

## AD 2 AERODROMES

## RJFK AD 2.1 AERODROME LOCATION INDICATOR AND NAME

## RJFK - KAGOSHIMA

## RJFK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	314812N/1304310E 150°(MAG) / 1.5km from RWY 16 THR
2	Direction and distance from (city)	29.6km (16.0nm) NE of Kagoshima-Chuo railway station. 8.5km(4.6nm) Kajiki Railway station.
3	Elevation/ Reference temperature	891ft / 31°C (2012-2016)
4	Geoid undulation at AD ELEV PSN	Nil
5	MAG VAR/ Annual change	7°W (JAN 2015) / 5°W
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Kagoshima Airport Office (CAB) Fumoto, Mizobe-cho, Kirishima-shi, Kagoshima Pref. AFS:RJFKYFYX Tel:0995(58)4461
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Nil

## RJFK AD 2.3 OPERATIONAL HOURS

1	AD Administration	2200 - 1300
2	Customs and immigration	Customs: 2330-0815 Immigration: INTL SKED FLT hours only
3	Health and sanitation	Quarantine(human): 2330-0815 Quarantine(animal, plant): INTL SKED FLT hours only
4	AIS Briefing Office	H24
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24(FUKUOKA)
7	ATS	2200 - 1300 (Flight Information Service (except ATIS) and Alerting Service : H24)
8	Fuelling	2330 - 0800
9	Handling	2200 - 1300
10	Security	2105 - 1210
11	De-icing	Nil
12	Remarks	Nil

**RJFK AD 2.4 HANDLING SERVICES AND FACILITIES**

1	Cargo-handling facilities	No limitation
2	Fuel/ oil types	Fuel / JET A-1, AVGAS 100 Oil / W80,W100
3	Fuelling facilities/ capacity	Fuel Truck Refueling, No limitation
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

**RJFK AD 2.5 PASSENGER FACILITIES**

1	Hotels	Hotels in the city
2	Restaurants	At Airport, Not Continuous
3	Transportation	Busses and Taxis
4	Medical facilities	Hospital in Kajiki-cho (10km from Airport)
5	Bank and Post Office	At Airport, Not Continuous
6	Tourist Office	Nil
7	Remarks	Nil

**RJFK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	AD category for fire fighting	CAT 9
2	Rescue equipment	Chemical fire fighting truck, Water-supply truck, Lighting power supply truck, Emergency medical equipments conveyance truck
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

**RJFK AD 2.7 SEASONAL AVAILABILITY-CLEARING**

1	Types of clearing equipment	Snow removal equipment: Motor grader x 5
2	Clearance priorities	Nil
3	Remarks	Seasonal availability : From early DEC to early MAR, Ask AD administration for detail

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

1	Apron surface and strength	Surface-Asphalt concrete, and concrete in part Strength: PCN 62/R/B/X/T PCN 20/F/A/Y/T PCN 20/R/B/X/T in front of Japan Coast Guard hangar
2	Taxiway width, surface and strength	Surface: Asphalt concrete Strength: PCN 58/F/A/X/T Width: 23m (P1-P6), 28.5m (T1, T7), 34m (T2, T3, T4 and T6), 30m (T5)
3	ACL and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	(Spot NR)  1 : 314817.13N, 1304251.30E 2 : 314815.26N, 1304252.50E 3 : 314813.42N, 1304253.74E 4 : 314811.39N, 1304255.12E 5 : 314809.37N, 1304256.54E 6 : 314807.42N, 1304257.91E 7 : 314805.92N, 1304259.23E 8 : 314804.66N, 1304300.08E 9 : 314803.04N, 1304300.76E 10 : 314801.16N, 1304302.04E 17 : 314749.18N, 1304310.21E 18 : 314747.22N, 1304311.53E
6	Remarks	Nil

## RJFK 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	ACFT stand ID sign: NR 3 - 10
2	RWY and TWY markings and LGT	RWY: (RWY 16/34) (Marking): RWY designation, RWY CL, RWY THR, Aiming point, TDZ, RWY side stripe (LGT): REDL, RENL, RCLL, RTHL, RTZL(RWY 34), WBAR(RWY34) RWY DIST marker LGT  TWY: ALL TWY (Marking): TWY CL, TWY side stripe (LGT): TWY edge LGT, TWY CL LGT  TWY: T1 - T7 (Marking): RWY HLDG PSN, Mandatory instruction (LGT): RWY guard LGT, Taxiing guidance sign
3	Stop bars	Stop bar LGT : T1-T7 Stop bar LGT operations 1) Stop bar LGT are installed at each RWY holding position associated with RWY 16/34. 2) Stop bar LGT will be operated when the visibility or the lowest RVR of RWY 16/34 is at or less than 600m. 3) Stop bar LGT on TWY T1, T7 are controlled individually by ATC. 4) Stop bar LGT on TWY T2 through T6 are not controlled individually by ATC. 5) During the period Stop bar LGT operated, TWY T2 through T6 are not available for departure aircraft.
4	Remarks	(Marking): Overrun area (LGT) Apron flood LGT

## RJFK AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas

See AD 2.24 Obstacle Chart

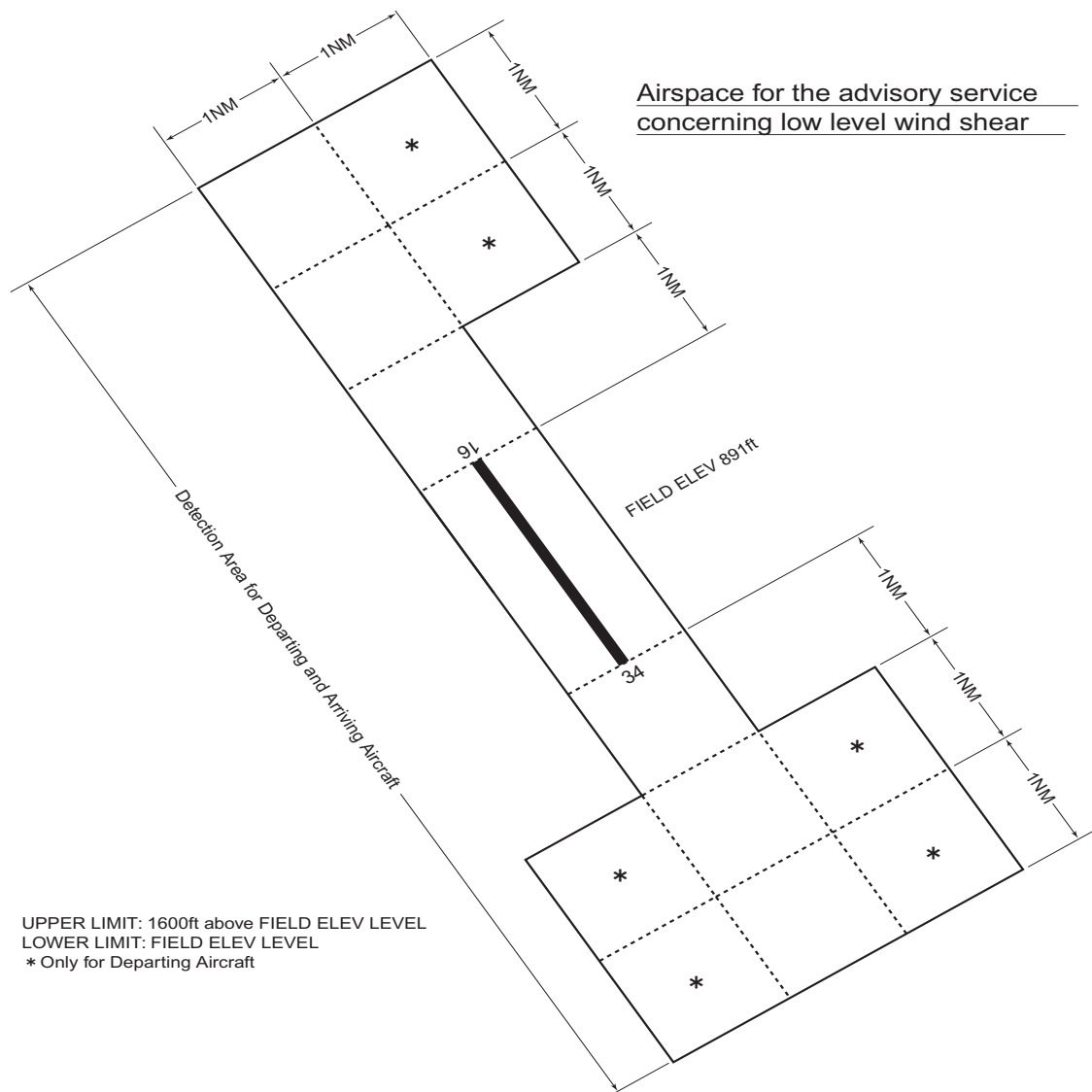
RWY/Area affected	Obstacle type	Coordinates	Elevation	Markings/LGT	Remarks
	Pylon	315718N1303639E	2117ft	Marking / -	Above outer horizontal surface
	Pylon	315717N1303651E	2189ft	Marking / Lighted	Above outer horizontal surface
	Pylon	315716N1303704E	1894ft	Marking / -	Above outer horizontal surface
	Building	314939N1304110E	1245ft	- / Lighted	Above conical surface
	Pylon	315227N1304736E	1627ft	Marking / Lighted	Above conical surface
	Windmill	314038N1303551E	1903ft	Marking / Lighted	Above outer horizontal surface
	Windmill	314034N1303547E	1903ft	- / Lighted	Above outer horizontal surface
	Windmill	314030N1303542E	1913ft	- / Lighted	Above outer horizontal surface
	Windmill	314025N1303550E	2015ft	Marking / Lighted	Above outer horizontal surface
	Windmill	314019N1303548E	2070ft	Marking / Lighted	Above outer horizontal surface
	Windmill	314013N1303548E	2067ft	- / Lighted	Above outer horizontal surface
	Windmill	314011N1303554E	2031ft	- / Lighted	Above outer horizontal surface
	Windmill	314006N1303556E	1992ft	Marking / Lighted	Above outer horizontal surface
	Antenna	314925N1304104E	1245ft	Marking / -	Above conical surface
	Antenna	315306N1304841E	1667ft	Marking / Lighted	Above conical surface
	Pylon	315520N1303908E	1794ft	- / Lighted	Above conical surface
	Pylon	315513N1303901E	1840ft	- / Lighted	Above conical surface
	Pylon	315504N1303853E	1803ft	- / -	Above conical surface
	Pylon	315305N1303806E	1678ft	- / Lighted	Above conical surface
	Pylon	315218N1303711E	1638ft	- / Lighted	Above conical surface
	Pylon	315209N1303703E	1849ft	- / Lighted	Above conical surface
	Pylon	315200N1303659E	1938ft	- / Lighted	Above conical surface
	Pylon	315150N1303701E	1725ft	- / Lighted	Above conical surface
	Pylon	315142N1303659E	1678ft	- / -	Above conical surface
	Windmill	313645N1304913E	2063ft	Marking / Lighted	Above outer horizontal surface
	Windmill	313635N1304917E	2119ft	Marking / Lighted	Above outer horizontal surface
	Windmill	313627N1304921E	2210ft	Marking / Lighted	Above outer horizontal surface

In circling area and at AD

Obstacle type	Coordinates	Elevation	Markings/LGT	Remarks
See AD 2.24 Obstacle Chart				

