AD 2 AERODROMES

RJOK AD 2.1 AERODROME LOCATION INDICATOR AND NAME

RJOK - KOCHI

RJOK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	*333246N /1334010E* 266° / 560m FM TWR
2	Direction and distance from (city)	7NM E from Kochi city
3	Elevation/ Reference temperature	29ft / 31°C (2004-2008)
4	Geoid undulation at AD ELEV PSN	120ft
5	MAG VAR/ Annual change	7°W (2006) / 1.0'W
6	AD Administration, address, telephone, telefax, telex, AFS, e-mail and/or Web-site addresses	Civil Aviation Bureau, Kochi Airport Office Monobe, Nankoku - shi, Kochi Pref. TEL: 088(863)2620, FAX: 088(863)2956 AFS: RJOKYFYX AND RJOKZPZX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Nil

RJOK AD 2.3 OPERATIONAL HOURS

1	AD Administration	2200 - 1200
2	Customs and immigration	On request Customs: 088-832-6131 Immigration: 088-871-7030
3	Health and sanitation	On request Quarantine(human): 0877-46-4279 Quarantine(animal): 087-879-4654 Quarantine(plant): 088-832-3690
4	AIS Briefing Office	2200 - 1200
5	ATS Reporting Office(ARO)	Nil
6	MET Briefing Office	H24 (KANSAI)
7	ATS	2200 - 1200
8	Fuelling	2200 - 1200
9	Handling	2200 - 1200
10	Security	2200 - 1200
11	De-icing	Nil
12	Remarks	Nil

RJOK AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	AVBL up to B777-200 ACFT
2	Fuel/ oil types	JET A-1, AVGAS 100
3	Fuelling facilities/ capacity	Fuel Truck Refueling
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	Nil
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

RJOK AD 2.5 PASSENGER FACILITIES

1	Hotels	In Nankoku City
2	Restaurants	At airport
3	Transportation	Buses and Taxi
4	Medical facilities	In Nankoku City
5	Bank and Post Office	ATM in airport
6	Tourist Office	At airport
7	Remarks	Nil

RJOK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

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

RJOK AD 2.7 SEASONAL AVAILABILITY-CLEARING

1	Types of clearing equipment	Motor grader x 7
2	Clearance priorities	1) RWY, 2) TWY T1 T6 A1-A5, 3) TWY T2-T5 and APRON
3	Remarks	Snow removal will be commenced when the RWY and TWY are covered with snow its depth 5cm or more

RJOK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface : Concrete, Strength : PCN 52/R/B/X/T
2	Taxiway width, surface and strength	T2 THRU T5 Width : 34m, Surface : Asphalt-concrete, Strength : PCN 42/F/A/X/T T1, T6 Width : 28.5m, Surface : Asphalt-concrete, Strength : PCN 42/F/A/X/T A1 THRU A5 Width : 23m, Surface : Asphalt-concrete, Strength : PCN 42/F/A/X/T
3	ACL and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	Spot NR 0: *333253.60N/1334019.95E* 1: *333251.95N/1334021.08E* 2: *333251.32N/1334023.49E* 3: *333250.05N/1334025.25E* 4: *333248.79N/1334027.02E* 5: *333247.49N/1334028.75E*
6	Remarks	Nil

RJOK 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	Aircraft stand ID signs: Spot NR2-4
2	RWY and TWY markings and LGT	RWY 14/32: (Marking): RWY designation, RWY CL, RWY THR, RWY middle point, Aiming point, TDZ, RWY side stripe (LGT): RCLL, REDL, RENL, RTHL, RTZL(RWY32), WBAR(RWY32) TWY: All TWY (Marking): TWY CL, RWY HLDG PSN, TWY side stripe (LGT): TWY edge LGT, TWY CL LGT, Taxiing guidance sign(T1-T6), RWY guard LGT(T1-T6)
3	Stop bars	Nil
4	Remarks	(Marking): Overrun area (LGT): Apron flood LGT

RJOK AD 2.10 AERODROME OBSTACLES

In Area2 See Obstacle data

Other obstacles

OBST ID/ designation	Obstacle type	Coordinates	Elevation	Markings/ LGT	Remarks
RJOK1	Mountain	*333401.1N/1333838.6E*	182ft	-/LIM	Under APCH SFC
RJOK2	Pole	*333328.3N/1333919E*	62ft	-/LIL	Under APCH SFC
RJOK3	Pole	*333318.3N/1333923E*	53ft	-/LIL	Under APCH SFC
RJOK4	Dike	*333210.1N/1334059.6E*	38ft	-/LIL	Under APCH SFC
RJOK5	Tower	*333257N/1333936E*	104ft	-/LIL	Under transitional SFC

In Area3 To be developed

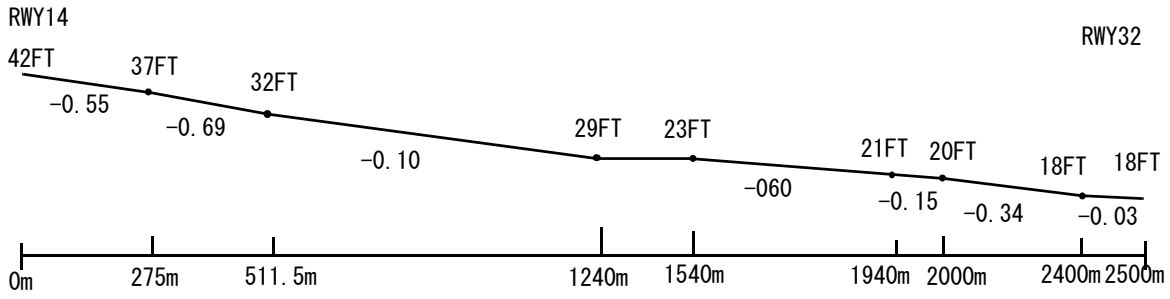
RJOK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	KANSAI
2	Hours of service MET Office outside hours	H24 (KANSAI)
3	Office responsible for TAF preparation Periods of validity	KANSAI 30 Hours
4	Trend forecast Interval of issuance	Nil
5	Briefing/ consultation provided	Briefing is available upon inquiry at KANSAI
6	Flight documentation Language(s) used	C 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	TWR, APP, ATIS
10	Additional information (limitation of service, etc.)	Nil

RJOK 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
14	130.51°	2500 × 45	PCN 80/F/B/X/T Asphalt Concrete	*333312.04N* *1333932.98E* 120.4ft	THR ELEV: 42ft
32	310.51°	2500 × 45	PCN 80/F/B/X/T Asphalt Concrete	*333219.33N* *1334046.67E* 120.3ft	THR ELEV: 17.8ft TDZ ELEV: 23ft

Slope of RWY	Strip Dimensions (M)	RESA (Overrun) Dimensions(M)	Remarks
7	10	11	14
See below figure	2620 × 300	40 × (MNM:242 MAX:300)*	RWY Grooving 2500×30m
	2620 × 300	180 × (MNM:127 MAX:300)* *For detail, ask airport administrator	



RJOK AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
14	2500	2500	2500	2500	Nil
32	2500	2500	2500	2500	Nil

