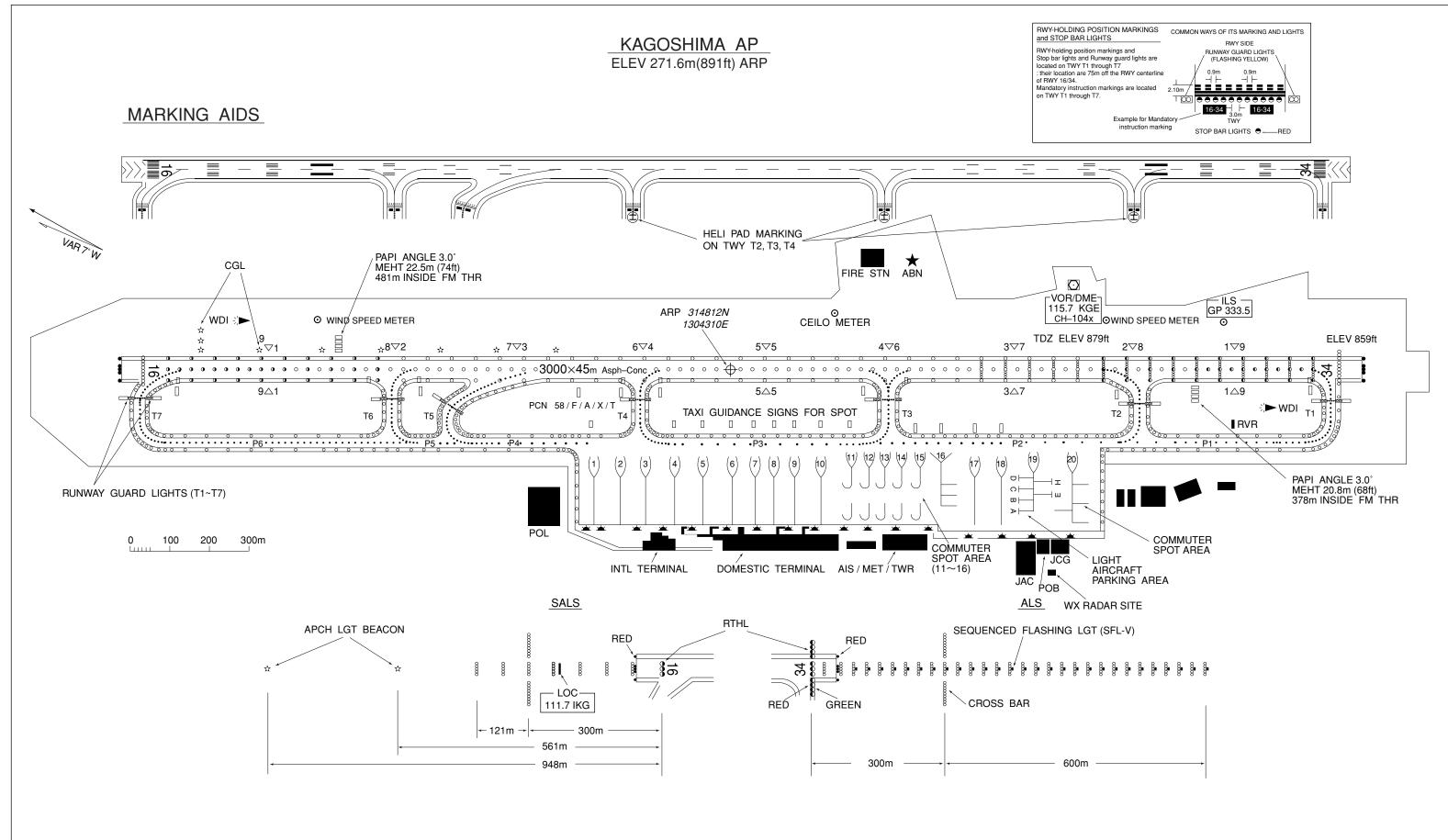
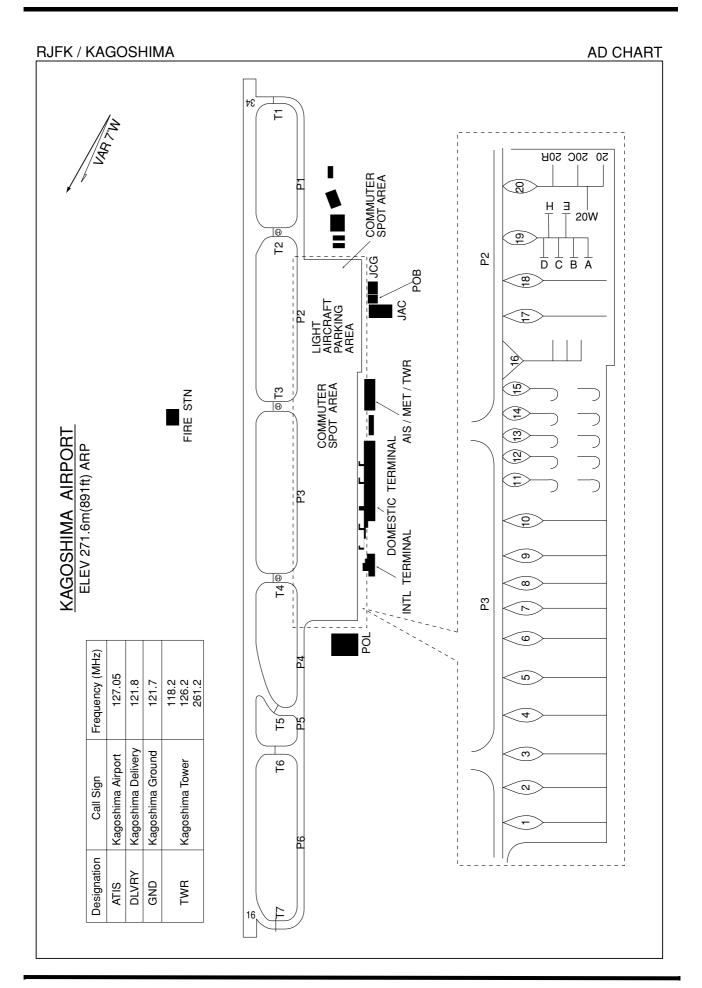