**RJFK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	FUKUOKA
2	Hours of service MET Office outside hours	H24(FUKUOKA)
3	Office responsible for TAF preparation Periods of validity	FUKUOKA 30 Hours
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	Briefing is available upon inquiry at FUKUOKA
6	Flight documentation Language(s) used	C En
7	Charts and other information available for briefing or consultation	S <sub>6</sub> , U <sub>85</sub> , U <sub>7</sub> , U <sub>5</sub> , U <sub>3</sub> , U <sub>25</sub> , U <sub>2</sub> /Tr, P <sub>s</sub> , P <sub>5</sub> , P <sub>3</sub> , P <sub>25</sub> , P <sub>SWE</sub> , P <sub>SWF</sub> , P <sub>SWG</sub> , P <sub>SWI</sub> , P <sub>SWM</sub> , P <sub>SW</sub> (domestic), E, C, W <sub>E</sub> , W <sub>F</sub> , W <sub>G</sub> , W <sub>I</sub> , W, N
8	Supplementary equipment available for providing information	Doppler Radar for Airport Weather (See attached chart)
9	ATS units provided with information	TWR, APP, ATIS
10	Additional information (limitation of service, etc.)	Nil



## RJFK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength(PCN) 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
16	150°	3000 × 45	PCN 58/F/A/X/T Asphalt Concrete	314854.41N 1304241.34E	THR ELEV: 906ft TDZ ELEV: 905.2ft
34	330°	3000 × 45	PCN 58/F/A/X/T Asphalt Concrete	314730.07N 1304338.38E	THR ELEV: 858.8ft TDZ ELEV: 861.6ft

Slope of RWY	Strip Dimensions(M)	RESA (Overrun) Dimensions(M)	Remarks
7	10	11	14
See attached chart	3120× 300	240 × (MNM:90 MAX:300)*	RWY grooving 3000 X 30m
See attached chart	3120× 300	240 × (MNM:90 MAX:300)* *For detail, ask airport administrator	RWY grooving 3000 X 30m

The profile view shows the elevation of the runway from 0m to 3000m. The elevation starts at 906.2ft at 0m and decreases to 858.8ft at 3000m. The slopes are -0.21% from 0m to 1200m, -0.54% from 1200m to 1875m, -0.71% from 1875m to 2500m, and -0.72% from 2500m to 3000m. The runway is labeled RWY16 at the start and RWY34 at the end.

Distance (m)	Elevation (ft)	Slope (%)
0	906.2	-0.21
1200	897.3	-0.54
1875	885.2	-0.71
2500	870.7	-0.72
3000	858.8	-

## RJFK AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	LDA (m)	ASDA (m)	Remarks
1	2	3	4	5	6
16	3000	3000	3000	3000	Nil
34	3000	3000	3000	3000	Nil

## RJFK 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
16	SALS (*1) 421m LIH	Green -	PAPI 3.0°/LEFT 481m 74ft		3000m 30m Coded color (White/Red) LIH	3000m 60m Coded color (White/Yellow) LIH	Red	Nil  (*2)
34	PALS 900m LIH	Green Green	PAPI 3.0°/LEFT 378m 68ft	900m	3000m 30m Coded color (White/Red) LIH	3000m 60m Coded color (White/Yellow) LIH	Red	Nil  (*2)
Remarks								
10								
SALS with APCH LGT beacon(561m and 948m FM RWY THR)(*1) Overrun area edge LGT(Color:Red)(*2) CGL for RWY 16								

## RJFK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: 314804N/1304328E, White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer : RWY 16: 425m from RWY 16 THR, LGTD RWY 34: 515m from RWY 34 THR, LGTD
3	TWY edge and center line lighting	TWY edge and center line lights installed, see AD2.9
4	Secondary power supply/ switch-over time	Within 1sec: REDL, RENL, RTHL, WBAR, RCLL, Overrun area edge LGT, Stop bar LGT Within 15sec: Other LGT
5	Remarks	WDI LGT

## RJFK AD 2.16 HELICOPTER LANDING AREA

Nil
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## RJFK 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
KAGOSHIMA CTR	Area within a radius of 5 nm of KAGOSHIMA ARP (31° 48'N 130° 43'E)	3 000 or below	D	KAGOSHIMA TWR En	
KAGOSHIMA PCA	See attached chart		C	KAGOSHIMA APP(1) KAGOSHIMA RADAR(1) KAGOSHIMA TWR(2) En	(1)Primary (2)Secondary
KAGOSHIMA ACA	See attached chart		E	KAGOSHIMA APP KAGOSHIMA RADAR KAGOSHIMA DEP En	
KAGOSHIMA TCA	See attached chart		E	KAGOSHIMA TCA En	



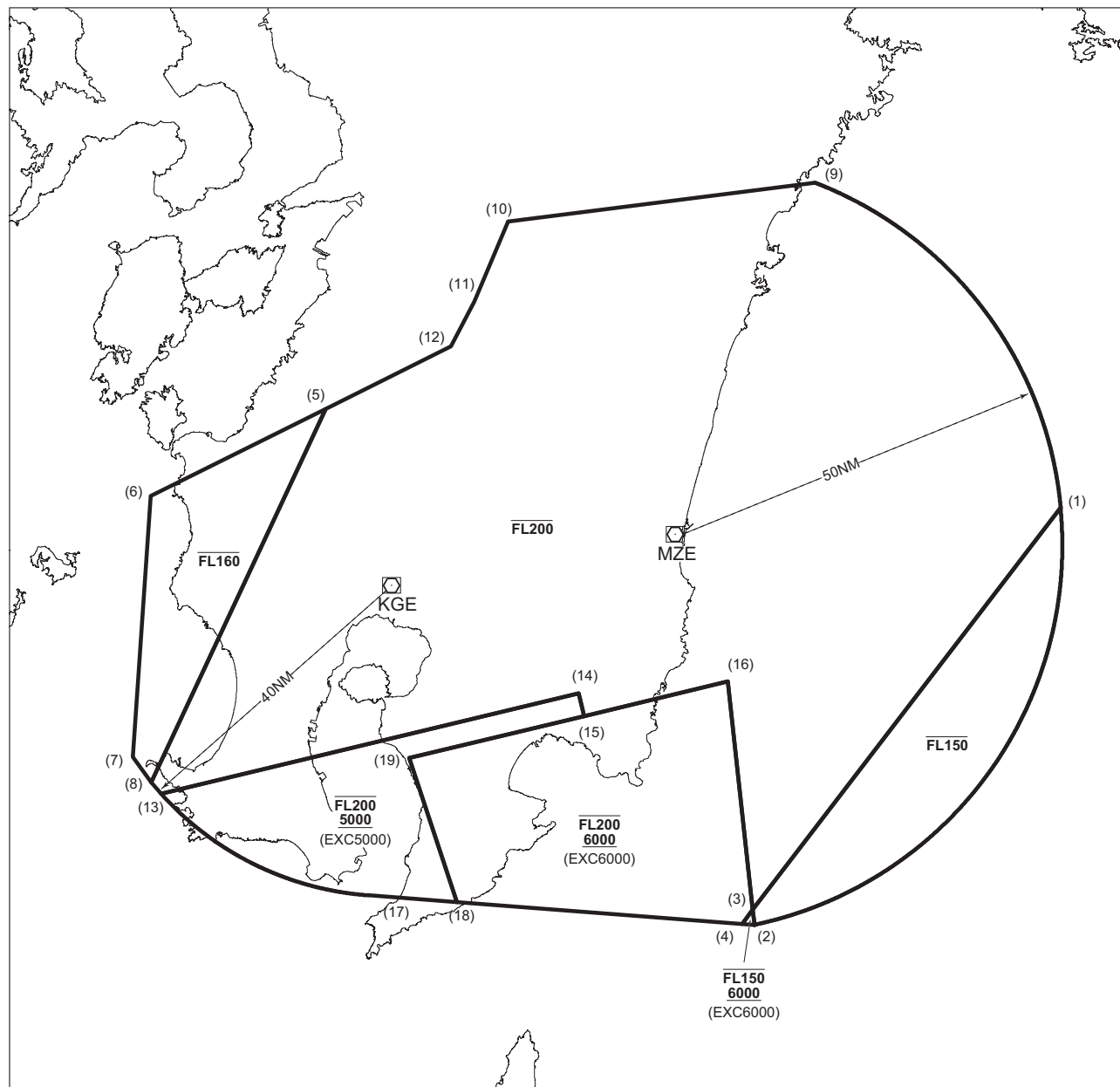
鹿児島特別管制区  
Kagoshima Positive Control Area

NAME	LATERAL LIMITS	UPPER LIMIT (AMSL)	UNIT PROVIDING SERVICE	REMARKS
		LOWER LIMIT (AMSL) M(ft)		
1	2	3	4	5
鹿児島 KAGOSHIMA	下記に示される区域 The area shown below		Primary Kagoshima APP Kagoshima Radar 126.0 120.8 261.2 Secondary Kagoshima TWR 118.2 126.2 261.2	当該空域を飛行しようとする航空機は、鹿児島アプローチ（鹿児島レーダー）又は鹿児島タワーに連絡し、コールサイン、現在位置、高度及び意図を通報し指示を受けること。 Pilot requiring transit of Kagoshima Positive Control Area must call Kagoshima Approach (Kagoshima Radar) or Kagoshima Tower prior to the point of entry to provide aircraft identification, position, altitude and intention.



## 鹿児島進入管制区

Kagoshima Approach Control Area



## Point list

(1) 315637N1322447E	(11) 322421N1305624E
(2) 310334N1313731E	(12) 321836N1305245E
(3) 310532N1313718E	(13) 312105N1300842E
(4) 310343N1313539E	(14) 313341N1311133E
(5) 321040N1303343E	(15) 313045N1311220E
(6) 315929N1300708E	(16) 313500N1313405E
(7) 312550N1300425E	(17) 310754N1303942E
(8) 312235N1300712E	(18) 310657N1305257E
(9) 323907N1314828E	(19) 312533N1304601E
(10) 323437N1310137E	

[illegible]

## RJFK AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Kagoshima approach	126.0MHz(1) 119.4MHz 121.4MHz 120.9MHz 362.3MHz 261.2MHz 121.5MHz(E) 243.0MHz(E)	2200 - 1300	(1)Primary
ASR	Kagoshima Radar	120.8MHz 121.4MHz 120.9MHz 362.3MHz 261.2MHz 121.5MHz(E) 243.0MHz(E)	2200 - 1300	
DEP	Kagoshima Departure	119.4MHz(1) 120.1MHz 121.4MHz 362.3MHz 261.2MHz 121.5MHz(E) 243.0MHz(E)	2200 - 1300	
TCA	Kagoshima TCA	120.0MHz 225.2MHz  121.25MHz 256.1MHz	2300 - 1030  2330 - 1100	
TWR	Kagoshima Tower	118.2MHz(1) 126.2MHz 261.2MHz 121.5MHz(E) 243.0MHz(E)	2200 - 1300	
GND	Kagoshima Ground	121.7MHz	2200 - 1300	
DLVRY	Kagoshima Delivery	121.8MHz	2200 - 1300	
ATIS	Kagoshima Airport	127.05MHz	2200 - 1300	

## RJFK 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 (6°W/2004)	HKC	113.3MHz	H24	314150.00N/ 1303458.59E		
TACAN	HKC	1167MHz (CH-80X)	H24	314149.80N/ 1303500.26E	1909ft	VORTAC unusable : 150°- 160° beyond 20nm BLW 6000ft.
VOR (7°W/2018)	KGE	115.7MHz	2200 - 1300	314751.15N/ 1304333.97E		VOR Unusable : 040°- 070° beyond 20nm BLW 8000ft.
DME	KGE	1191MHz (CH-104X)	2200 - 1300	314751.15N/ 1304333.97E	901ft	DME Unusable : 040°- 050° beyond 15nm BLW 8000ft. 050°- 070° beyond 20nm BLW 8000ft.
ILS-LOC 34	IKG	111.7MHz	2200 - 1300	314900.89N/ 1304236.96E		LOC : 230m(755ft) away FM RWY 16 THR, BRG (MAG) 337°
ILS-GP 34	-	333.5MHz	2200 - 1300	314740.78N/ 1304336.38E		GP : 312m(1024ft) inside FM RWY 34 THR, 120m(394ft) E of RCL. HGT of ILS REF datum 17.3m(57ft). GP angle 3.0°
ILS-DME 34	IKG	1015MHz (CH-54X)	2200 - 1300	314741.11N/ 1304336.81E	880ft	DME : 315m(1034ft) inside FM RWY 34 THR, 135m(443ft) E of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based



REMARKS : 1. ILS-LOC beam BRG(MAG) 337°  
 2. HGT of ILS REF datum 17.3m (57ft)  
 3. GP Angle 3.0°  
 4. ELEV of ILS-DME 268.1m (880ft)

**RJFK AD 2.20 LOCAL TRAFFIC REGULATIONS**

## 1. Airport regulations

Owing to congestion on the ACFT aprons, operators of transient ACFT are requested to obtain prior permission from CAB KAGOSHIMA(TEL:0995-58-4470), EXC SKD FLT and ACFT in an emergency.