RJOK 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
14	SALS 420m (*1) LIH	Green -	PAPI 3.0°/Left 583.5m 84ft	-	2500m 30m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
32	PALS (CAT I) 420m LIH	Green Green	PAPI 3.0°/Left 404.4m 66ft	900m	2500m 30m Coded color (White/Red) LIH	2500m 60m Coded color (White/Yellow) LIH	Red	Nil (*2)
Remarks								
10								
SALS with APCH LGT beacon (589.358m and 952.287m FM RWY 14 THR)(*1) Overrun area edge LGT(LEN:60m Color:Red) (*2) CGL for RWY 14								

RJOK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: *333255N/1334030E,* White/Green EV4.3sec, HO
2	LDI location and LGT Anemometer location and LGT	LDI:Nil Anemometer : 430m FM RWY 14 THR, LGTD 430m FM RWY 32 THR, LGTD
3	TWY edge and centerline lighting	TWY edge LGT: Blue TWY CL LGT: ALTN Green/Yellow FM RWY leaving Report point,other Green
4	Secondary power supply/ switch-over time	Within 1 sec : REDL, RENL, RTHL, WBAR, RCLL, Overrun area edge LGT Within 15 sec : Other LGT
5	Remarks	WDI LGT

RJOK AD 2.16 HELICOPTER LANDING AREA

Nil

RJOK AD 2.17 ATS AIRSPACE

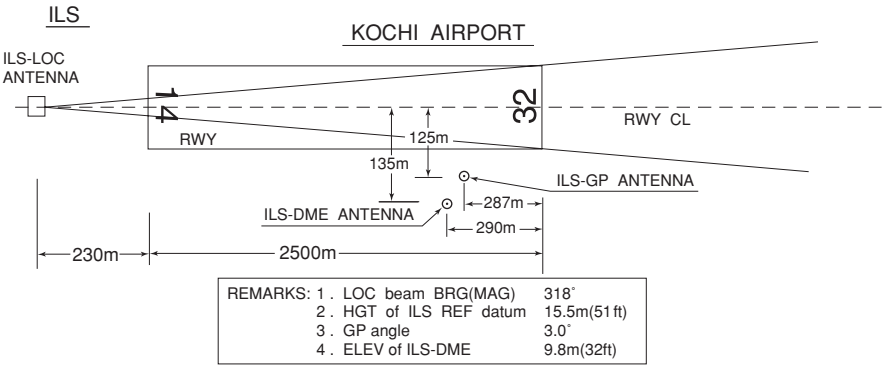
Designation and lateral limits		Vertical limits (ft)	Airspace classification	ATS unit call sign Language	Remarks
1		2	3	4	6
Kochi CTR	Area within a radius of 5nm of KOCHI ARP (*33°33'N/133°40'E*).	3000 or below	D	Kochi TOWER En	
Kansai ACA	See RJBB attached chart		E	Kansai APP Kansai DEP Kansai RADAR En	

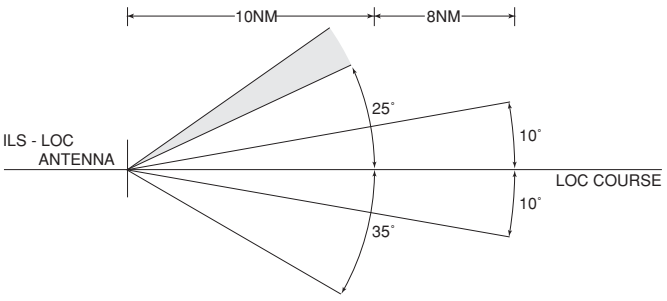
RJOK AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP/ASR	Kansai Approach / Kansai Radar	125.0 MHz 124.8 MHz 121.5 MHz(E) 243.0 MHz(E)	2200 - 1200	APP service provided by KANSAI APP.
DEP	Kansai Departure	124.8 MHz(1) 125.0 MHz 121.5 MHz(E) 243.0 MHz(E)	2200 - 1200	(1)Primary
TWR	Kochi Tower	118.75 MHz(1) 126.2 MHz 121.5 MHz(E) 243.0 MHz(E)	2200 - 1200	(1)Primary
ATIS	Kochi Airport	126.45MHz	2200 - 1200	

RJOK 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 (7°W / 2008)	KRE	113.7MHz	H24	*333230.42N/ 1334048.57E*		VOR/DME Unusable: 010°-040° beyond 30nm BLW 8,000ft. 040°-060° beyond 30nm BLW 9,000ft. 340°-010° beyond 30nm BLW 9,000ft.
DME	KRE	1171MHz (CH-84X)	H24	*333230.42N/ 1334048.57E*	16.3m (54ft)	
ILS-LOC 32	IKR	110.9MHz	2200 -1200	*333316.90N/ 1333926.24E*		LOC: 230m (755ft) away FM RWY 14 THR, BRG (MAG) 318°. Unusable : beyond 25° NE Side of course due to Terrain.
ILS-GP 32	-	330.8MHz	2200-1200	*333222.28N/ 1334035.09E*		GP: 287m (942ft) inside FM RWY 32 THR, 125m (410ft) SW of RCL. Angle 3.0°, HGT of ILS REF datum 15.5m(51ft).
ILS-DME 32	IKR	1007MHz	2200-1200	*333222.10N/ 1334034.73E*	9.8m (32ft)	DME: 290m (951ft) inside FM RWY 32 THR, 135m (443ft) SW of RCL.
MSAS		1575.42MHz	H24			Transmitting antennas are satellite based





UNUSABLE : BEYOND 25DEG NORTH EAST(150Hz) SIDE OF COURSE DUE TO TERRAIN.

RJOK AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

Aircraft operations other than scheduled flights or in an emergency.
Prior permission required for transient aircraft.
Call : 088-863-2620(OPS)

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 B772 holding at the stop marking on TWY T2 or T5

Wing Span (WS) of aircraft taxiing on TWY A1-A2 or A4-A5	WS =<35.4m	35.4m <WS =<52.4m	WS >52.4m
Wing tip clearance	*A	*B	*C

Legend:
*A : wing tip clearance >= 15m
*B : 6.5m =< 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

RJOK AD 2.21 NOISE ABATEMENT PROCEDURES

1. 騒音軽減運航方式 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 32） 急上昇方式 (2) 着陸について（滑走路 14） 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 2. 優先滑走路方式 なし 3. 優先飛行経路 なし	1. Noise Abatement Operating Procedures 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 RWY32 Steepest Climb Procedure (2) For landing to RWY14 Delayed Flap Approach Procedure and Reduced Flap Setting Procedure (3) Reverse Thrust Nil 2. Preferential Runways Procedures Nil 3. Noise Preferential Routes Nil

RJOK AD 2.22 FLIGHT PROCEDURES

1. TAKE OFF MINIMA

	RWY	ACFT CAT	REDL & RCLL		REDL or RCLL or RCL Marking		NIL (DAYTIME ONLY)	
			CEIL-RVR	CEIL-VIS	CEIL-RVR	CEIL-VIS	RVR-VIS	CEIL-VIS
Multi-Engine ACFT with TKOF ALTN AP FILED	14	A,B,C,D	-	200′-800m	-	200′-800m	-	200′-800m
	32	A,B,C,D	0′-400m	0′-400m	0′-400m	0′-400m	-	0′-500m
OTHER	14	A,B,C,D	AVBL LDG MINIMA					
	32	A,B,C,D						

2. Lost communication procedures for arrival aircraft under radar navigational guidance

If radio communications with Kansai Approach/Radar are lost for 1 minute, squawk Mode A/3 Code 7600 and:

1. Contact Kochi Tower.
2. If unable, proceed in accordance with Visual Flight Rules.
3. If unable,
   A) When assigned altitude at or above 5,000 feet, proceed to KRE VOR/DME maintaining last assigned altitude and execute instrument approach.
   B) When assigned altitude below 5,000 feet,
      a) If established on a segment of the Instrument Approach Procedure, execute that Instrument Approach.
      b) If not yet established on a segment of the Instrument Approach Procedure, climb and maintain 5,000 feet and proceed to KRE VOR/DME and execute instrument approach.