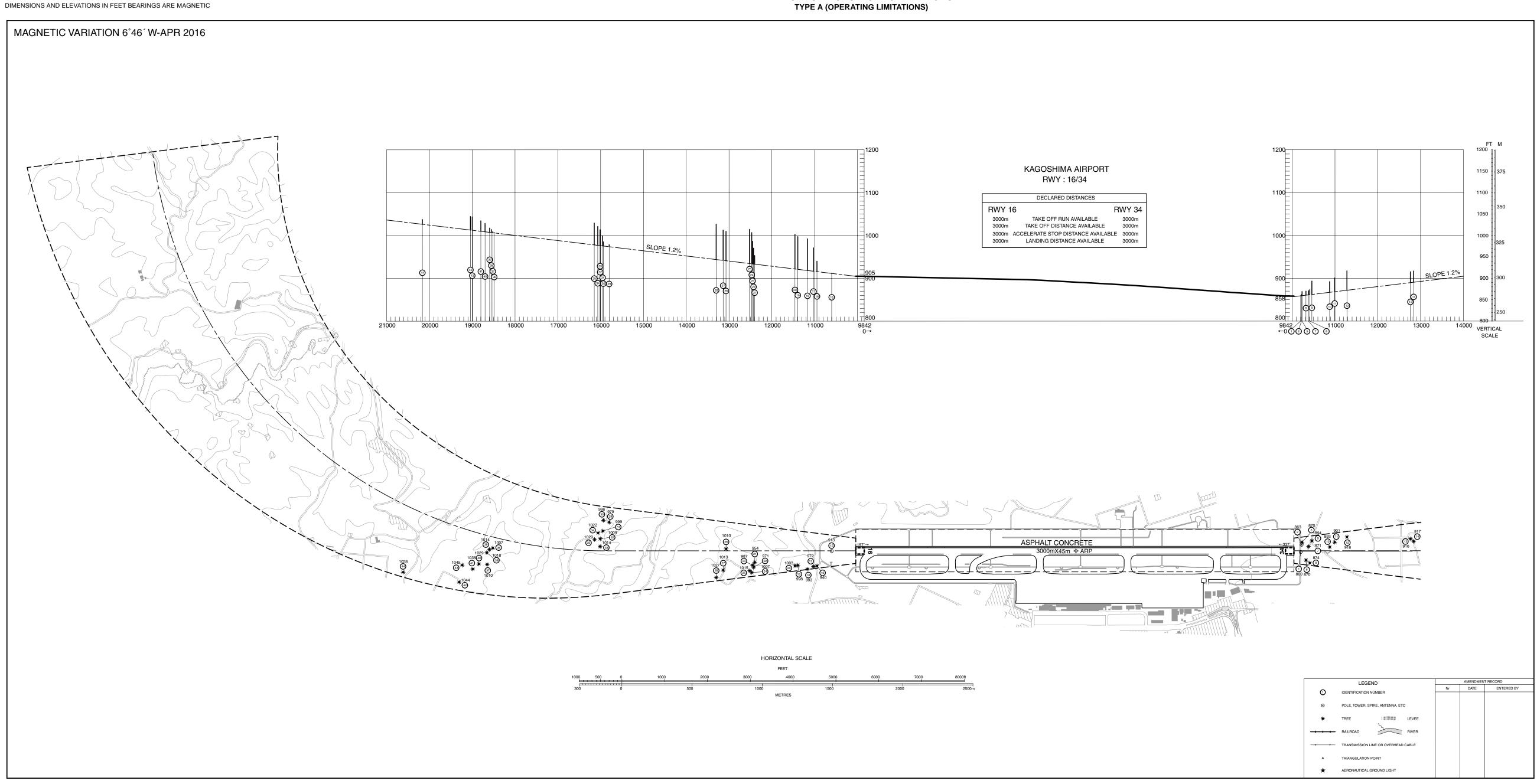
### **AERODROME CHART**