## 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

Wing tip clearance at the TWY intersection (REF. AD1.1.6.8)

Wing tip clearance at the TWY intersection between the aircraft holding at the stop marking on the TWY and the other aircraft taxiing behind it are as follows.

When B744 holding at the stop marking on TWY T2 or T6

Wing Span (WS) of aircraft taxiing on TWY P1 - P2 or P5 - P6	WS ≤ 21.4m	WS > 21.4m
Wing tip clearance	*B	*C

Legend:

\*A wing tip clearance  $\geq$  15m

\*B  $6.5\text{m} \leq$  wing tip clearance  $<$  15m

\*C wing tip clearance  $<$  6.5m

## 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

## RJFK AD 2.21 NOISE ABATEMENT PROCEDURES

<b>1. 騒音軽減運航方式</b> すべてのジェット機に対して、空港周辺における航空機騒音軽減のため、運航の安全に支障のない範囲で、以下の方式が適用される。ただし、これらの方式によることができない航空機は実効的にこれらと同等と認められる代替方式を実施するものとする。  (1) 離陸について（滑走路 16/34） 急上昇方式 (2) 着陸について（滑走路 16/34） ディレイド・フラップ進入方式及び低フラップ角着陸方式 (3) リバース・スラストについて なし <b>2. 優先滑走路方式</b> なし <b>3. 優先飛行経路</b> なし	<b>1. Noise Abatement Operating Procedures</b> For all jet aircraft, in order to reduce aircraft noise in the vicinity of airport, the following procedures shall be applied unless compliance of the procedures adversely affects the safety of aircraft operations. In case that the aircraft is unable to take these procedures, pilots should execute alternative procedures which are considered to be practically equivalent. (1) For take-off from RWY16/34 Steepest Climb Procedure (2) For landing to RWY16/34 Delayed Flap Approach Procedure and Reduced Flap Setting Procedure (3) Reverse Thrust Nil <b>2. Preferential Runways Procedures</b> Nil <b>3. Noise Preferential Routes</b> Nil
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## RJFK AD 2.22 FLIGHT PROCEDURES

## 1. TAKE OFF MINIMA

	RWY	REDL & RCLL AVBL		REDL or RCLL AVBL		REDL & RCLL OUT	
		CEIL-RVR	CEIL-VIS	CEIL-RVR	CEIL-VIS	CEIL-RVR	CEIL-VIS
TKOF ALTN AP FILED	16	-	0' - 400m *200' - 800m	-	0' - 600m *200' - 800m	-	0' - 800m *200' - 800m
	34	200' - 800m	200' - 800m	200' - 800m	200' - 800m	-	200' - 800m
OTHER	16	AVBL LDG MINIMA					
	34						

NOTE: SIDs are designed in accordance with provisional standards for FLIGHT PROCEDURE DESIGN.

\* Applicable to OSUMI FIVE DEPARTURE

## 2. TAKE OFF MINIMA for RNAV DEPARTURE

	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	16	A,B,C,D	-	400m	-	400m	-	500m
	34	A,B,C,D	400m	400m	400m	400m	-	500m
OTHER	16	A,B,C,D	AVBL LDG MINIMA					
	34	A,B,C,D						

**3. Trajectorized Airport Traffic Data Processing System (TAPS)**

Aircraft flying in Kagoshima approach control area under its control will be instructed to reply with discrete code on Mode A/3 and Mode C.

If an aircraft has no capability of replying with discrete code, the pilot shall report ATC if so instructed.

鹿児島アプローチの指示のもとに、当該進入管制区を飛行する航空機は、モード A/3 の二次レーダー個別コード及びモード C による応答を指示される。

二次レーダー個別コードを搭載していない航空機が当該コードによる応答を指示された場合は、管制官に対し、その旨通報すること。

**4. Lost Communication Procedures for Arrival Aircraft under radar navigational guidance**

If radio communications with Kagoshima Approach/Radar are lost for 30 seconds, Squawk Mode A/3 Code 7600 and :

- 1) Contact Kagoshima tower.
- 2) If unable, proceed in accordance with visual flight rules.
- 3) If unable, proceed to KAJIKI VOR at the last assigned altitude or 4000 feet whichever is higher, and execute approach.

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

**RJFK AD 2.23 ADDITIONAL INFORMATION**

Volcano SAKURAJIMA located 3135N/13040E being active

**RJFK AD 2.24 CHARTS RELATED TO AN AERODROME**

Aerodrome/Heliport Chart-1

Aerodrome/Heliport Chart-2

Aerodrome Obstacle Chart - type A (RWY16/34)

Aerodrome Obstacle Chart - type B (RWY16/34)

Standard Departure Chart - Instrument (NANSHU)\*

Standard Departure Chart - Instrument (OSUMI)\*

Standard Departure Chart - Instrument (SOGIE)\*

Standard Departure Chart - Instrument (AIRA)\*

Standard Departure Chart - Instrument (MIDAI-RNAV)

Standard Arrival Chart - Instrument (SIMAZ-RNAV)

Standard Arrival Chart - Instrument (KINKOH-RNAV)

Standard Arrival Chart - Instrument (OGOJO, YUKSA, OIDON-RNAV)

Instrument Approach Chart (ILS Z or LOC Z RWY34)

Instrument Approach Chart (ILS Y or LOC Y RWY34)

Instrument Approach Chart (VOR RWY34)\*

Instrument Approach Chart (VOR A)\*

Instrument Approach Chart (RNAV(GNSS) RWY16)

Other Chart (KINKO VISUAL RWY34)

Other Chart (Visual REP)

Other Chart (LDG CHART)

Other Chart (MVA CHART)

\*: Designed in accordance with provisional standards for FLIGHT PROCEDURE DESIGN.



KAGOSHIMA AP  
ELEV 271.6m(891ft) ARP



RJFK / KAGOSHIMA

AD CHART



DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC

AERODROME OBSTACLE CHART - ICAO  
TYPE A (OPERATING LIMITATIONS)

MAGNETIC VARIATION 6°46' W-APR 2016



DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC





STANDARD DEPARTURE CHART-INSTRUMENT

RJFK / KAGOSHIMA

SID

NANSHU TWO DEPARTURE

RWY 16 : Climb via RWY HDG until 1NM from RWY end/KGE 1.3DME, turn left,...

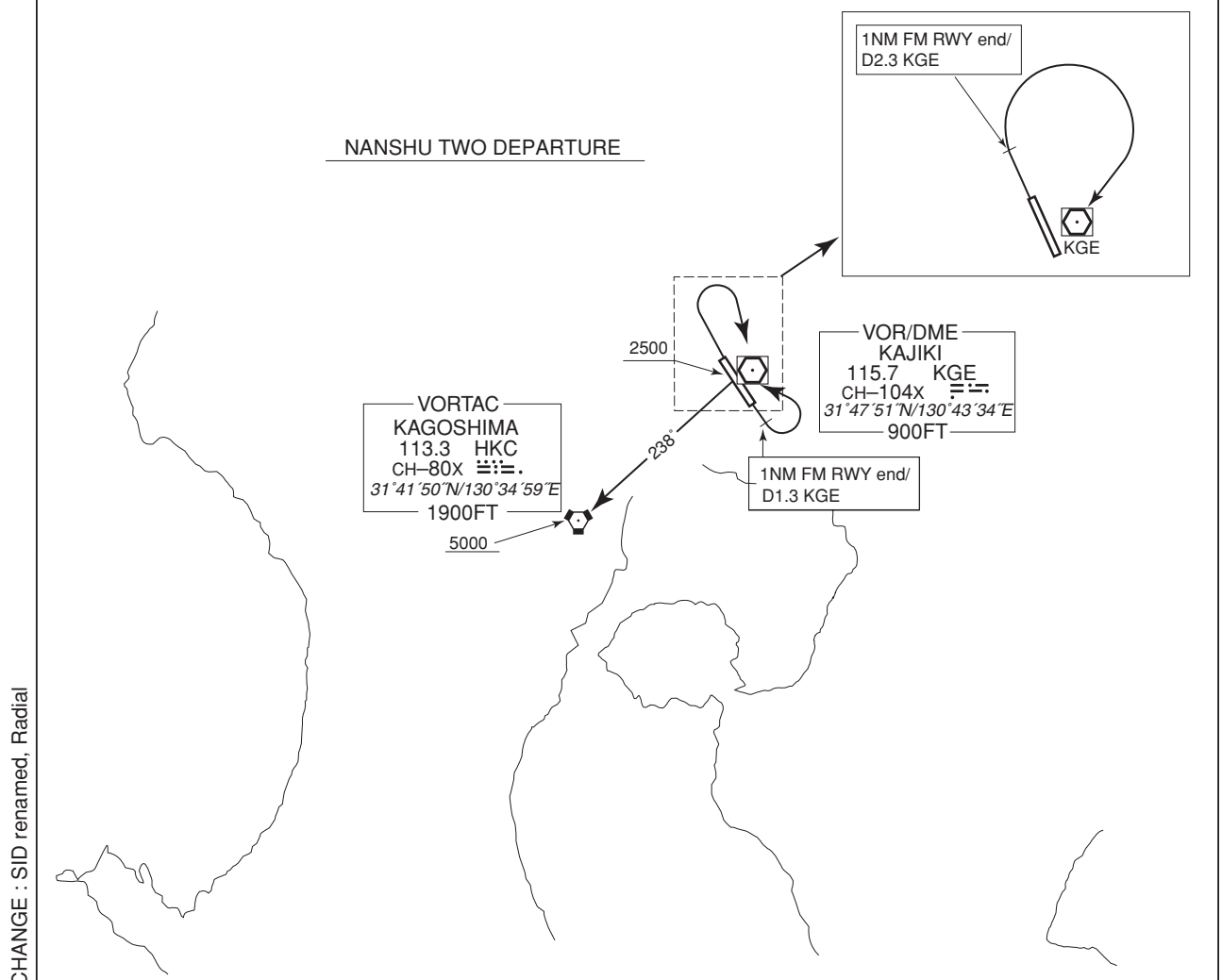
RWY 34 : Climb via RWY HDG until 1NM from RWY end/KGE 2.3DME, turn right,...

...direct to KGE VOR/DME, via KGE R238 to HKC VORTAC.

Cross KGE VOR/DME at or above 2500FT, cross HKC VORTAC at or above 5000FT.

NOTE : When take off RWY34, following climb gradient should be maintained until 2100FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050



## STANDARD DEPARTURE CHART-INSTRUMENT

RJFK / KAGOSHIMA

SID and TRANSITION

OSUMI FIVE DEPARTURE

RWY 16 : Climb ...

RWY 34 : Climb via RWY HDG until 1NM from RWY end/KGE 2.3DME, turn right,...  
... via KGE R170 to OSUMI.

Note : Following climb gradient should be maintained until 4200FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050

JOKER TRANSITION

From over OSUMI, via HKC R134 to JOKER.