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

RJOK AD 2.23 ADDITIONAL INFORMATION

Nil

RJOK AD 2.24 CHARTS RELATED TO AN AERODROME

Aerodrome/Heliport Chart
Standard Departure Chart-Instrument (SHIMIZU)
Standard Departure Chart-Instrument (KOCHI REVERSAL)
Standard Departure Chart-Instrument (URADO REVERSAL)
Standard Departure Chart-Instrument (KARIN-RNAV)
Standard Departure Chart-Instrument (KAIFU-RNAV)
Standard Departure Chart-Instrument (MUROT-RNAV)
Standard Departure Chart-Instrument (OMOGO-RNAV)
Standard Arrival Chart-Instrument (YOSAKOI NORTH-RNAV)
Standard Arrival Chart-Instrument (YOSAKOI EAST-RNAV)
Standard Arrival Chart-Instrument (YOSAKOI SOUTH-RNAV)
Standard Arrival Chart-Instrument (YOSAKOI WEST-RNAV)
Instrument Approach Chart (ILS Z or LOC Z RWY32)
Instrument Approach Chart (ILS Y or LOC Y RWY32)
Instrument Approach Chart (VOR RWY32)
Instrument Approach Chart (RNP Z RWY14 (AR))
Instrument Approach Chart (RNP Y RWY14 (AR))
Other Chart (Visual REP)
Other Chart (LDG CHART)
Other Chart (MVA CHART)

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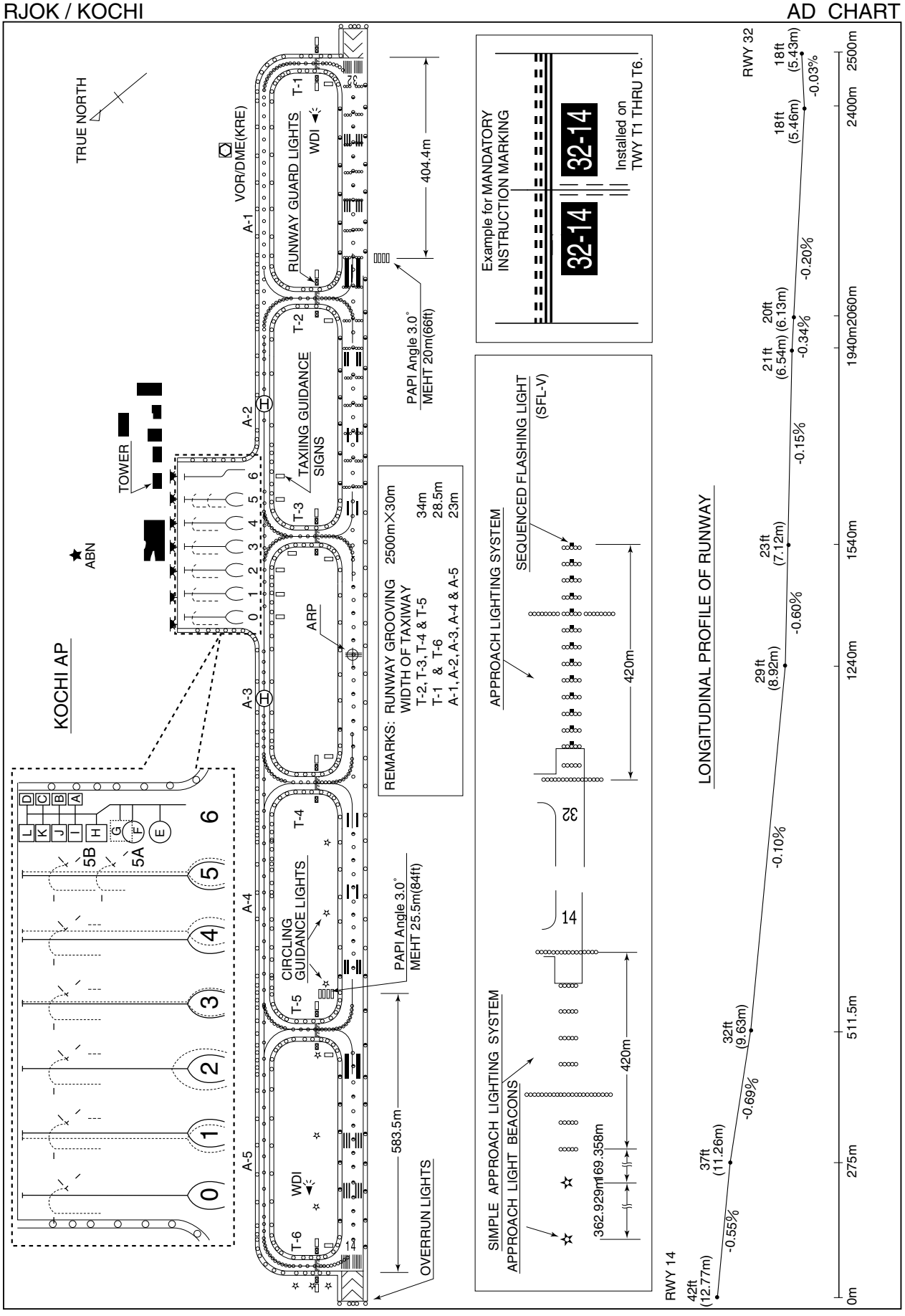
RJOK / KOCHI AD CHART



