | 490 (473) | 1500 | 490 (482) | 1500 | 730 (722) | 1600 |
| B | | | | | 990 (982) | |
| C | | 2000 | | 2000 | 1190 (1182) | 2400 |
| D | | | | | 1480 (1472) | 3200 |

MINIMA with Missed APCH climb gradient of 2.5% are not established.
Circling to WEST side of RWY only.

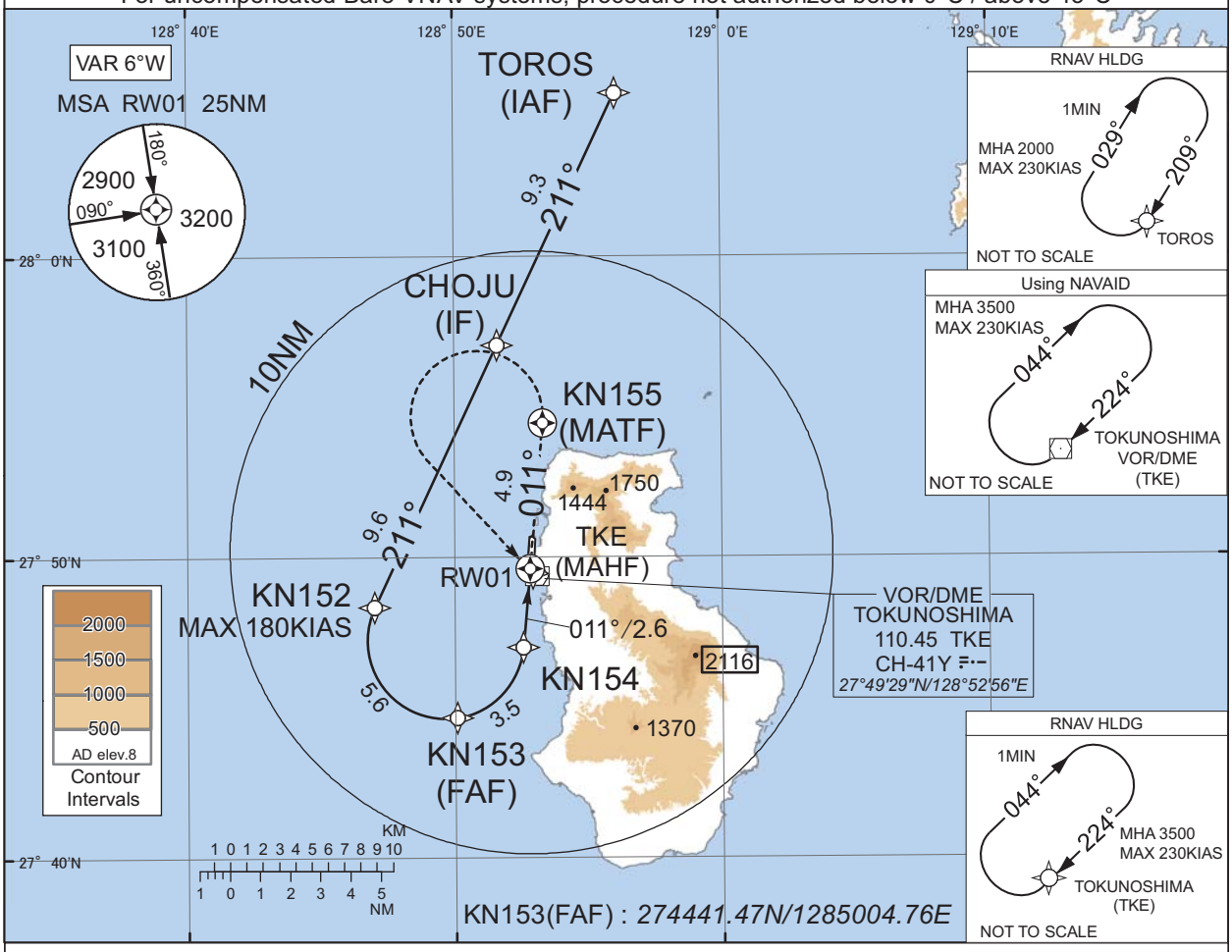
CHANGE : Correction of misdescription(Missed APCH PROC).