SAZMA TRANSITION

From over OSUMI, via KGE R170 to KGE 24DME(HKC R146/22DME), turn right, via HKC 25DME clockwise ARC to intercept and proceed via HKC R207 to SAZMA.

Cross KGE R170/24DME(HKC R146/22DME) at or above 8000FT.

CHANGE : SID renamed, Radial

STANDARD DEPARTURE CHART-INSTRUMENT

RJFK / KAGOSHIMA

SID and TRANSITION



## STANDARD DEPARTURE CHART - INSTRUMENT

RJFK / KAGOSHIMA

SID and TRANSITION

SOGIE THREE DEPARTURE

RWY 16 : Climb via RWY HDG until 1NM from RWY end/KGE 1.3DME, turn left, direct to KGE VOR/DME to cross at or above 2500FT,...

RWY 34 : Climb via RWY HDG until 1NM from RWY end/KGE 2.3DME, turn right,...  
... via KGE R348 to SOGIE.

NOTE : When take off RWY34, following climb gradient should be maintained until 2300FT.

Speed (Knots)	60	90	120	150	180	210
Rate (Feet/Min)	300	450	600	750	900	1050

SAKURAJIMA TRANSITION

From over SOGIE, turn left, direct to KGE VOR/DME.  
Cross KGE VOR/DME at or above 8000FT.

SASIK TRANSITION

From over SOGIE, via KGE R348 to SASIK.

KAGOSHIMA TRANSITION

From over SOGIE, turn left to intercept and proceed via HKC R001 to HKC VORTAC.



CHANGE : SID renamed, Radial



STANDARD DEPARTURE CHART-INSTRUMENT

RJFK / KAGOSHIMA

➔ SID

AIRA ONE DEPARTURE

- RWY16 : Climb via RWY HDG until 1NM from RWY end/KGE 1.3DME, turn right, proceed to HKC VORTAC.  
 RWY34 : (Not established)  
 Cross HKC VORTAC at or above 5000FT.



## STANDARD DEPARTURE CHART - INSTRUMENT

RJFK / KAGOSHIMA

RNAV SID

## MIDAI THREE DEPARTURE

## RNAV 1

Note 1) DME/DME/IRU or GNSS required.

✂The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.

2) RADAR service required.

Critical DME

RWY16 : HKC:7NM to OICHI — 2NM to OICHI  
KGE:7NM to OICHI — 2NM to OICHI

DME GAP

RWY16 : DER — 7NM to OICHI  
RWY34 : DER — 12NM to SMIKO

Inappropriate Nav aids

See AD 1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

VAR 7°W (2020)



## MIDAI THREE DEPARTURE

RWY16 : Climb on HDG 157° at or above 1300FT, turn right direct to OICHI, to SMIKO at or above 7000FT, to MIDAI at or above FL160.

RWY34 : Climb on HDG 337° at or above 2000FT, turn right direct to FK400, to SMIKO at or above 7000FT, to MIDAI at or above FL160.

Note RWY34 : 5.0% climb gradient required up to 3100FT.

OBST ALT 3117FT located at 7.7NM 046° FM end of RWY34.

CHANGE : PROC. KOKUBU VOR/DME(KBE) abolished.

STANDARD DEPARTURE CHART - INSTRUMENT

RJFK / KAGOSHIMA

RNAV SID

MIDAI THREE DEPARTURE

RWY16

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	—	—	157 (150.1)	-7.2	—	—	+1300	—	—	RNAV1
002	DF	OICHI	—	—	-7.2	—	R	—	—	—	RNAV1
003	TF	SMIKO	—	099 (091.5)	-7.2	9.4	—	+7000	—	—	RNAV1
004	TF	MIDAI	—	099 (091.6)	-7.2	20.3	—	+FL160	—	—	RNAV1

RWY34

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	—	—	337 (330.1)	-7.2	—	—	+2000	—	—	RNAV1
002	DF	FK400	—	—	-7.2	—	R	—	—	—	RNAV1
003	TF	SMIKO	—	156 (148.5)	-7.2	15.8	—	+7000	—	—	RNAV1
004	TF	MIDAI	—	099 (091.6)	-7.2	20.3	—	+FL160	—	—	RNAV1

CHANGE : PROC.

## STANDARD ARRIVAL CHART -INSTRUMENT

RJFK / KAGOSHIMA

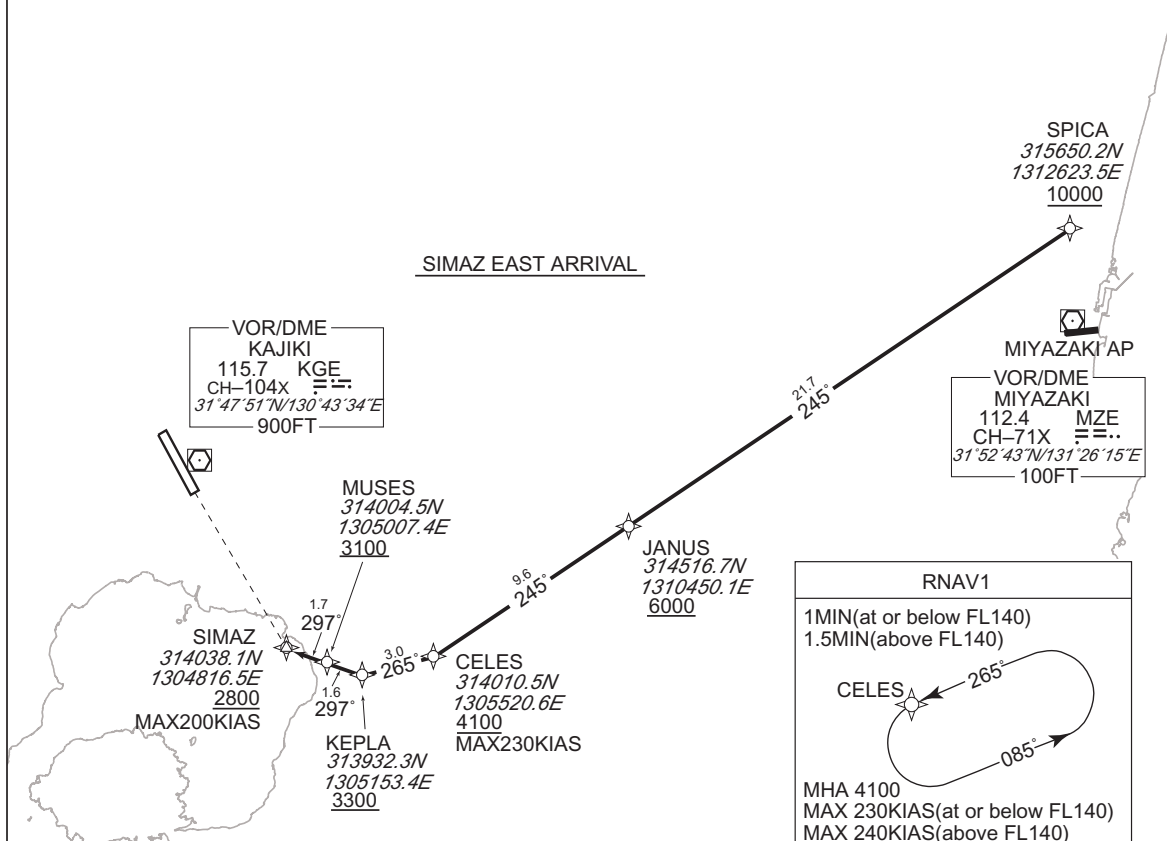
RNAV STAR RWY34

## SIMAZ EAST ARRIVAL

RNAV 1

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.

VAR 7°W (2020)



## SIMAZ EAST ARRIVAL

From SPICA at or above 10000FT, to JANUS at or above 6000FT, to CELES at or above 4100FT, to KEPLA at or above 3300FT, to MUSES at or above 3100FT, to SIMAZ at above 2800FT.

Critical DME	—
DME GAP	—
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDS for RNAV1

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	SPICA	—	—	-7.2	—	—	+10000	—	—	RNAV1
002	TF	JANUS	—	245 (237.8)	-7.2	21.7	—	+6000	—	—	RNAV1
003	TF	CELES	—	245 (237.8)	-7.2	9.6	—	+4100	-230	—	RNAV1
004	TF	KEPLA	—	265 (257.8)	-7.2	3.0	—	+3300	—	—	RNAV1
005	TF	MUSES	—	297 (289.6)	-7.2	1.6	—	+3100	—	—	RNAV1
006	TF	SIMAZ	—	297 (289.6)	-7.2	1.7	—	+2800	-200	—	RNAV1

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Outbound Distance (NM)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	CELES	265 (257.8)	-7.2	1.0(-14000) 1.5(+14001)	—	L	4100	—	-230(-14000) -240(+14001)	RNAV1

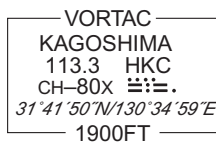
CHANGE : PROC. KOKUBU VOR/DME(KBE) abolished. HLDG pattern.

## RJFK / KAGOSHIMA

RNAV STAR RWY34

## RNAV 1

VAR 7°W (2017)



KAGOSHIMA(HKC)  
314150.0N  
1303458.6E  
3500

SIMAZ NORTH ARRIVAL

VOR/DME  
KAJIKI  
115.7 KGE  
CH-104x  
31°47'51"N/130°43'34"E  
900FT

SIMAZ  
314038.1N  
1304816.5E  
2800

ROKET  
314004.5N  
304139.5E  
3100

TOPPY  
313908.0N  
1304513.8E  
MAX185KIAS

HKC  
VORTAC

MHA 4500

From HKC at or above 3500FT, to ROKET at or above 3100FT, to TOPPY, to SIMAZ at or above 2800FT.

Critical DME	KGE : 3NM to ROKET - SIMAZ
DME GAP	HKC - 3NM to ROKET
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

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	HKC	—	—	-6.9	—	—	+3500	—	—	RNAV1
002	TF	ROKET	—	114 (107.2)	-6.9	6.0	—	+3100	—	—	RNAV1
003	TF	TOPPY	—	114 (107.2)	-6.9	3.2	—	—	-185	—	RNAV1
004	TF	SIMAZ	—	067 (059.9)	-6.9	3.0	—	+2800	—	—	RNAV1

CHANGE : Critical DME,DME GAP. KOKUBU VOR/DME(KBE) abolished.