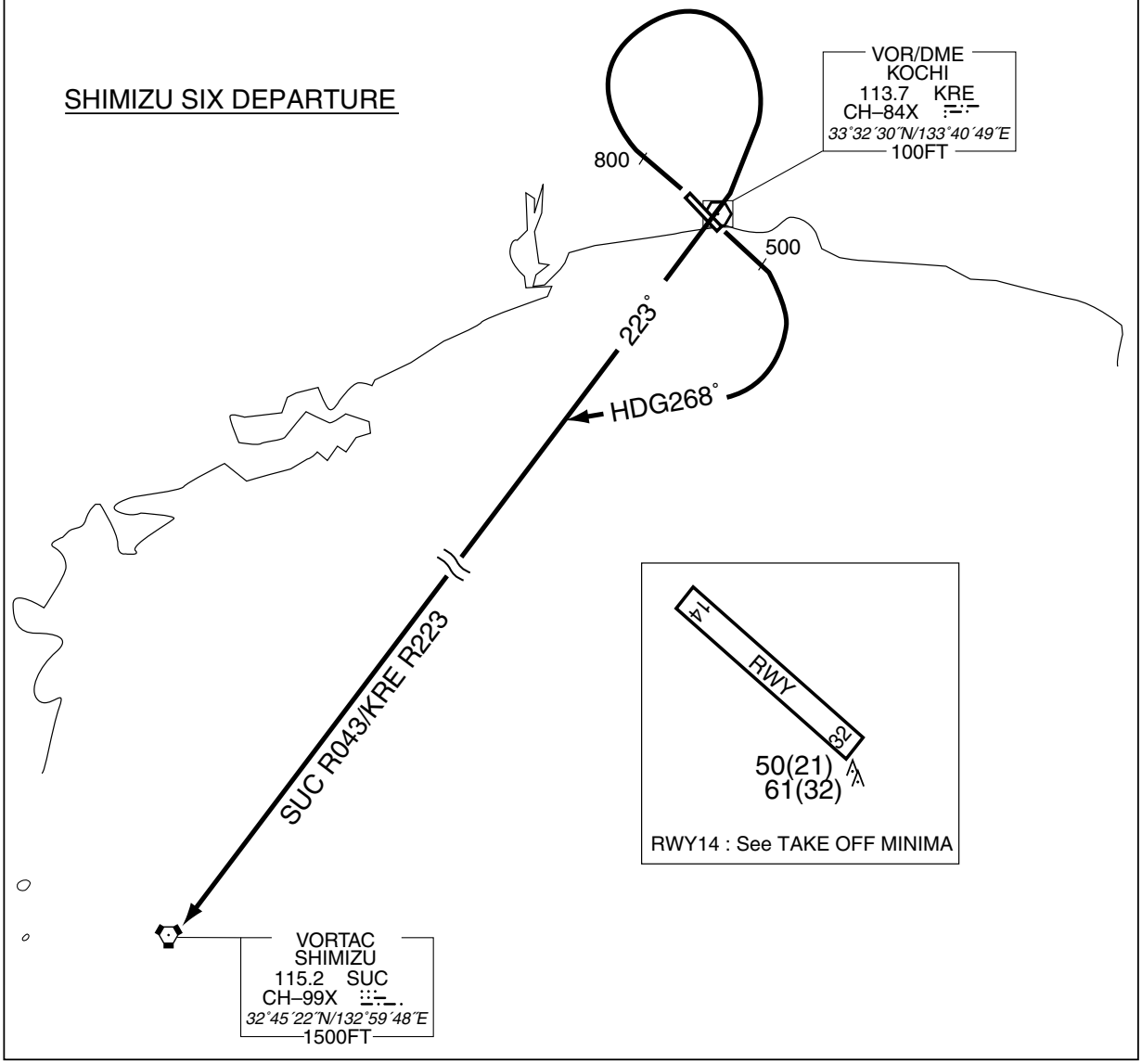
STANDARD DEPARTURE CHART - INSTRUMENT

RJOK / KOCHI SID

SHIMIZU SIX DEPARTURE

RWY 14 : Climb RWY HDG to 500FT, turn right HDG 268˚...
RWY 32 : Climb RWY HDG to 800FT, turn right...
...to intercept and proceed via KRE R223/SUC R043 to SUC VORTAC.

Note RWY32 : 6.0% climb gradient required up to 2500FT.
OBST ALT 2165FT located at 6.6NM 358˚ FM end of RWY32.



STANDARD DEPARTURE CHART - INSTRUMENT

RJOK / KOCHI SID

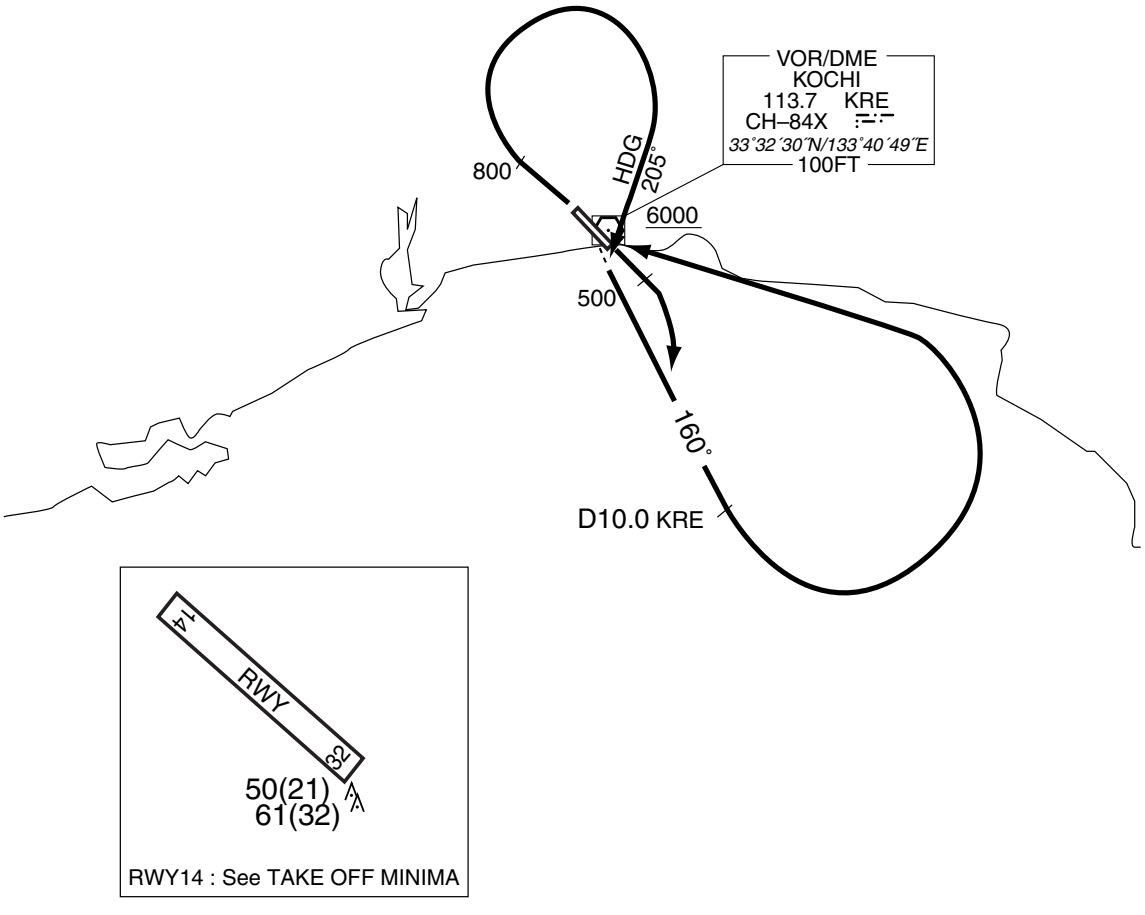
KOCHI REVERSAL FIVE DEPARTURE

RWY 14 : Climb RWY HDG to 500FT, turn right...
RWY 32 : Climb RWY HDG to 800FT, trun right HDG 205˚...

...to intercept and proceed via KRE R160 to KRE 10.0DME, then turn left proceed to KRE VOR/DME.
Cross KRE VOR/DME at or above 6000FT.

Note RWY32 : 6.0% climb gradient required up to 2500FT.
OBST ALT 2165FT located at 6.6NM 358˚ FM end of RWY32.