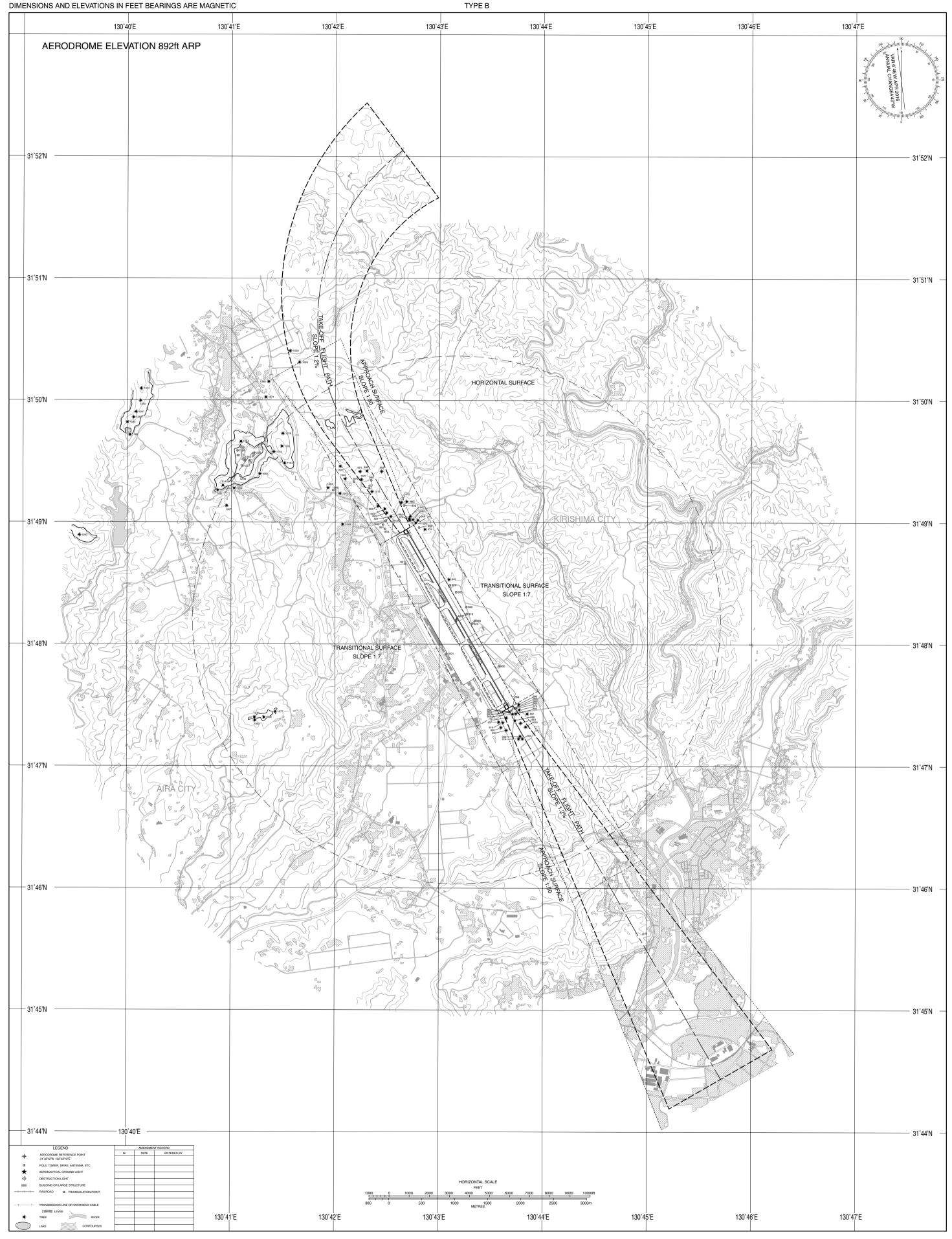


Civil Aviation Bureau, Japan (EFF:1 FEB 2018)



# AERODROME OBSTACLE CHART - ICAO TYPE A (OPERATING LIMITATIONS)





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



Civil Aviation Bureau, Japan (EFF:31 JAN 2019)

## 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.



### 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**

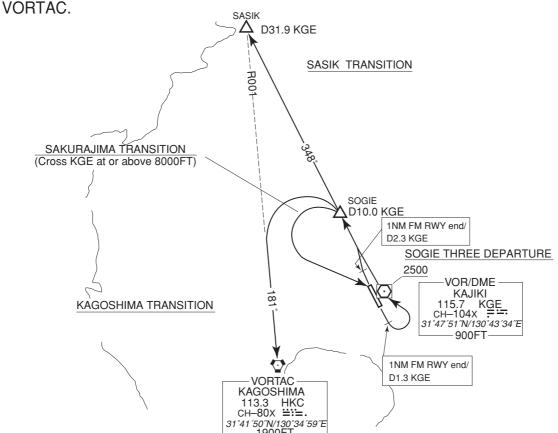
From over SOGIE, turn left, direct to KGE VOR/DME. Cross KGE VOR/DME at or above 8000FT.