## STANDARD ARRIVAL CHART -INSTRUMENT

RJFK / KAGOSHIMA

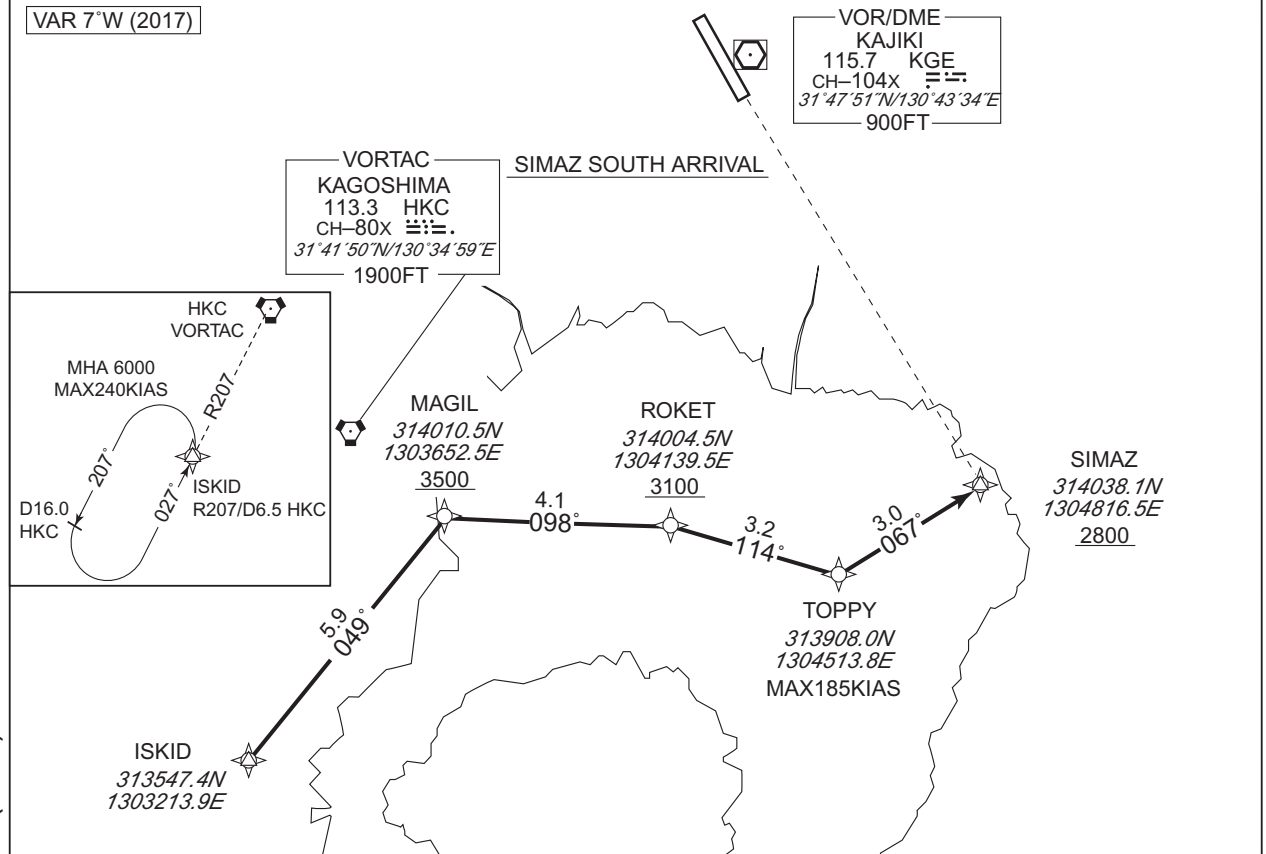
RNAV STAR RWY34

## SIMAZ SOUTH ARRIVAL

RNAV 1

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.

VAR 7°W (2017)



## SIMAZ SOUTH ARRIVAL

From ISKID, to MAGIL at or above 3500FT, to ROKET at or above 3100FT, to TOPPY, to SIMAZ at or above 2800FT.

Critical DME	—
DME GAP	ISKID - 3NM to MAGIL 1NM to MAGIL - SIMAZ
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

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	ISKID	—	—	-6.9	—	—	—	—	—	RNAV1
002	TF	MAGIL	—	049 (042.0)	-6.9	5.9	—	+3500	—	—	RNAV1
003	TF	ROKET	—	098 (091.4)	-6.9	4.1	—	+3100	—	—	RNAV1
004	TF	TOPPY	—	114 (107.2)	-6.9	3.2	—	—	-185	—	RNAV1
005	TF	SIMAZ	—	067 (059.9)	-6.9	3.0	—	+2800	—	—	RNAV1

CHANGE : Critical DME,DME GAP, KOKUBU VOR/DME(KBE) abolished.

## STANDARD ARRIVAL CHART -INSTRUMENT

RJFK / KAGOSHIMA

RNAV STAR RWY34

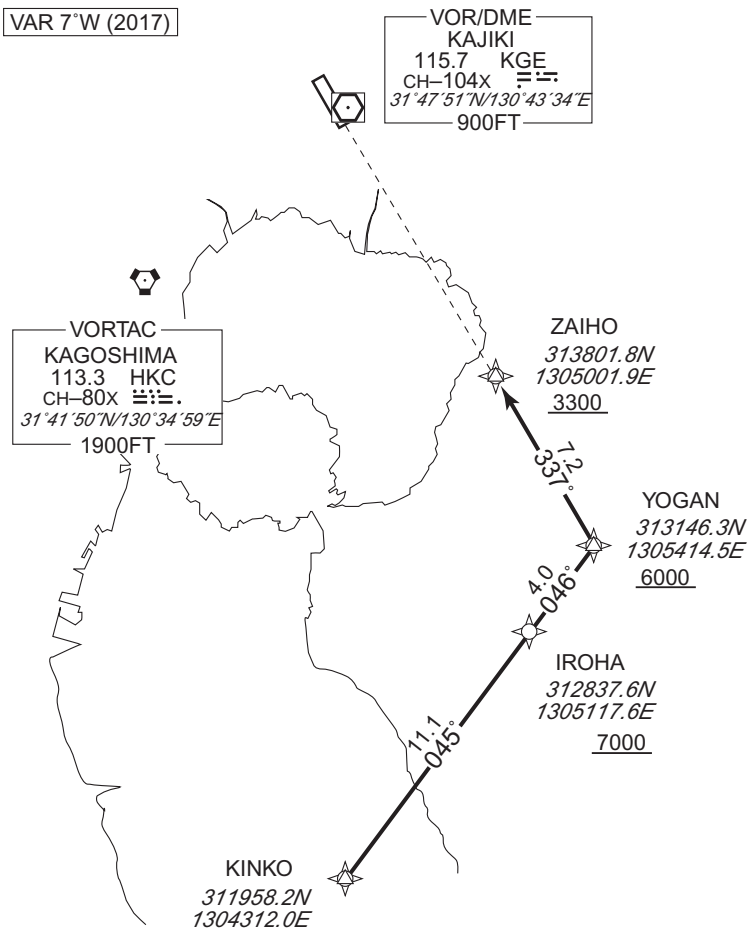
## KINKOH ARRIVAL

RNAV 1

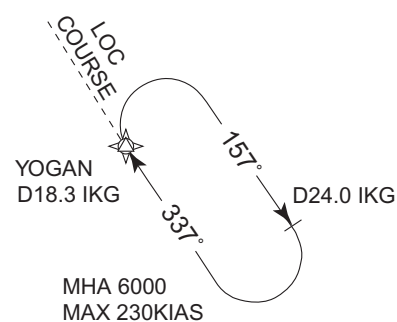
Note 1 ) DME/DME/IRU or GNSS required.

2 ) RADAR service required.

VAR 7°W (2017)



## KINKOH ARRIVAL



## KINKOH ARRIVAL

From KINKO, to IROHA at or above 7000FT, to YOGAN at or above 6000FT, to ZAIHO at or above 3300FT.

Critical DME	JAT : 10.2NM to IROHA – 5.7NM to IROHA NHT : 5.6NM to IROHA – 2.4NM to IROHA 2.4NM to ZAIHO – 1.2NM to ZAIHO HKC : 4.4NM to ZAIHO – 1.3NM to ZAIHO
DME GAP	–
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

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	KINKO	–	–	-6.9	–	–	–	–	–	RNAV1
002	TF	IROHA	–	045 (038.6)	-6.9	11.1	–	+7000	–	–	RNAV1
003	TF	YOGAN	–	046 (038.6)	-6.9	4.0	–	+6000	–	–	RNAV1
004	TF	ZAIHO	–	337 (330.2)	-6.9	7.2	–	+3300	–	–	RNAV1

CHANGE : KOKUBU VOR/DME(KBE) abolished.

## STANDARD ARRIVAL CHART-INSTRUMENT

RJFK / KAGOSHIMA

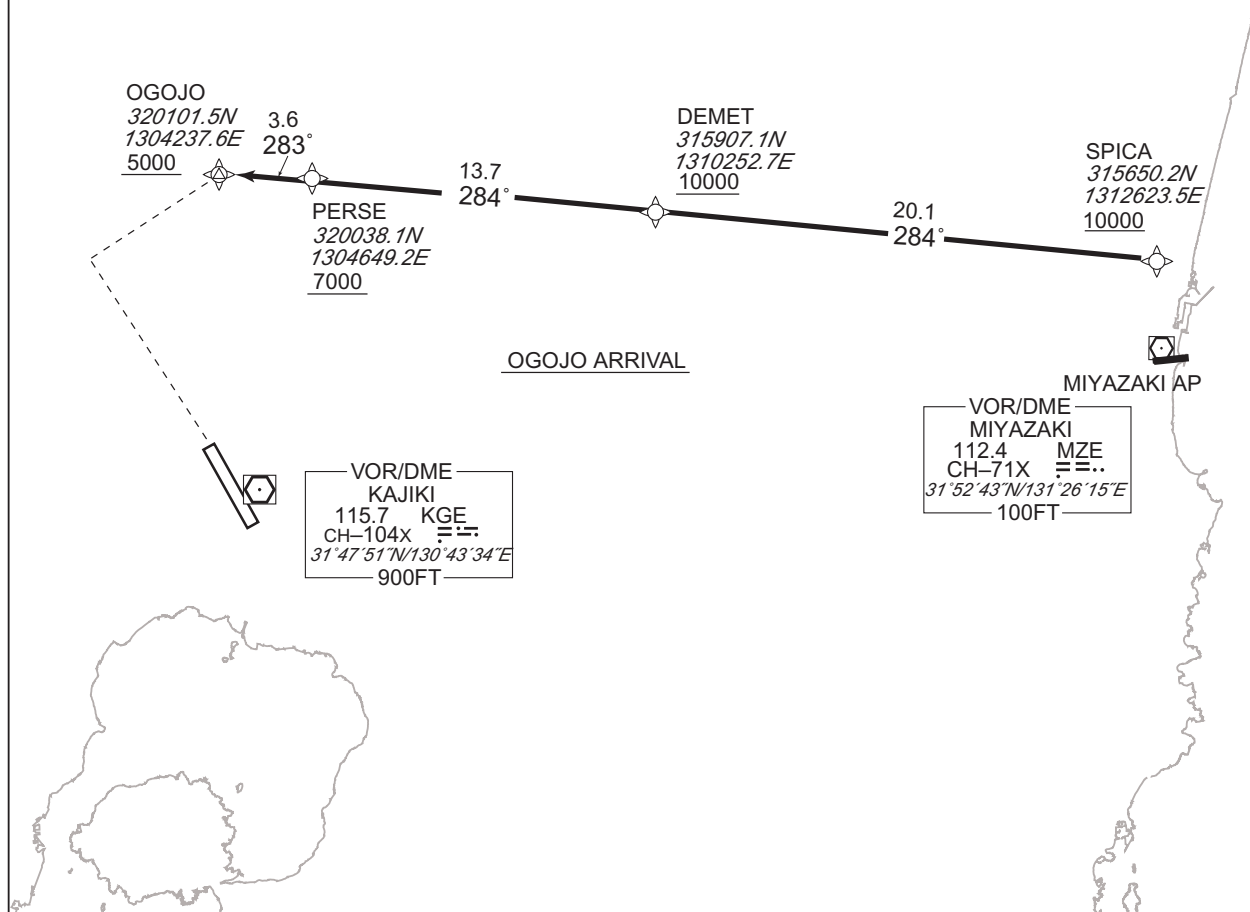
RNAV STAR RWY16

## OGOJO ARRIVAL

RNAV 1

Note 1) DME/DME/IRU or GNSS required.  
2) RADAR service required.

VAR 7°W (2020)



## OGOJO ARRIVAL

From SPICA at or above 10000FT, to DEMET at or above 10000FT, to PERSE at or above 7000FT, to OGOJO at or above 5000FT.

Critical DME	—	—
DME GAP	—	—
Inappropriate NavAids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

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	SPICA	—	—	-7.2	—	—	+10000	—	—	RNAV1
002	TF	DEMET	—	284 (276.6)	-7.2	20.1	—	+10000	—	—	RNAV1
003	TF	PERSE	—	284 (276.4)	-7.2	13.7	—	+7000	—	—	RNAV1
004	TF	OGOJO	—	283 (276.3)	-7.2	3.6	—	+5000	—	—	RNAV1

CHANGE : PROC. KOKUBU VOR/DME(KBE) abolished.