KOCHI REVERSAL FIVE DEPARTURE



STANDARD DEPARTURE CHART - INSTRUMENT

RJOK / KOCHI SID

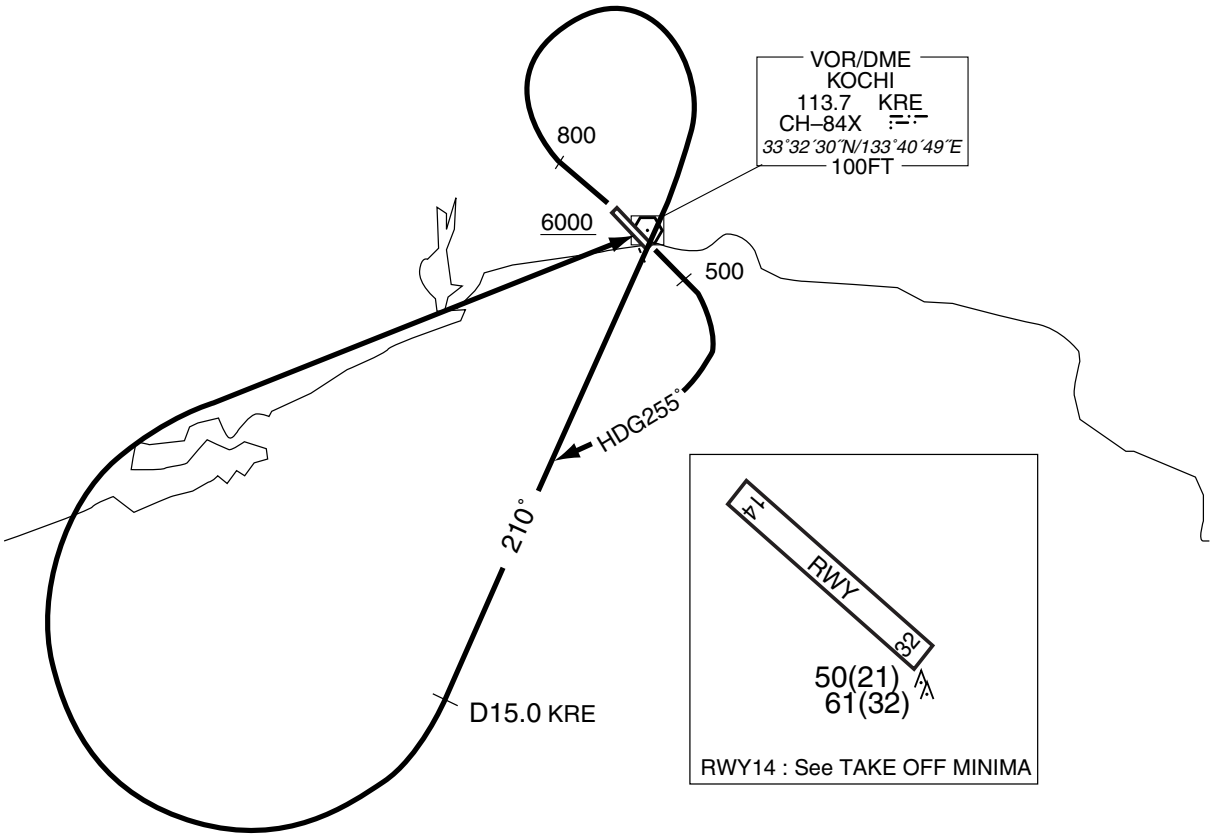
URADO REVERSAL THREE DEPARTURE

RWY 14 : Climb RWY HDG to 500FT, turn right HDG 255˚...
RWY 32 : Climb RWY HDG to 800FT, trun right...

...to intercept and proceed via KRE R210 to KRE 15.0DME, then turn right proceed to KRE VOR/DME.
Cross KRE VOR/DME at or above 6000FT.

Note RWY32 : 6.0% climb gradient required up to 2500FT.
OBST ALT 2165FT located at 6.6NM 358˚ FM end of RWY32.

URADO REVERSAL THREE DEPARTURE

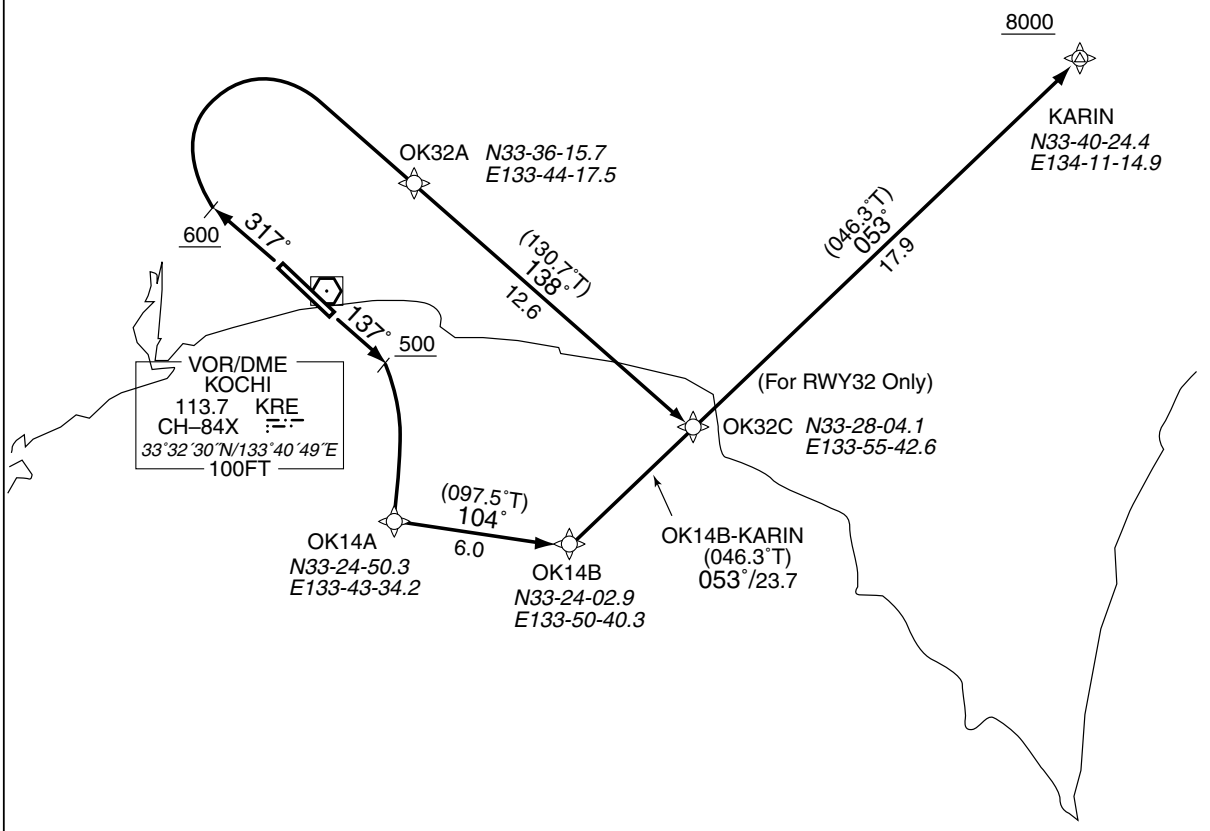


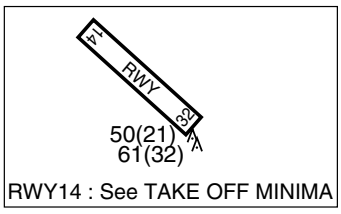
STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI RNAV SID

KARIN ONE RNAV 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	RWY14 : KRE 3.0NM fm DER - 7NM to KARIN SUC 3.0NM fm DER - 10NM to KARIN RWY32 : KRE 9NM to OK32C - 10NM to KARIN SUC 9NM to OK32C - 4NM to OK32C
	DME GAP	RWY14 : DER - 3.0NM fm DER RWY32 : DER - 9NM fm OK32C
	Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

VAR 7˚ W(2009)





RWY14 : See TAKE OFF MINIMA

DESIGNATION	COORDINATES
OK14A	*33 24 50.3N 133 43 34.2E*
OK14B	*33 24 02.9N 133 50 40.3E*
OK32A	*33 36 15.7N 133 44 17.5E*
OK32C	*33 28 04.1N 133 55 42.6E*
KARIN	*33 40 24.4N 134 11 14.9E*

Note RWY32: 6.0% climb gradient required up to 2300FT.