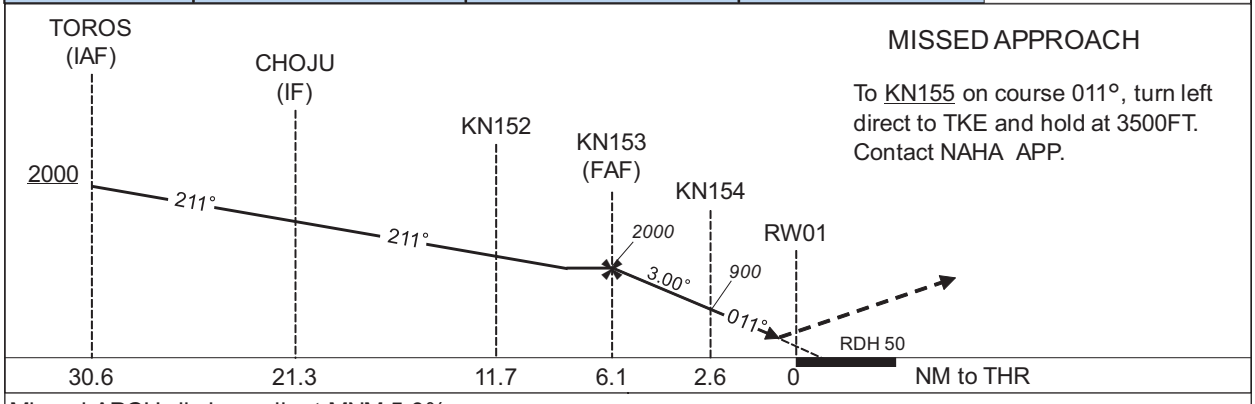
**INSTRUMENT APPROACH CHART**

RJKN / TOKUNOSHIMA — RNP Y RWY01(AR)

| NAHA APP<br>124.95 - 280.1 | RNP AR<br>RF required. | TOKUNOSHIMA RADIO<br>122.7<br>AFIS provided by<br>Kagoshima Airport Office | RADAR AVBL |
|---|---|---|---|

For uncompensated Baro-VNAV systems, procedure not authorized below 0°C / above 45°C




MISSED APPROACH

To KN155 on course 011°, turn left direct to TKE and hold at 3500FT. Contact NAHA APP.

Missed APCH climb gradient MNM 5.0%

| MINIMA | THR elev. 17 | AD elev. 8 |
|---|---|---|
| CAT | RNP 0.30 | |
| | DA(H) | CMV |
| A | - | - |
| B | | |
| C | 656(639) | 2000 |
| D | - | - |

MINIMA with Missed APCH climb gradient of 2.5% are not established.

**Authorization Required**

CHANGE : Description of RADAR Service. Missed APCH PROC.

INSTRUMENT APPROACH CHART

RJKN / TOKUNOSHIMA RNP Y RWY01(AR)

## Coding Table

| Serial Number | Path Descriptor | Waypoint Identifier | Fly Over | Course °M(°T) | Magnetic Variation | Distance (NM) | Turn Direction | Altitude (FT) | Speed (KIAS) | VPA/ RDH (°/FT) | RNP Value |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | IF | TOROS | - | - | -6.2 | - | - | +2000 | - | - | - |
| 002 | TF | CHOJU | - | 211 (205.2) | -6.2 | 9.3 | - | - | - | - | 1.0 |
| 003 | TF | KN152 | - | 211 (205.1) | -6.2 | 9.6 | - | - | -180 | - | 1.0 |
| 004 | RF Center: KNRF1 r=2.59NM | KN153 | - | - | -6.2 | 5.6 | L | 2000 | - | - | 1.0 |
| 005 | RF Center: KNRF1 r=2.59NM | KN154 | - | - | -6.2 | 3.5 | L | 900 | - | -3.00 | 0.3 |
| 006 | TF | RW01 | Y | 011 (005.1) | -6.2 | 2.6 | - | 67 | - | -3.00/50 | 0.3 |
| 007 | CF | KN155 | Y | 011 (005.1) | -6.2 | 4.9 | - | - | - | - | 1.0 |
| 008 | DF | TKE | - | - | -6.2 | - | L | 3500 | - | - | 1.0 |

| Path | Waypoint Identifier | Inbound Course °M(°T) | Magnetic Variation | Outbound Time (MIN) | Turn Direction | Minimum Altitude (FT) | Maximum Altitude (FT) | Speed (KIAS) | RNP Value |
|---|---|---|---|---|---|---|---|---|---|
| Hold | TOROS | 209 (203.3) | -6.2 | 1.0 (-14000) | R | 2000 | FL140 | -230(-14000) | 1.0 |
| Hold | TKE | 224 (217.8) | -6.2 | 1.0 (-14000) | R | 3500 | FL140 | -230(-14000) | 1.0 |

## Waypoint Coordinates

| Waypoint Identifier | Coordinates | RF Arc Center Identifier | Coordinates |
|---|---|---|---|
| TOROS | *280527.68N / 1285604.41E* | KNRF1 | *274715.75N / 1284938.87E* |
| CHOJU | *275704.94N / 1285137.19E* | | |
| KN152 | *274822.20N / 1284700.16E* | | |
| KN153 | *274441.47N / 1285004.76E* | | |
| KN154 | *274701.73N / 1285233.57E* | | |
| RW01 | *274938.71N / 1285249.54E* | | |
| KN155 | *275429.43N / 1285319.15E* | | |
| TKE | *274929.20N / 1285255.98E* | | |

CHANGE : New PROC.