## STANDARD ARRIVAL CHART-INSTRUMENT

RJFK / KAGOSHIMA

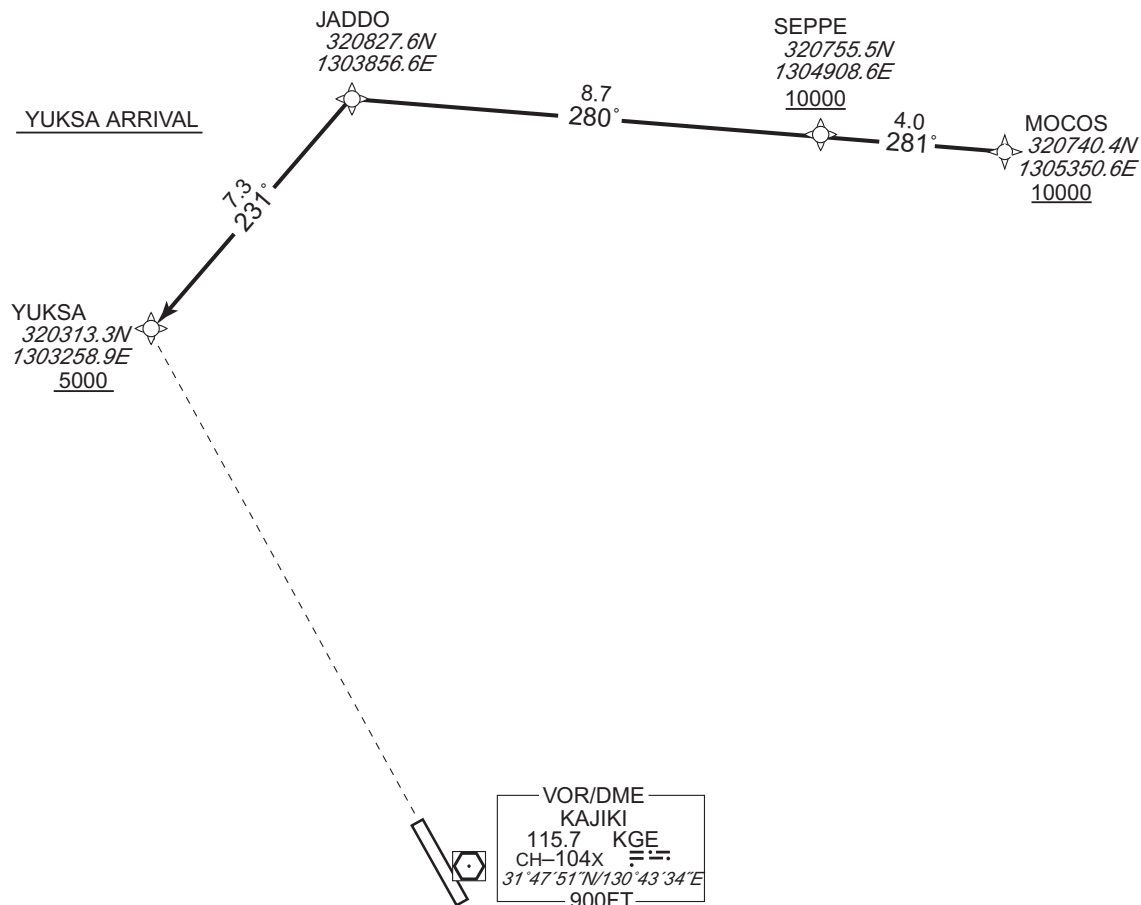
RNAV STAR RWY16

## YUKSA ARRIVAL

RNAV 1

Note 1) DME/DME/IRU or GNSS required.  
2) RADAR service required.

VAR 7°W (2017)

YUKSA ARRIVAL

From MOCOS at or above 10000FT, to SEPPE at or above 10000FT, to JADDO, to YUKSA at or above 5000FT.

Critical DME	MZE	2NM to JADDO - JADDO
	KUE	1NM to YUKSA - YUKSA
	MZE	1NM to YUKSA - YUKSA
DME GAP	—	—
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

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	MOCOS	—	—	-6.9	—	—	+10000	—	—	RNAV1
002	TF	SEPPE	—	281 (273.6)	-6.9	4.0	—	+10000	—	—	RNAV1
003	TF	JADDO	—	280 (273.6)	-6.9	8.7	—	—	—	—	RNAV1
004	TF	YUKSA	—	231 (224.0)	-6.9	7.3	—	+5000	—	—	RNAV1

STANDARD ARRIVAL CHART-INSTRUMENT

RJFK / KAGOSHIMA RNAV STAR RWY16

OIDON ARRIVAL RNAV 1

Note 1 ) DME/DME/IRU or GNSS required.  
2 ) RADAR service required.



OIDON ARRIVAL  
From HKC at or above 4500FT, to OIDON at or above 4500FT.

Critical DME	HKC	7NM to OIDON - OIDON
DME GAP	HKC - 10NM to OIDON	
Inappropriate NavAids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

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	HKC	—	—	-6.9	—	—	+4500	—	—	RNAV1
002	TF	OIDON	—	351 (343.6)	-6.9	13.7	—	+4500	—	—	RNAV1

CHANGE : Critical DME,DME GAP. KOKUBU VOR/DME(KBE) abolished.

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INSTRUMENT APPROACH CHART

RJFK / KAGOSHIMA

ILS Z or LOC Z RWY34

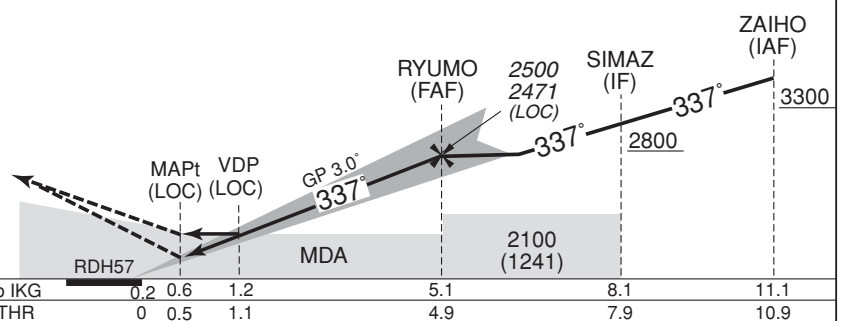


**MISSED APPROACH**

Climb to 1300FT on HDG337°,  
turn left, direct to HKC VORTAC  
and hold at 4500FT.

Contact KAGOSHIMA APP.

No turn before IKG 0.6DME.  
Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 5.0%

**MINIMA** THR elev. 859 AD elev. 891

CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	1059 (200)	550	1240 (381)	900	1660 (769)	1600
B				1000		
C				1000		
D				1400		

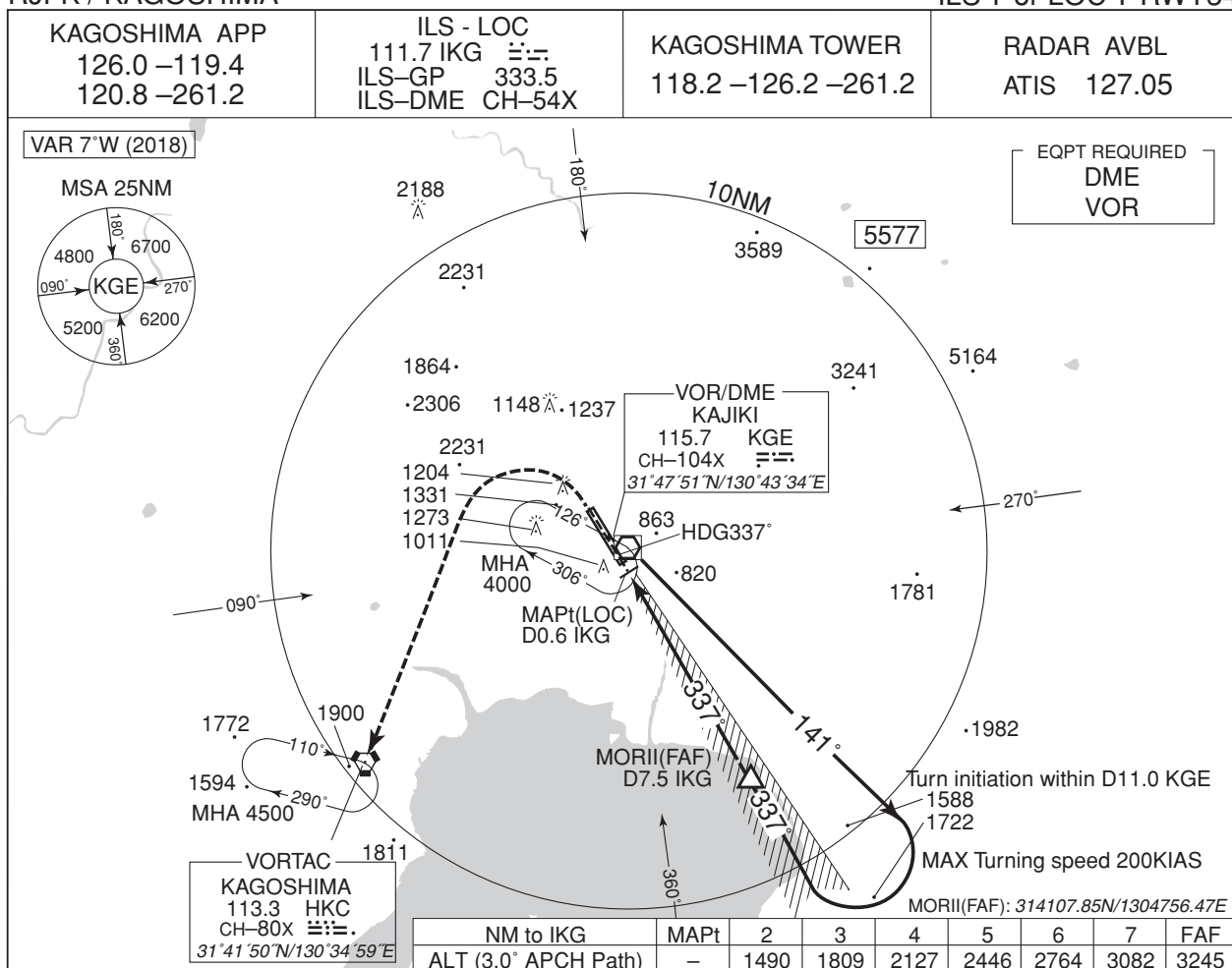
MINIMA with Missed APCH climb gradient of 2.5% are not established.

CHANGE : VAR

## INSTRUMENT APPROACH CHART

RJFK / KAGOSHIMA

ILS Y or LOC Y RWY34

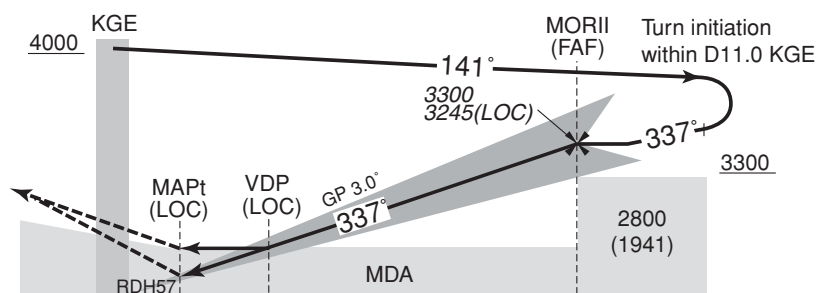


## MISSED APPROACH

Climb to 1300FT on HDG337°,  
turn left, direct to HKC  
VORTAC and hold at 4500FT.  
Contact KAGOSHIMA APP.