RWY14 : Climb on HDG137˚ at or above 500FT, turn right direct to OK14A, to OK14B, to KARIN at or above 8000FT.

RWY32 : Climb on HDG317˚ at or above 600FT, turn right direct to OK32A, to OK32C, to KARIN at or above 8000FT.

Note RWY32: 6.0% climb gradient required up to 2300FT.
OBST ALT 1970FT located at 6.13NM 004˚ FM end of RWY32.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI RNAV SID

KARIN ONE RNAV DEPARTURE

RWY14

Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
VA	—	—	—	137° (130.6°)	—	+500	—	—	RNAV1
DF	OK14A	—	—	—	R	—	—	—	RNAV1
TF	OK14B	—	6.0	104° (097.5°)	—	—	—	—	RNAV1
TF	KARIN	—	23.7	053° (046.3°)	—	+8000	—	—	RNAV1

RWY32

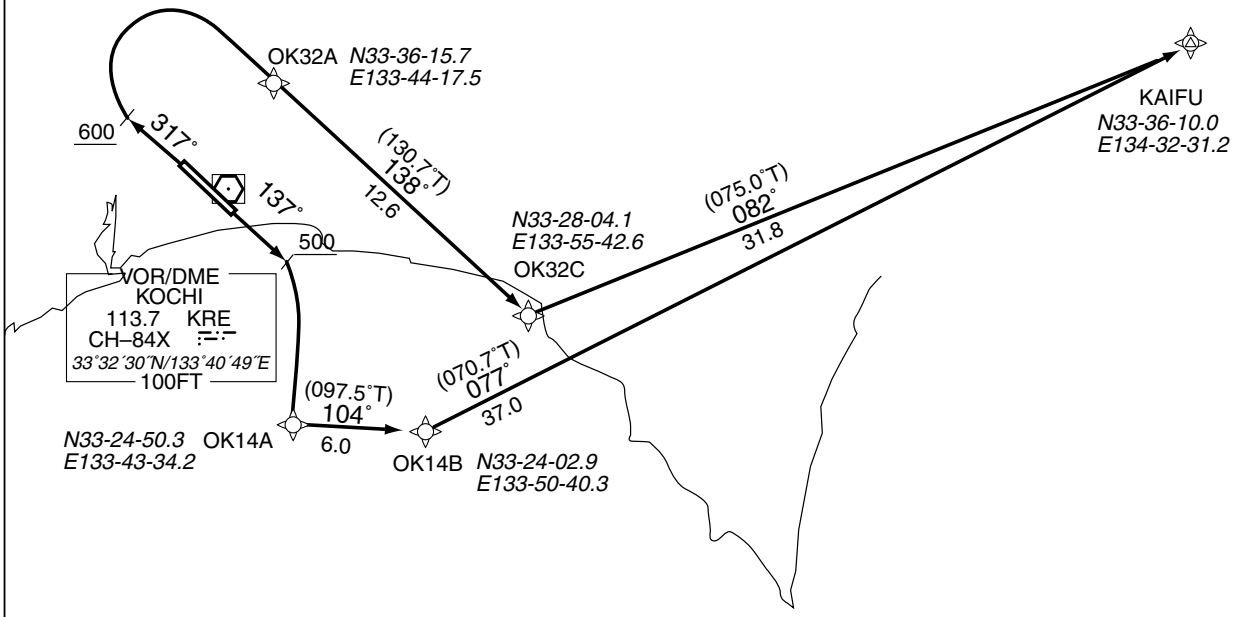
Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
VA	—	—	—	317° (310.6°)	—	+600	—	—	RNAV1
DF	OK32A	—	—	—	R	—	—	—	RNAV1
TF	OK32C	—	12.6	138° (130.7°)	—	—	—	—	RNAV1
TF	KARIN	—	17.9	053° (046.3°)	—	+8000	—	—	RNAV1

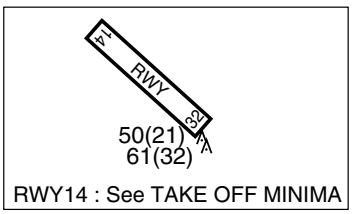
STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI RNAV SID

KAIFU ONE RNAV 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	RWY14 : KRE 3.0NM fm DER - 23NM to KAIFU SUC 3.0NM fm DER - 32NM to KAIFU RWY32 : KRE 9NM to OK32C - 28NM to KAIFU SUC 9NM to OK32C - 4NM to OK32C
	DME GAP	RWY14 : DER - 3.0NM fm DER RWY32 : DER - 9NM to OK32C
	Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

VAR 7° W(2009)





RWY14 : See TAKE OFF MINIMA

DESIGNATION	COORDINATES
OK14A	*33 24 50.3N 133 43 34.2E*
OK14B	*33 24 02.9N 133 50 40.3E*
OK32A	*33 36 15.7N 133 44 17.5E*
OK32C	*33 28 04.1N 133 55 42.6E*
KAIFU	*33 36 10.0N 134 32 31.2E*

Note RWY32: 6.0% climb gradient required up to 2300FT.

RWY14 : Climb on HDG137° at or above 500FT, turn right direct to OK14A, to OK14B, to KAIFU.

RWY32 : Climb on HDG317° at or above 600FT, turn right direct to OK32A, to OK32C, to KAIFU.

Note RWY32: 6.0% climb gradient required up to 2300FT.
OBST ALT 1970FT located at 6.13NM 004° FM end of RWY32.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI RNAV SID

KAIFU ONE RNAV DEPARTURE

RWY14

Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
VA	—	—	—	137° (130.6°)	—	+500	—	—	RNAV1
DF	OK14A	—	—	—	R	—	—	—	RNAV1
TF	OK14B	—	6.0	104° (097.5°)	—	—	—	—	RNAV1
TF	KAIFU	—	37.0	077° (070.7°)	—	—	—	—	RNAV1

RWY32

Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
VA	—	—	—	317° (310.6°)	—	+600	—	—	RNAV1
DF	OK32A	—	—	—	R	—	—	—	RNAV1
TF	OK32C	—	12.6	138° (130.7°)	—	—	—	—	RNAV1
TF	KAIFU	—	31.8	082° (075.0°)	—	—	—	—	RNAV1