# 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



# **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.



RJFK / KAGOSHIMA **RNAV SID** MIDAI THREE DEPARTURE RNAV 1 Note 1) DME/DME/IRU or GNSS required. RWY16: HKC:7NM to OICHI — 2NM to OICHI KGE:7NM to OICHI — 2NM to OICHI %The aircraft equipped with only DME/DME/IRU Critical DME must be able to update its position without delay at the starting point of take-off roll. RWY16: DER - 7NM to OICHI 2) RADAR service required. DME GAP RWY34: DER - 12NM to SMIKO Inappropriate Navaids | See AD 1.1.6.10.3. Inappropriate NAVAIDs for RNAV1 VAR 7°W (2020) VOR/DME MIYAZAKI 112.4 MZE CH-71X ==·· VOR/DMF KAJIKI 115.7 KGE CH-104X :---31°47′51″N/130°43′34″E 31°52′43″N/131°26′15″E 100FT -900FT MIYAZAKIAP 337 2000 FK400 315023.2N 1304844.2E 157 MIDAI THREE DEPARTURE ري. مير 1300 4 OICHI 9.4 20.3 313712.8N 099 1304725.8E 099 FL160 **SMIKO** MIDAI 313657.5N 313621.1N 1305824.7E 1312212.7E 7000 0 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.

KOKUBU VOR/DME(KBE) abolished

CHANGE: PROC.

**RNAV SID** 

## STANDARD DEPARTURE CHART - INSTRUMENT

# RJFK / KAGOSHIMA

# MIDAI THREE DEPARTURE

## RWY16

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	157 (150.1)	-7.2	_	-	+1300	_	_	RNAV1
002	DF	OICHI	_	_	-7.2	_	R	1	_	_	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	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	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	1	+FL160	-	_	RNAV1

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

#### STANDARD ARRIVAL CHART -INSTRUMENT

#### **RNAV STAR RWY34** RJFK / KAGOSHIMA SIMAZ EAST ARRIVAL RNAV 1 Note 1) DME/DME/IRU or GNSS required. 2) RADAR service required. VAR 7°W (2020) **SPICA** 315650.2N 1312623.5E 10000 SIMAZ EAST ARRIVAL $\odot$ VOR/DME MIYAZAKIAP **KAJIKI** 115.7 KGE CH−104X =:--31°47′51″W130°43′34″E VOR/DME MIYAZAKI 112.4 MZE CH-71X ==·· 31°52′43″N/131°26′15″E -900FT -100FT MUSES 314004.5N 1305007.4E JANUS *314516.7N* 3100 RNAV1 1310450.1E 6000 1MIN(at or below FL140) 297 <sup>®</sup> SIMAZ *314038.1N* 1.5MIN(above FL140) 265° **CELES** 1304816.5E 314010.5N **CELES** 2800 1305520.6E 297 MAX200KIAS 4100 KEPLA 313932.3N MAX230KIAS 1305153.4E MHA 4100 3300 MAX 230KIAS(at or below FL140) MAX 240KIAS(above FL140) 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 Turn Serial Path Waypoint Fly Course Magnetic Distance Altitude Speed Vertical Navigation Number Descriptor Specification Identifier °M(°T) Variation (KIAS) Angle Over (NM) Direction (FT) 001 +10000 IF **SPICA** -7.2 RNAV1 245 002 21.7 TF **JANUS** -7.2 +6000 RNAV1 (237.8)245 003 TF **CELES** -7.2 RNAV1 +4100 $(2\overline{37.8})$ 9.6 -230 265 (257.8) 004 TF **KEPLA** -7.2 RNAV1 +3300 3.0 297 005 TF **MUSES** -7.2 +3100 RNAV1 1.6 (289.6)297 SIMAZ +2800 -7.2 -200 006 TF 1.7 RNAV1 (289.6)Outbound Minimum Maximum Waypoint Inbound Magnetic Outbound Turn Speed Navigation Path Distance Altitude (FT) Altitude Course Time Variation Identifier Direction (KIAS) Specification °M(°T) (MIN) (NM) (FT) -230(-14000) 265 (257.8) 1.0(-14000) CELES -7.2 4100 Hold RNAV1 -240(+14001) 1.5(+14001)