No turn before IKG 0.6DME.

Timing not authorized for defining the MAPt.



DME to IKG	0.2	0.6	1.2	7.5
NM to THR	0	0.5	1.1	7.4

Missed APCH climb gradient MNM 5.0%.

MINIMA THR elev. 859 AD elev. 891

CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	1059 (200)	550	1240 (381)	900	1660 (769)	1600
B				1000		
C						
D				1400	1710 (819)	3200

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

CHANGE : VAR, Radial

## RJFK / KAGOSHIMA

VOR RWY34

VAR 7°W (2020)EQPT REQUIRED  
DME

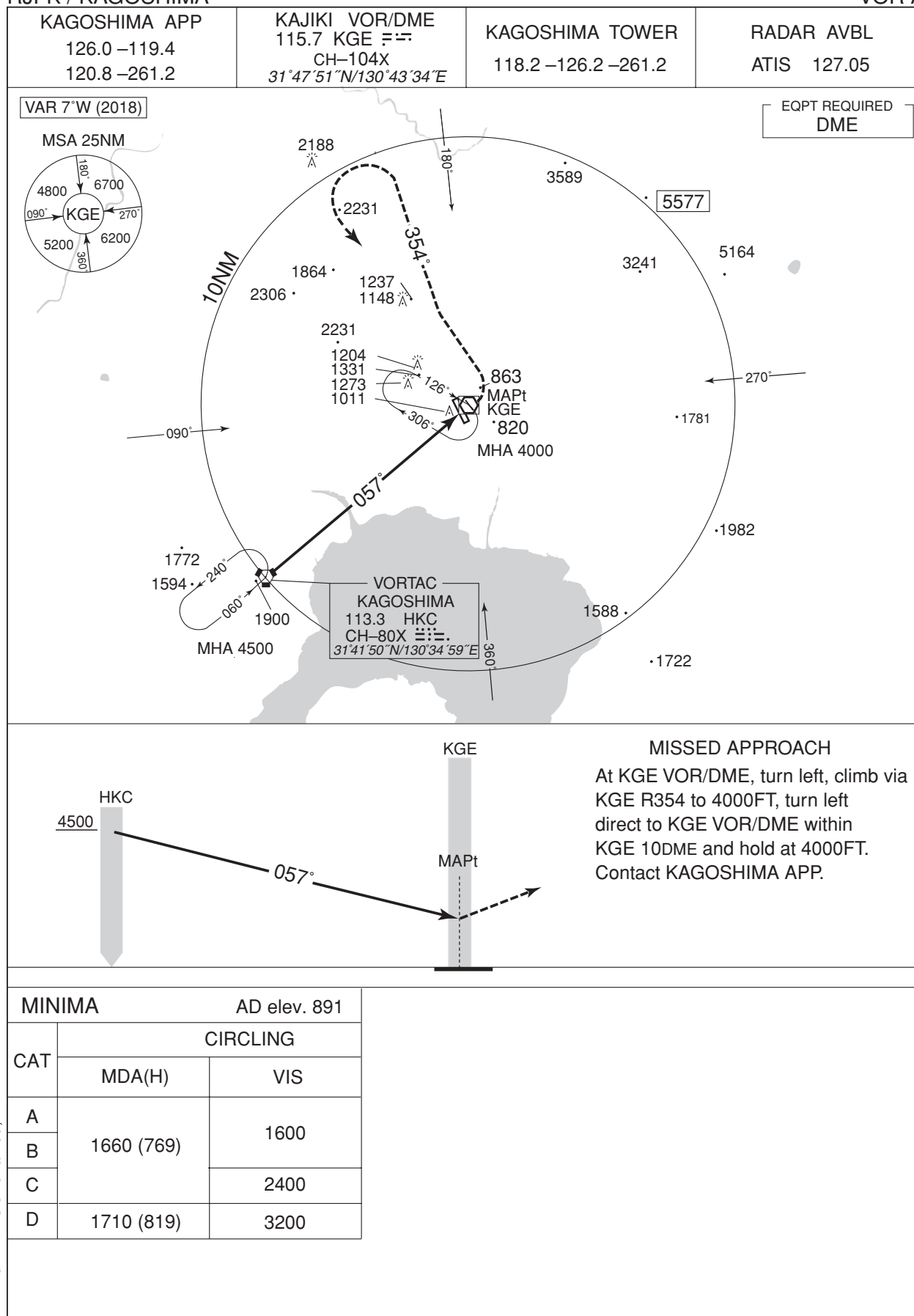
Remain within D14.0 KGE

MINIMA		THR elev. 859	AD elev. 891	
CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	1350 (491)	1000	1660 (769)	1600
B		1200		
C				
D			1600	1710 (819)

## INSTRUMENT APPROACH CHART

RJFK / KAGOSHIMA

VOR A

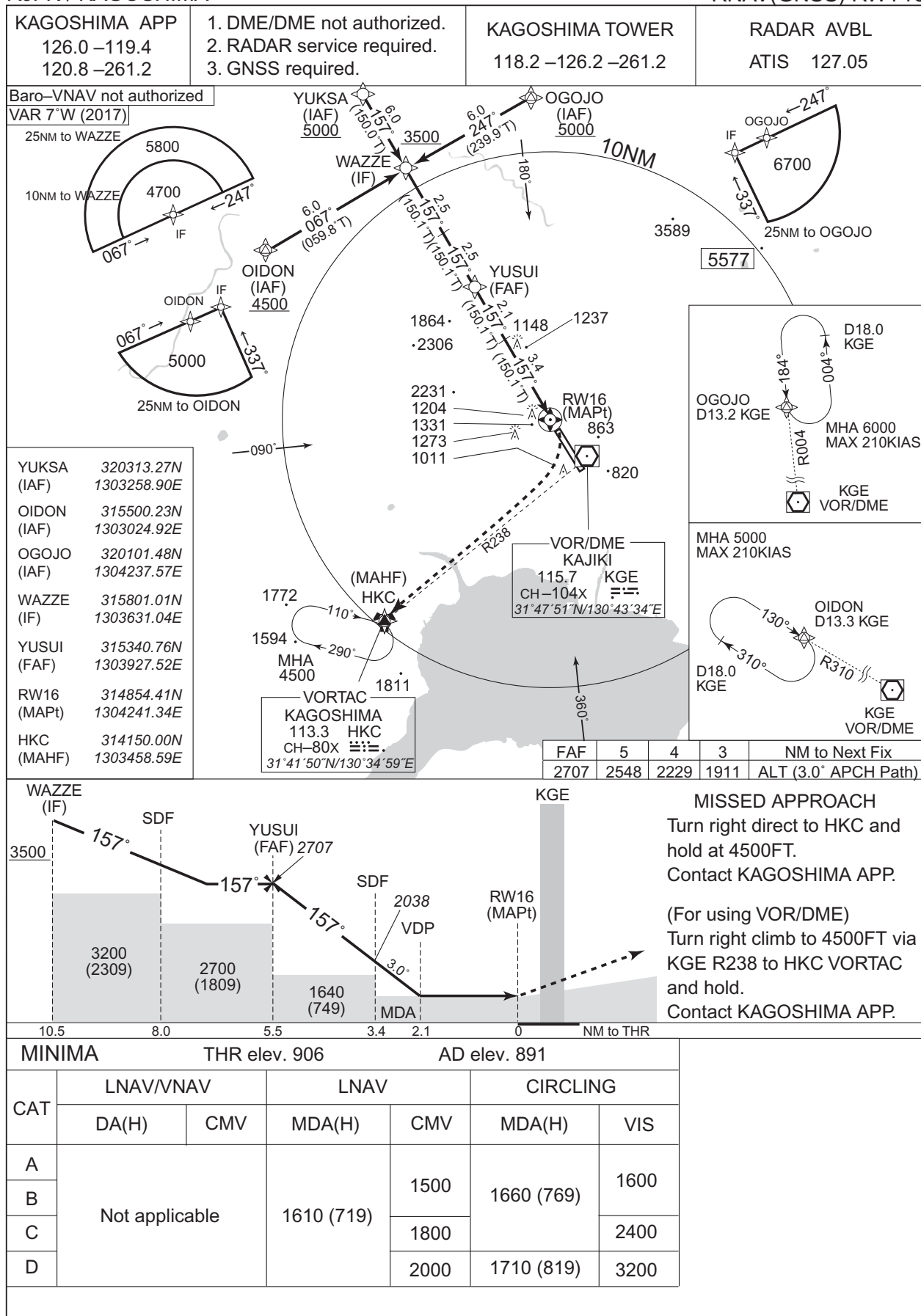


CHANGE : PROC renamed, VAR

## INSTRUMENT APPROACH CHART

## RJFK / KAGOSHIMA

## RNAV(GNSS) RWY16





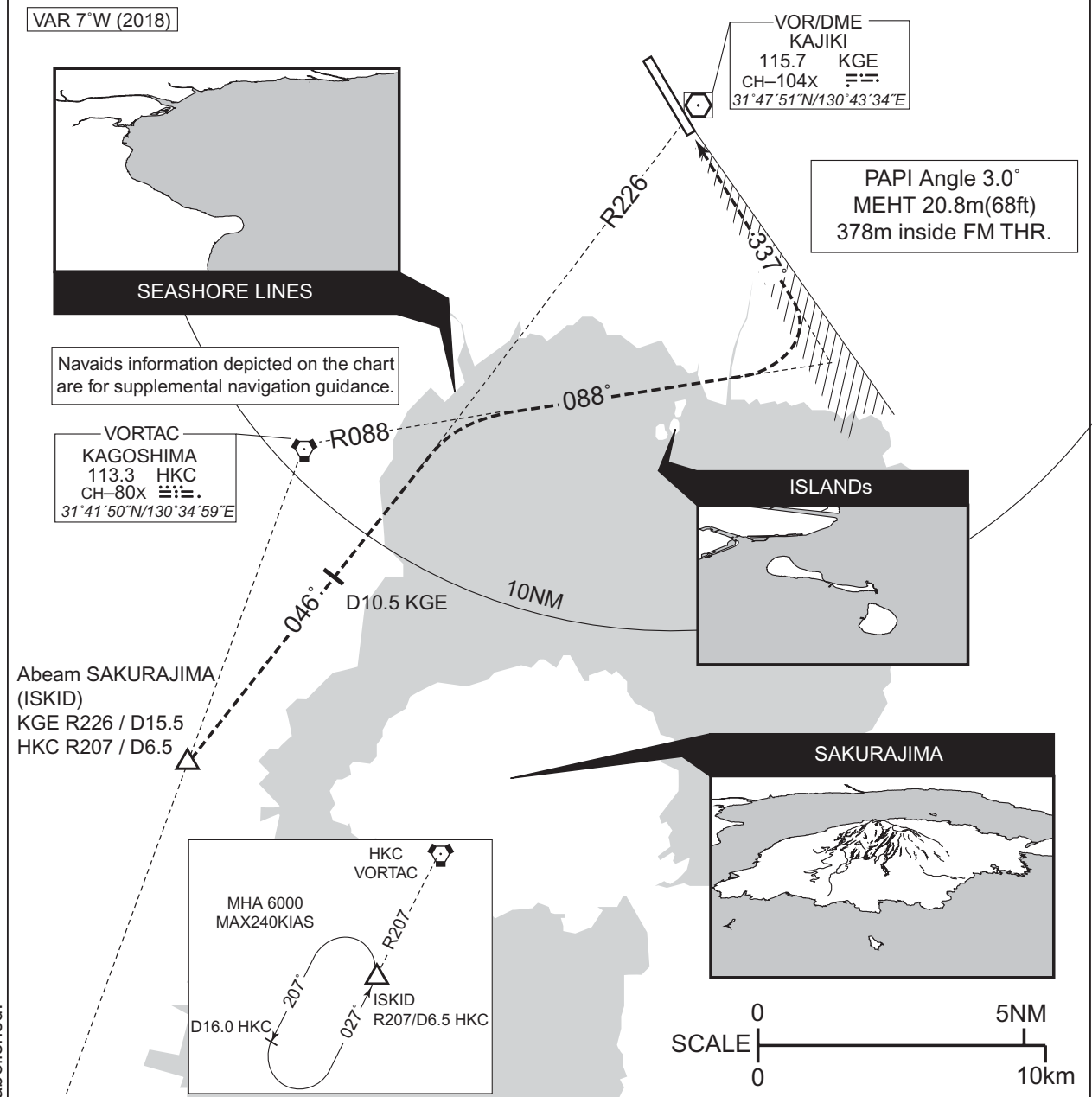
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## RJFK / KAGOSHIMA

VISUAL APPROACH  
KINKO VISUAL RWY34

KAGOSHIMA APP 126.0 –119.4 120.8 –261.2	ILS - LOC 111.7 IKG 𠄎𠄎𠄎 CH-54X 𠄎𠄎𠄎 ILS-GP 333.5	KAGOSHIMA TOWER 118.2 –126.2 –261.2	ATIS 127.05
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VAR 7°W (2018)



When visual approaches to RWY34 are in progress, arriving aircraft may be vectored into the ISKID for KINKO VISUAL RWY34 APPROACH.  
In the event of a go-around, climb via IKG LOC and RWY HDG to 3500FT until receiving ATC instructions.