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI — RNAV SID and TRANSITION

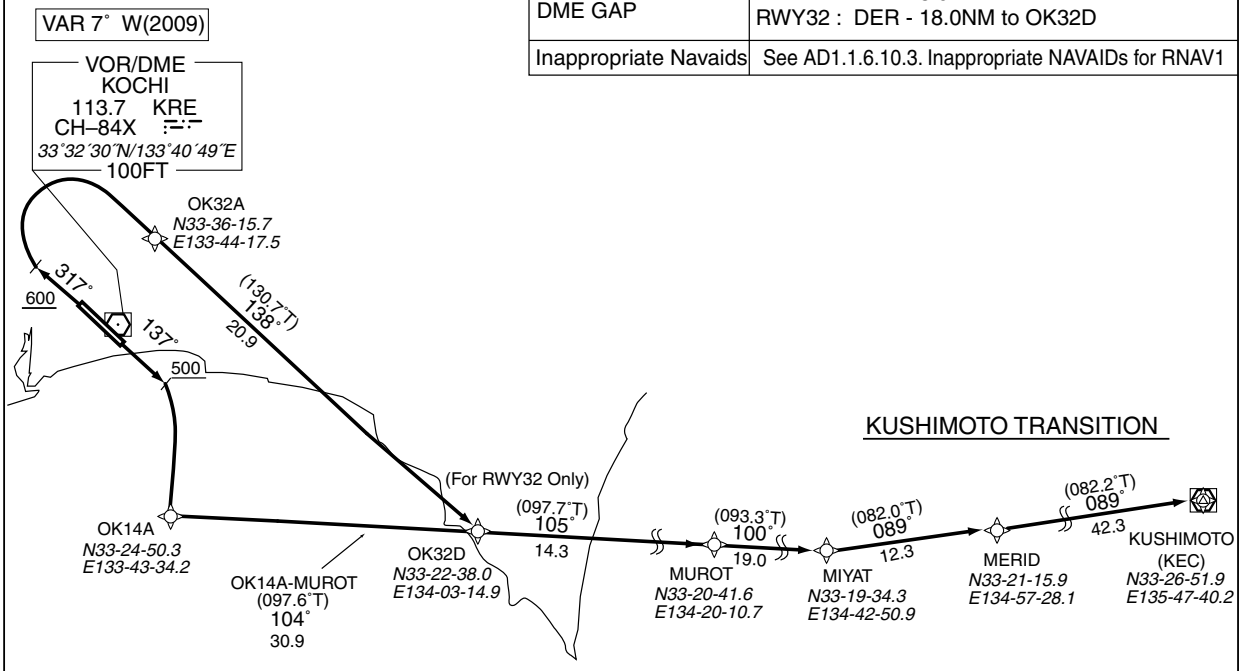
MUROT ONE RNAV DEPARTURE — RNAV 1

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

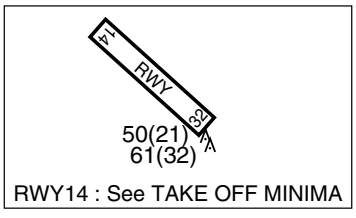
※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off roll.

2) RADAR service required.

Critical DME	–
DME GAP	RWY14 : DER - 3.0NM fm DER RWY32 : DER - 18.0NM to OK32D
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1



MUROT ONE RNAV DEPARTURE



RWY14 : See TAKE OFF MINIMA

DESIGNATION	COORDINATES
OK14A	*33 24 50.3N 133 43 34.2E*
OK32A	*33 36 15.7N 133 44 17.5E*
OK32D	*33 22 38.0N 134 03 14.9E*
MUROT	*33 20 41.6N 134 20 10.7E*
MIYAT	*33 19 34.3N 134 42 50.9E*
MERID	*33 21 15.9N 134 57 28.1E*
KUSHIMOTO(KEC)	*33 26 51.9N 135 47 40.2E*

Note RWY32: 6.0% climb gradient required up to 2300FT.

MUROT ONE RNAV DEPARTURE

RWY14 : Climb on HDG137° at or above 500FT, turn right direct to OK14A, to MUROT.

RWY32 : Climb on HDG317° at or above 600FT, turn right direct to OK32A, to OK32D, to MUROT.

KUSHIMOTO TRANSITION

From MUROT to MIYAT, to MERID, to KUSHIMOTO(KEC).

Note RWY32: 6.0% climb gradient required up to 2300FT.
OBST ALT 1970FT located at 6.13NM 004° FM end of RWY32.

AIP JAPAN

RJOK / KOCHI RNAV SID and TRANSITION

MUROT ONE RNAV DEPARTURE

RWY14

Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
VA	—	—	—	137° (130.6°)	—	+500	—	—	RNAV1
DF	OK14A	—	—	—	R	—	—	—	RNAV1
TF	MUROT	—	30.9	104° (097.6°)	—	—	—	—	RNAV1

RWY32

Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
VA	—	—	—	317° (310.6°)	—	+600	—	—	RNAV1
DF	OK32A	—	—	—	R	—	—	—	RNAV1
TF	OK32D	—	20.9	138° (130.7°)	—	—	—	—	RNAV1
TF	MUROT	—	14.3	105° (097.7°)	—	—	—	—	RNAV1

KUSHIMOTO TRANSITION

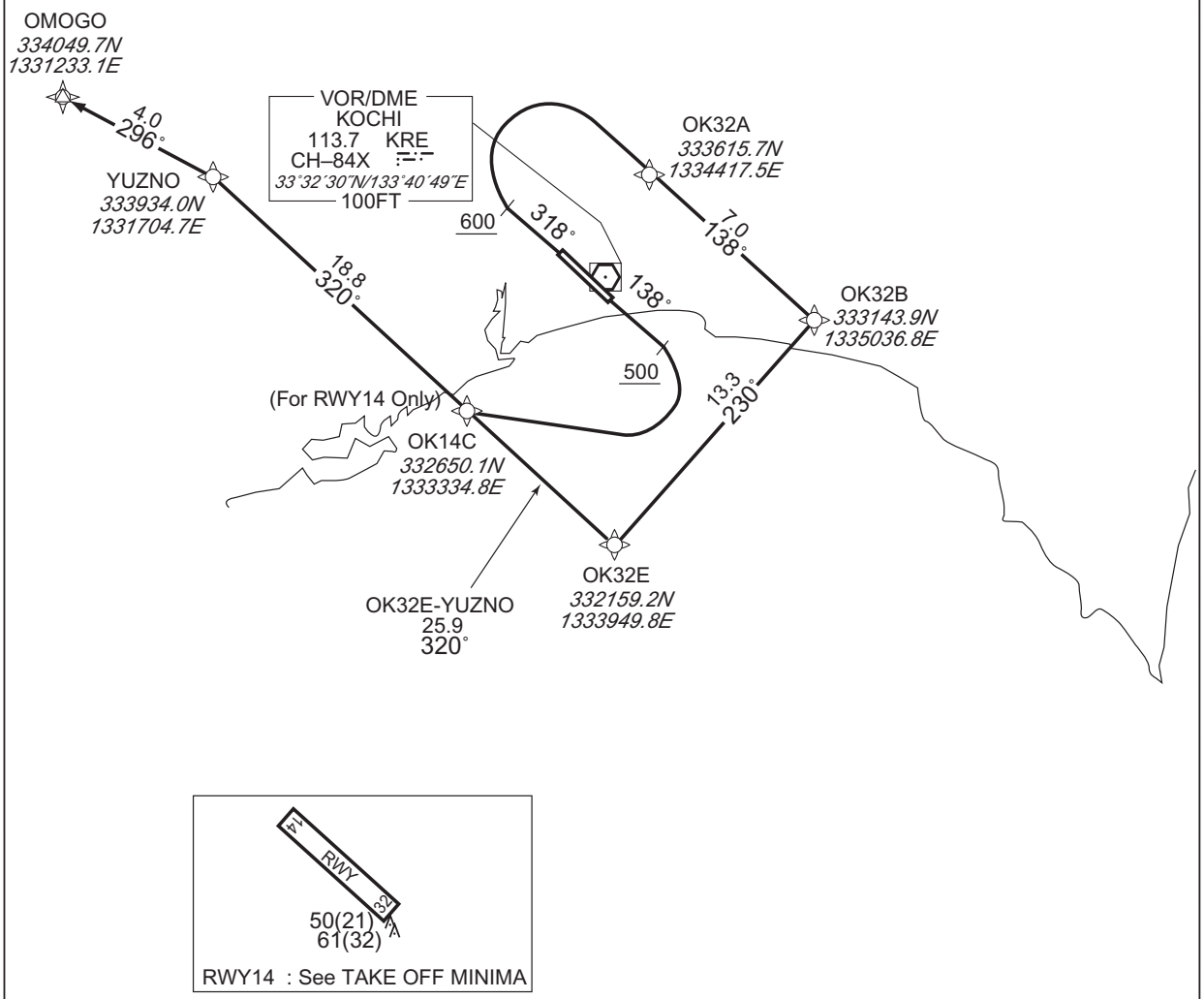
Rcmd. Path Terminator	Fix ID (Waypoint Name)	Fly Over	Distance (NM)	MAG Track (TRUE Track)	Turn Direction	Altitude (FT)	Speed Limit (KIAS)	Vertical Angle	Navigation Performance
IF	MUROT	—	—	—	—	—	—	—	RNAV1
TF	MIYAT	—	19.0	100° (093.3°)	—	—	—	—	RNAV1
TF	MERID	—	12.3	089° (082.0°)	—	—	—	—	RNAV1
TF	KUSHIMOTO (KEC)	—	42.3	089° (082.2°)	—	—	—	—	RNAV1