#### STANDARD ARRIVAL CHART -INSTRUMENT

### RJFK / KAGOSHIMA **RNAV STAR RWY34** SIMAZ NORTH ARRIVAL RNAV 1 Note 1) DME/DME/IRU or GNSS required. 2) RADAR service required. VAR 7°W (2017) VOR/DME KAJIKI 115.7 KGE CH−104X =:-: 31°47′51″W130°43′34″E 900FT SIMAZ NORTH ARRIVAL VORTAC -KAGOSHIMA 113.3 HKC CH–80x ≌:≡ 31°41′50″N/130°34′59″E 1900FT KAGOSHIMA(HKC) 314150.0N 1303458.6E 6.0 SIMAZ 3500 314038.1N *1304816.5E* 2800 ROKET HKC 314004.5N VORTAC 1304139.5E TOPPY 1100 3100 313908.0N 1304513.8E MAX185KIAS 290 MHA 4500

SIMAZ NORTH ARRIVAL

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	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	HKC	_	_	-6.9	_	_	+3500	_	_	RNAV1
002	TF	ROKET	_	114 (107.2)	-6.9	6.0	1	+3100	1	_	RNAV1
003	TF	TOPPY	_	114 (107.2)	-6.9	3.2	1	_	-185	_	RNAV1
004	TF	SIMAZ	_	067 (059.9)	-6.9	3.0	ı	+2800	١	_	RNAV1

#### 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. VOR/DME VAR 7°W (2017) KAJIKI 115.7 KGE CH-104X ≓∺ 31°47′51″W130°43′34″E $\odot$ 900FT VORTAC -SIMAZ SOUTH ARRIVAL KAGOSHIMA 113.3 HKC CH-80x **∷**:=. 31°41′50″N/130°34′59″E 1900FT HKC VORTAC MHA 6000 · R20> MAX240KIAS MAGIL **ROKET** 314010.5N 1303652.5E 314004.5N 1304139.5E SIMAZ 3500 İSKID 3100 314038.1N 4.1 D16.0 R207/D6.5 HKC 1304816.5E 098 HKC 2800 **TOPPY** 45.70g 313908.0N 1304513.8E MAX185KIAS ISKID 313547.4N 1303213.9E

### 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.

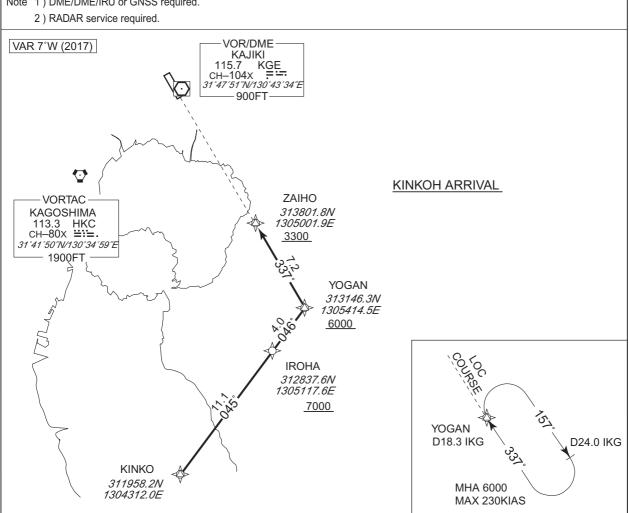
Critical DME	-
DME GAP	ISKID - 3NM to MAGIL 1NM to MAGIL - SIMAZ
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	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	1	_	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

### STANDARD ARRIVAL CHART -INSTRUMENT

#### RJFK / KAGOSHIMA **RNAV STAR RWY34** KINKOH ARRIVAL RNAV 1

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



### KINKOH ARRIVAL

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

	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		Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	KINKO		_	-6.9	1	_	_	_	_	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

#### 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 320101.5N 3.6 1304237.6E 283° **DEMET** 315907.1N **SPICA** 5000 1310252.7E 13.7 315650.2N 10000 1312623.5E 284 20.1 **PERSE** 10000 320038.1N 284 1304649.2E 7000 OGOJO ARRIVAL MIYAZAKI AP VOR/DME MIYAZAKI 112.4 CH-71X VOR/DME KAJIKI 115.7 KGE CH–104X **≓** 31°47′51″W130°43′34″E 31°52′43″N/131°26′15″E -100FT -900FT-

# 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	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number De	escriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	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

abolished.

#### STANDARD ARRIVAL CHART-INSTRUMENT

# **RNAV STAR RWY16** RJFK / KAGOSHIMA YUKSA ARRIVAL RNAV 1 Note 1) DME/DME/IRU or GNSS required. 2) RADAR service required. VAR 7°W (2017) JADDO SEPPE 320827.6N 320755.5N 1303856.6E 1304908.6E 8.7 10000 280° YUKSA ARRIVAL 4.0 MOCOS 281: 320740.4N 1305350.6E 10000 YUKSA *320313.3N* <sup>≪</sup> *1303258.9E* 5000 VOR/DME KAJIKI 115.7 KGE CH-104x F 31°47′51″N/130°43′34″E -900FT

# YUKSA ARRIVAL

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

	MZE	2NM to JADDO - JADDO				
Critical DME	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		Turn Direction	Altitude (FT)	Speed (KIAS)		•
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