RJKN / TOKUNOSHIMA

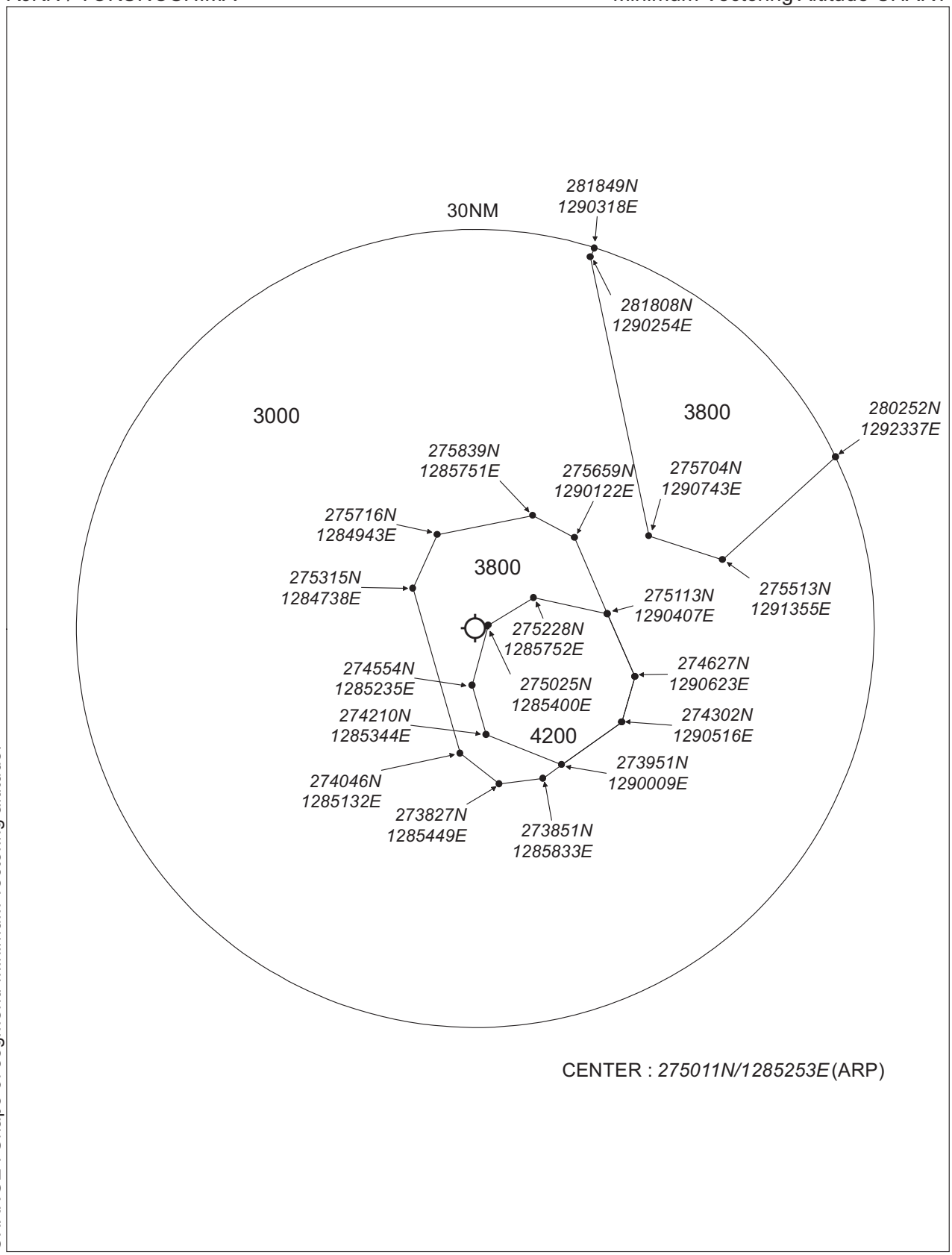
Visual REP


※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

CHANGE : VAR.

| Call sign | BRG / DIST from ARP | Remarks |
|---|---|---|
| 金見崎<br>Kanamizaki | 055°T / 5.8NM | 灯台<br>Lighthouse |
| 与名間崎<br>Yonamazaki | 011°T / 2.8NM | 灯台<br>Lighthouse |
| 亀徳港<br>Kametokuko | 127°T / 9.5NM | 漁港<br>Harbor |
| 犬田布崎<br>Inutabuzaki | 179°T / 6.8NM | 白い大きな慰霊碑<br>Big white monument |

RJKN / TOKUNOSHIMA Minimum Vectoring Altitude CHART




CHANGE : Shape of segment. Minimum vectoring altitude.