## &lt;KINKO VISUAL RWY34 APPROACH&gt;

After ISKID, aircraft proceed via seashore lines to the mouth of the Beppu River (KGE R226), proceed via seashore lines to ISLANDS(HKC R088) until intercept to RWY34 RWY center line, and proceed to RWY34(IKG LOC course).

Aircraft is recommended KGE 10.5DME(HKC R167) at or above 3500FT.

Note1: Pilot is urged to report promptly to ATC when lose sight of landmark(SAKURAJIMA, Seashore Lines and ISLANDS) and the preceding aircraft concerned.

Note2: Reference NAVAIDS(KGE, HKC and IKG LOC) must be operating.

Note3: RADAR service required.

Note4: Procedure not authorized at night.

CHANGE : KOKUBU VOR/DME(KBE) abolished.

## RJFK / KAGOSHIMA

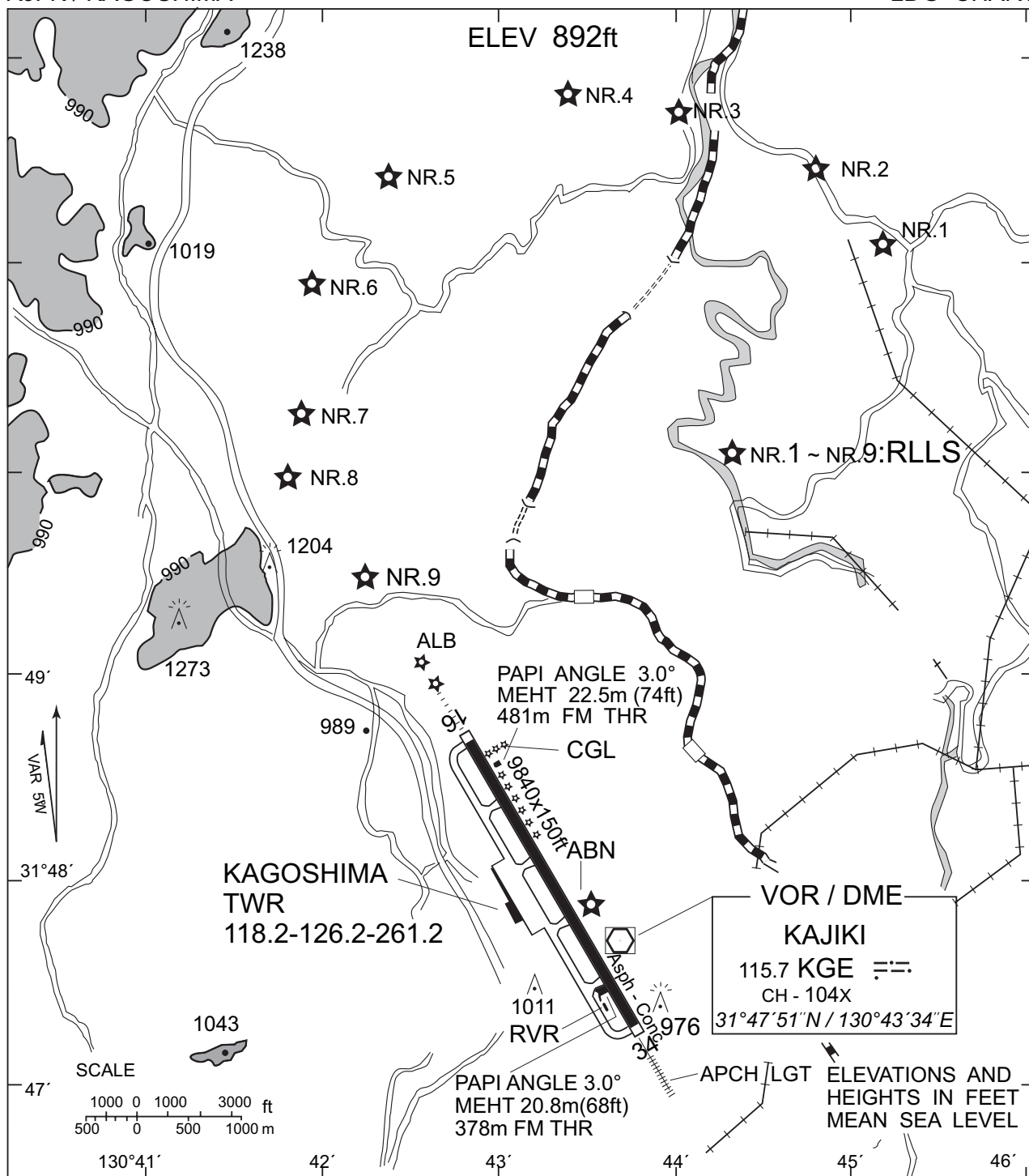
## Visual REP



Call sign	BRG / DIST from ARP	Remarks
栗野 Kurino	001° / 8.8NM	JR駅 JR Station
都城 Miyakonojo	102° / 18.5NM	JR駅 JR Station
加治木タウン Kajiki Town	213° / 5.4NM	網掛川河口 River-mouth(The Amikake)
大崎鼻 Ohsakibana	210° / 10.0NM	崎 Point
鹿児島シティ Kagoshima City	211° / 14.7NM	港 Harbor
蒲生 Kamo	253° / 6.8NM	住吉池 Pond
鶴田ダム Tsuruta Dam	314° / 16.0NM	ダム Dam
神宮 Jingu	081° / 6.0NM	JR駅 JR Station

RJFK / KAGOSHIMA

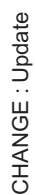
LDG CHART



RUNWAY LEAD - IN LIGHTING SYSTEM :

NR.1~NR.9 FLASHING WHITE

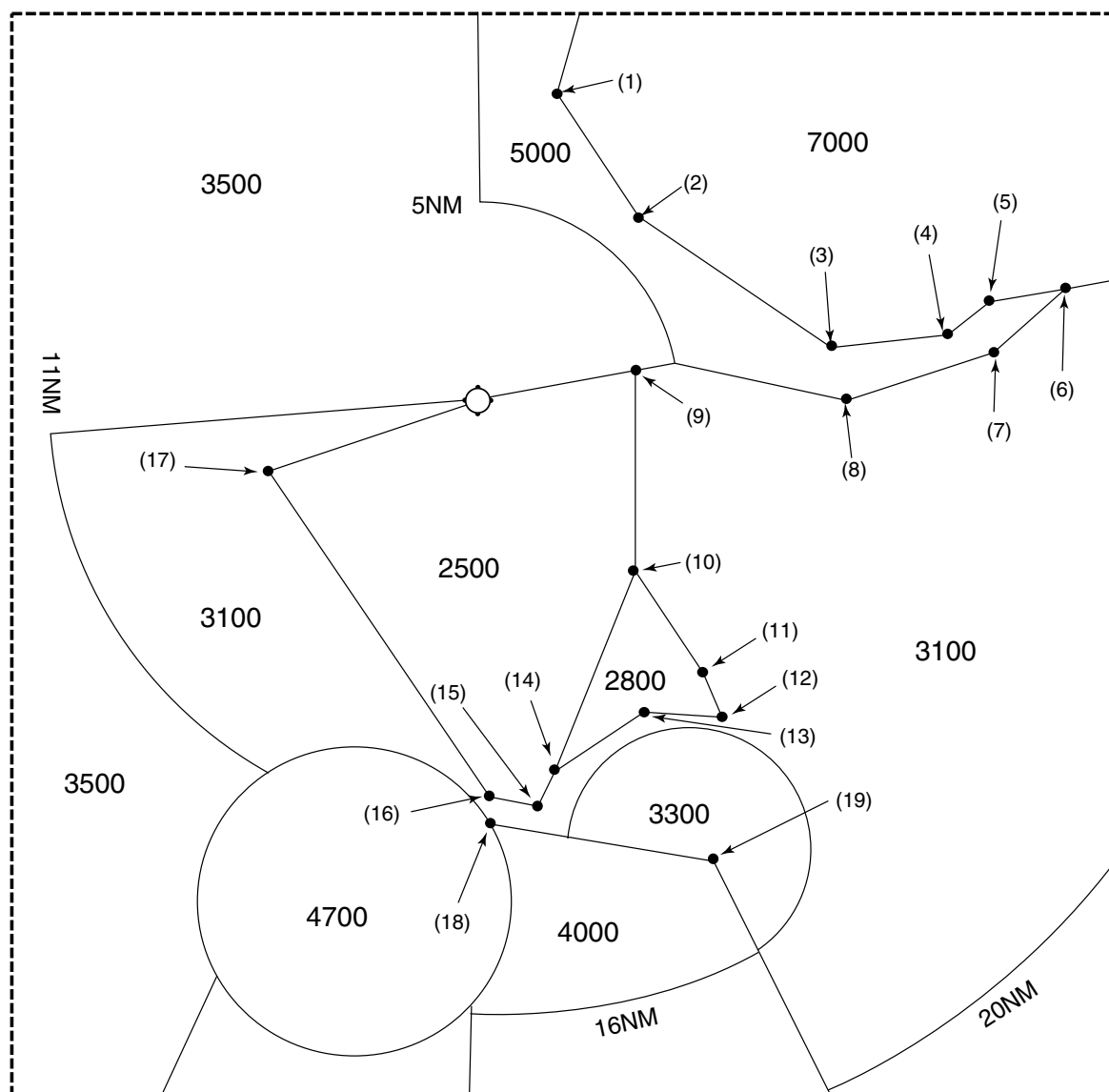
## Minimum Vectoring Altitude CHART



RJFK / KAGOSHIMA

Minimum Vectoring Altitude CHART

enlarged view



- |                        |                       |
|------------------------|-----------------------|
| ( 1 ) 315600N/1304528E | (11) 314059N/1304947E |
| ( 2 ) 315250N/1304805E | (12) 314004N/1305007E |
| ( 3 ) 314927N/1305345E | (13) 314005N/1304809E |
| ( 4 ) 314951N/1305709E | (14) 313829N/1304518E |
| ( 5 ) 315042N/1305825E | (15) 313733N/1304453E |
| ( 6 ) 315102N/1310029E | (16) 313747N/1304326E |
| ( 7 ) 314919N/1305824E | (17) 314616N/1303653E |
| ( 8 ) 314801N/1305359E | (18) 313707N/1304328E |
| ( 9 ) 314858N/1304746E | (19) 313608N/1305004E |
| (10) 314342N/1304742E  |                       |