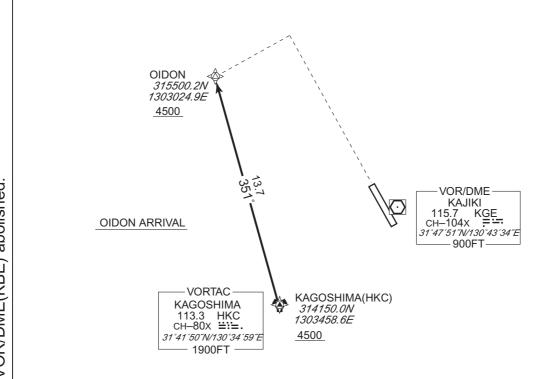
## RJFK / KAGOSHIMA

**RNAV STAR RWY16** 

OIDON ARRIVAL RNAV 1

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

VAR 7°W (2017)



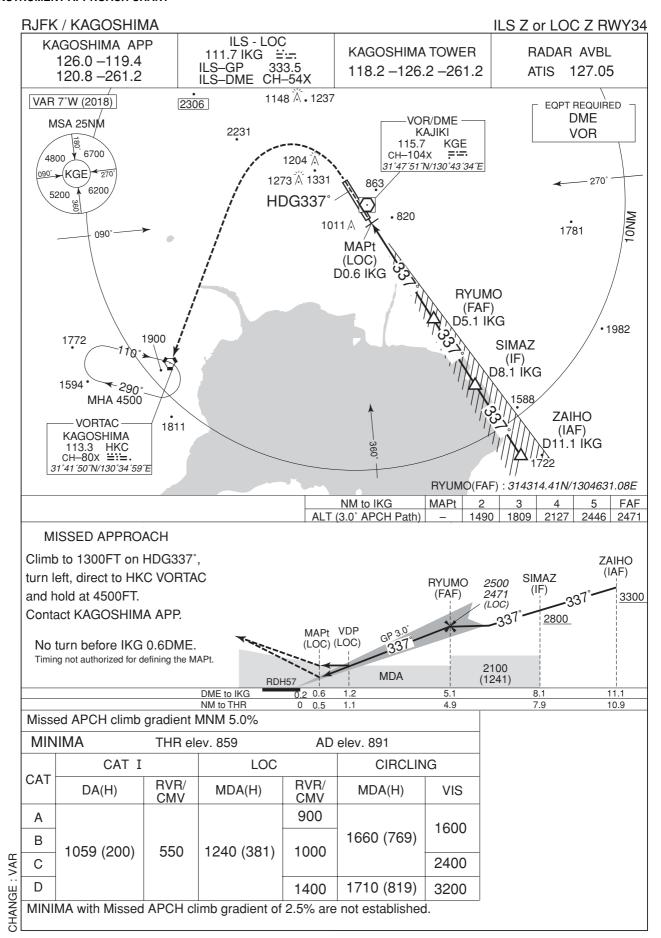
### OIDON ARRIVAL

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

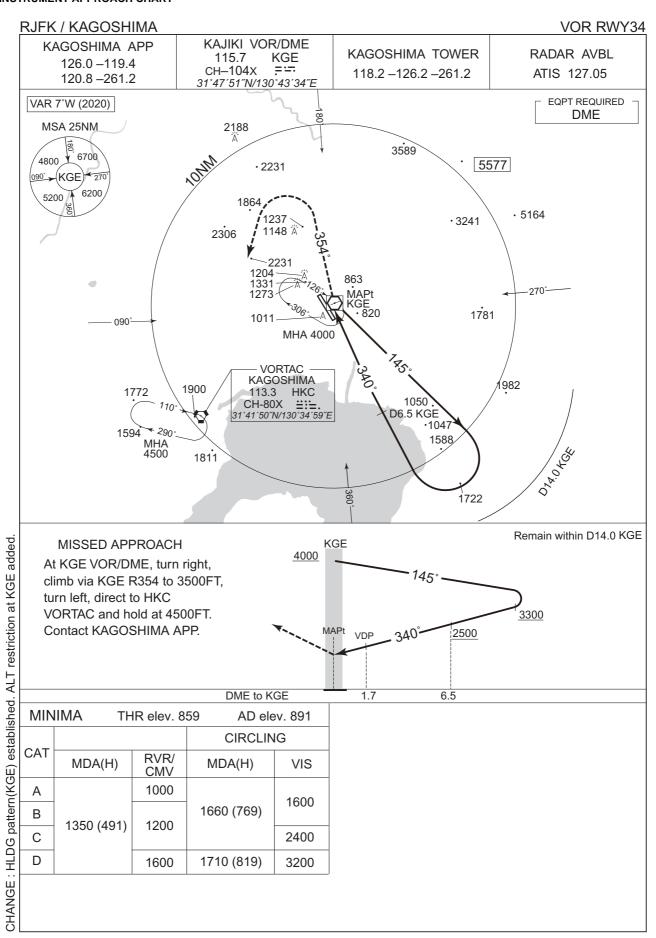
Critical DME	HKC	7NM to OIDON - OIDON
DME GAP	HKC - 10NM to OIDC	N
Inappropriate Navaids	See AD1.1.6.10.3	Inappropriate NAVAIDs for RNAV1

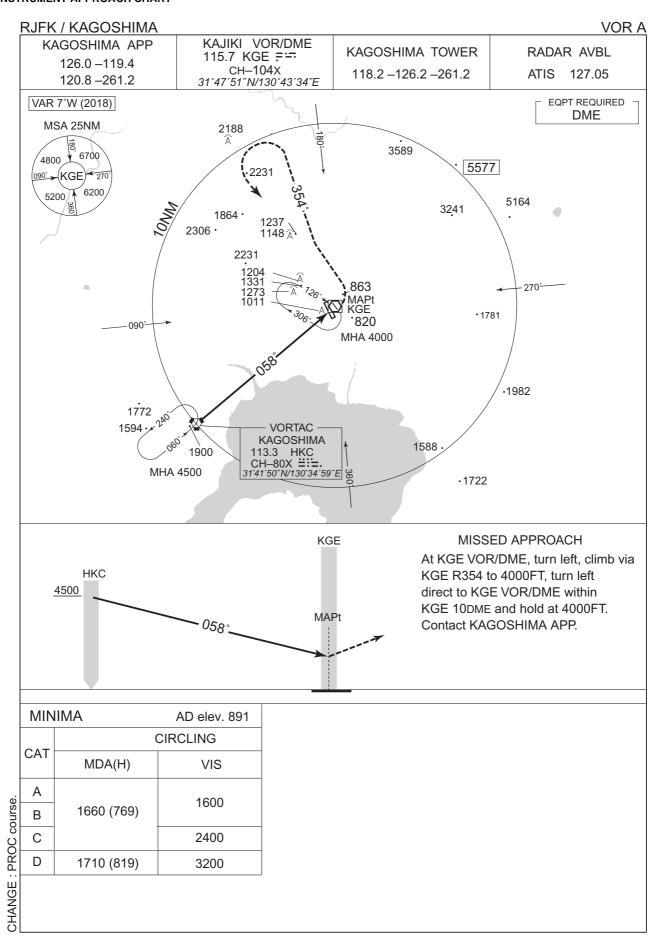
Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	HKC	_	_	-6.9	_	_	+4500	_	_	RNAV1
002	TF	OIDON	_	351 (343.6)	-6.9	13.7	_	+4500	_	_	RNAV1

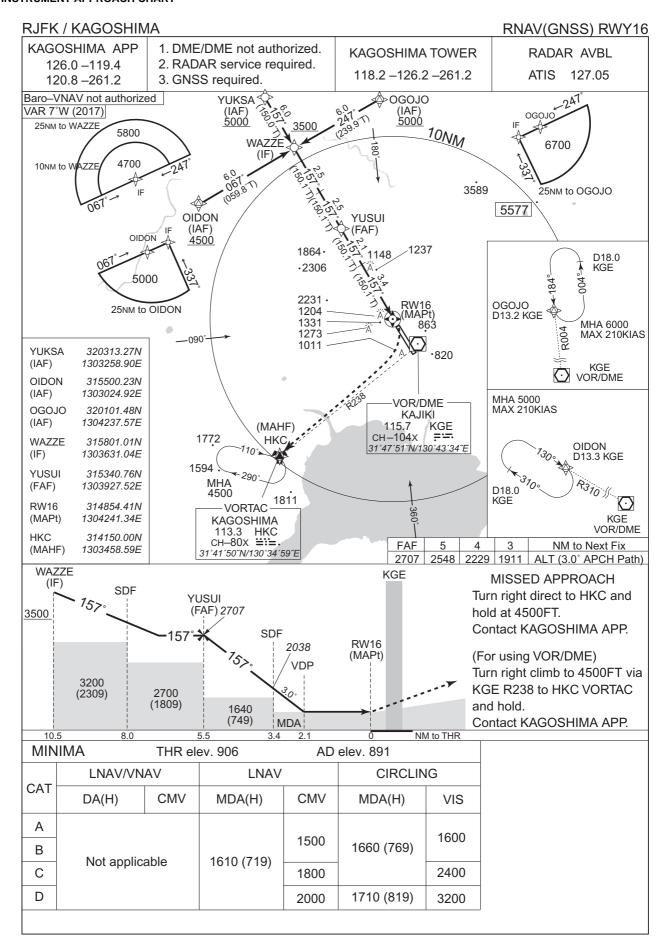




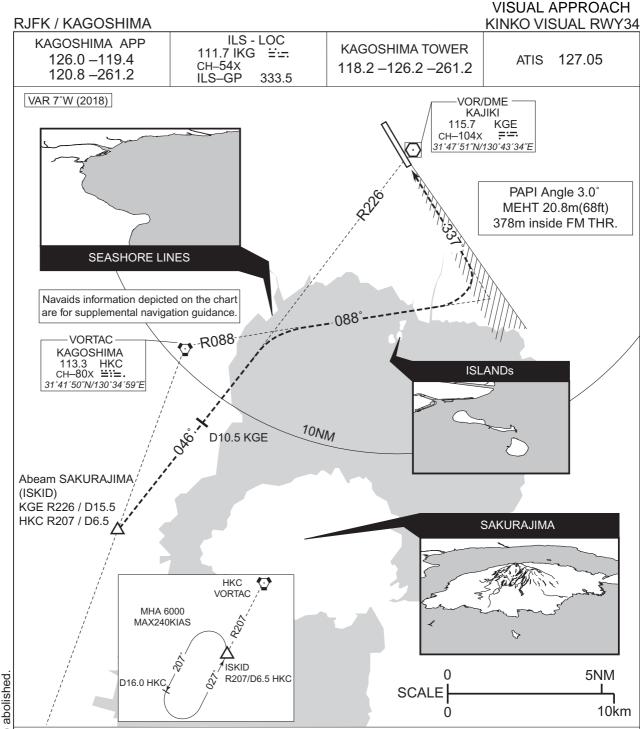












When visual approaches to RWY34 are in progress, arriving aircraft may be vectored into the ISKID for KINKO VISUAL RWY34 APPROACH.

In the event of a go-around, climb via IKG LOC and RWY HDG to 3500FT until receiving ATC instructions.

### <KINKO VISUAL RWY34 APPROACH>

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).

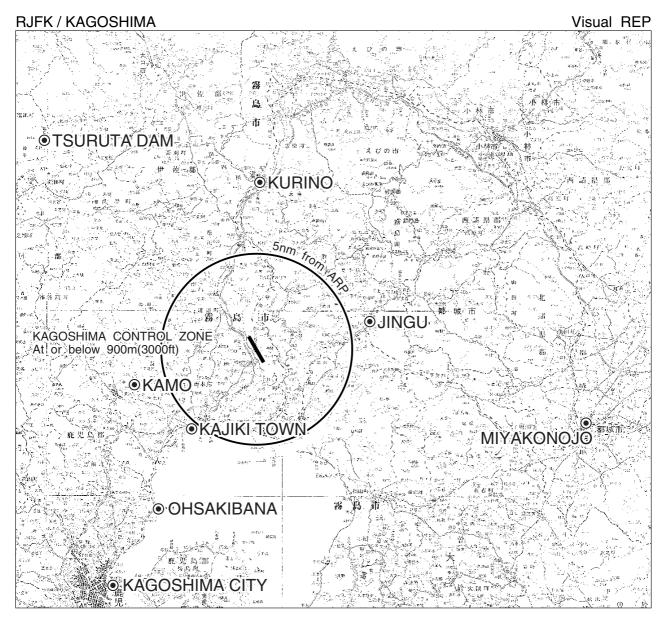
Aircraft is recommended KGE 10.5DME(HKC R167) at or above 3500FT.

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

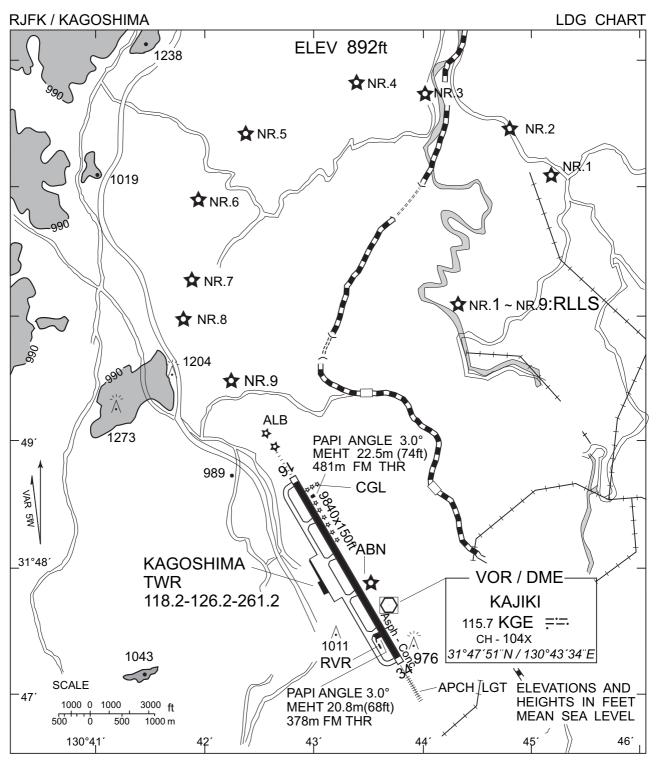
Note2: Reference NAVAIDS(KGE, HKC and IKG LOC) must be operating.

Note3: RADAR service required.

Note4: Procedure not authorized at night.



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				



RUNWAY LEAD - IN LIGHTING SYSTEM:

NR.1~NR.9 FLASHING WHITE