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI RNAV SID

OMOGO TWO RNAV 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	RWY14 : KRE 16NM to YUZNO - 7NM to YUZNO SUC 16NM to YUZNO - 7NM to YUZNO RWY32 : KRE 4NM to OK32B - 25NM to YUZNO SUC 4NM to OK32B - 25NM to YUZNO
	DME GAP	RWY14 : DER - 16NM to YUZNO RWY32 : DER - 4NM to OK32B 25NM to YUZNO - 18NM to YUZNO
	Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1

VAR 7° W(2017)



RWY14 : See TAKE OFF MINIMA

RWY14 : Climb on HDG138° at or above 500FT, turn right direct to OK14C, to YUZNO, to OMOGO.

RWY32 : Climb on HDG318° at or above 600FT, turn right direct to OK32A, to OK32B, to OK32E, to YUZNO, to OMOGO.

Note RWY32: 6.0% climb gradient required up to 2300FT.
OBST ALT 1970FT located at 6.1NM 004° FM end of RWY32.

STANDARD DEPARTURE CHART -INSTRUMENT

RJOK / KOCHI RNAV SID

OMOGO TWO RNAV DEPARTURE

RWY14

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	–	–	138 (130.6)	-7.4	–	–	+500	–	–	RNAV1
002	DF	OK14C	–	–	-7.4	–	R	–	–	–	RNAV1
003	TF	YUZNO	–	320 (312.9)	-7.4	18.8	–	–	–	–	RNAV1
004	TF	OMOGO	–	296 (288.5)	-7.4	4.0	–	–	–	–	RNAV1

RWY32

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	–	–	318 (310.6)	-7.4	–	–	+600	–	–	RNAV1
002	DF	OK32A	–	–	-7.4	–	R	–	–	–	RNAV1
003	TF	OK32B	–	138 (130.7)	-7.4	7.0	–	–	–	–	RNAV1
004	TF	OK32E	–	230 (222.8)	-7.4	13.3	–	–	–	–	RNAV1
005	TF	YUZNO	–	320 (312.9)	-7.4	25.9	–	–	–	–	RNAV1
006	TF	OMOGO	–	296 (288.5)	-7.4	4.0	–	–	–	–	RNAV1

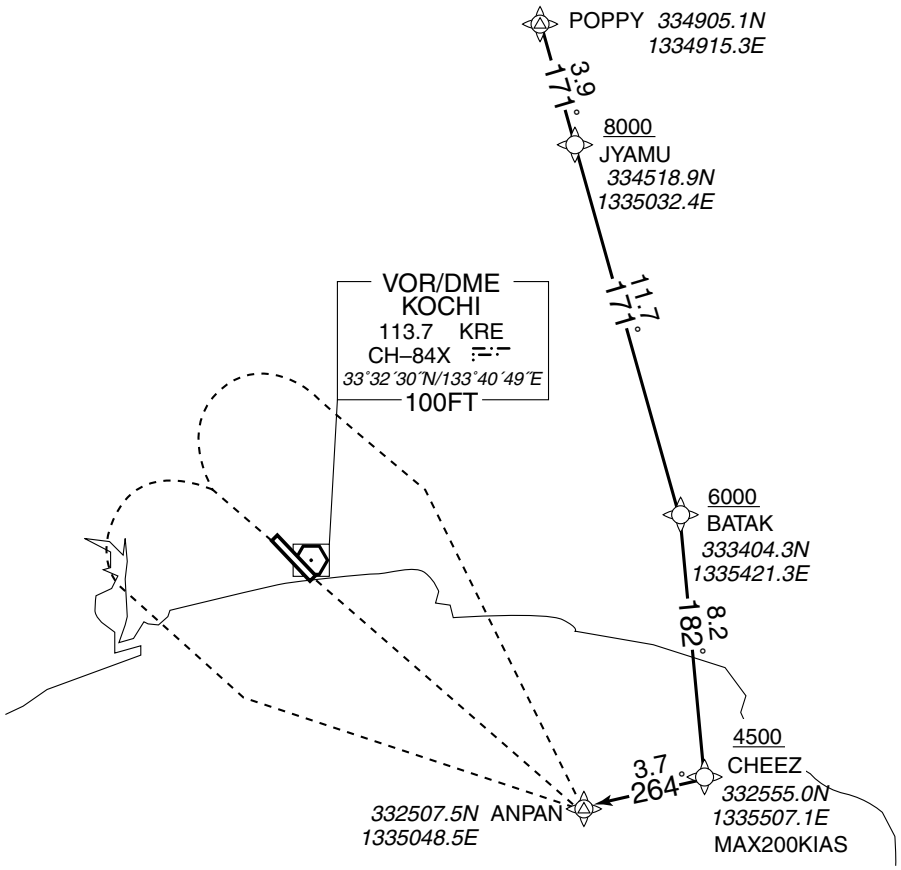
STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI — RNAV STAR

YOSAKOI NORTH ARRIVAL	RNAV 1

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

VAR 7° W(2012)



From POPPY, to JYAMU at or above 8000FT, to BATAK at or above 6000FT, to CHEEZ at or above 4500FT, to ANPAN.

Critical DME	GBD	POPPY - 2NM to BATAK
	SUC	7NM to BATAK - ANPAN
	KRE	1NM to BATAK - ANPAN
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	POPPY	—	—	-6.9	—	—	—	—	—	RNAV1
002	TF	JYAMU	—	171 (164.2)	-6.9	3.9	—	+8000	—	—	RNAV1
003	TF	BATAK	—	171 (164.2)	-6.9	11.7	—	+6000	—	—	RNAV1
004	TF	CHEEZ	—	182 (175.5)	-6.9	8.2	—	+4500	-200	—	RNAV1
005	TF	ANPAN	—	264 (257.6)	-6.9	3.7	—	—	—	—	RNAV1

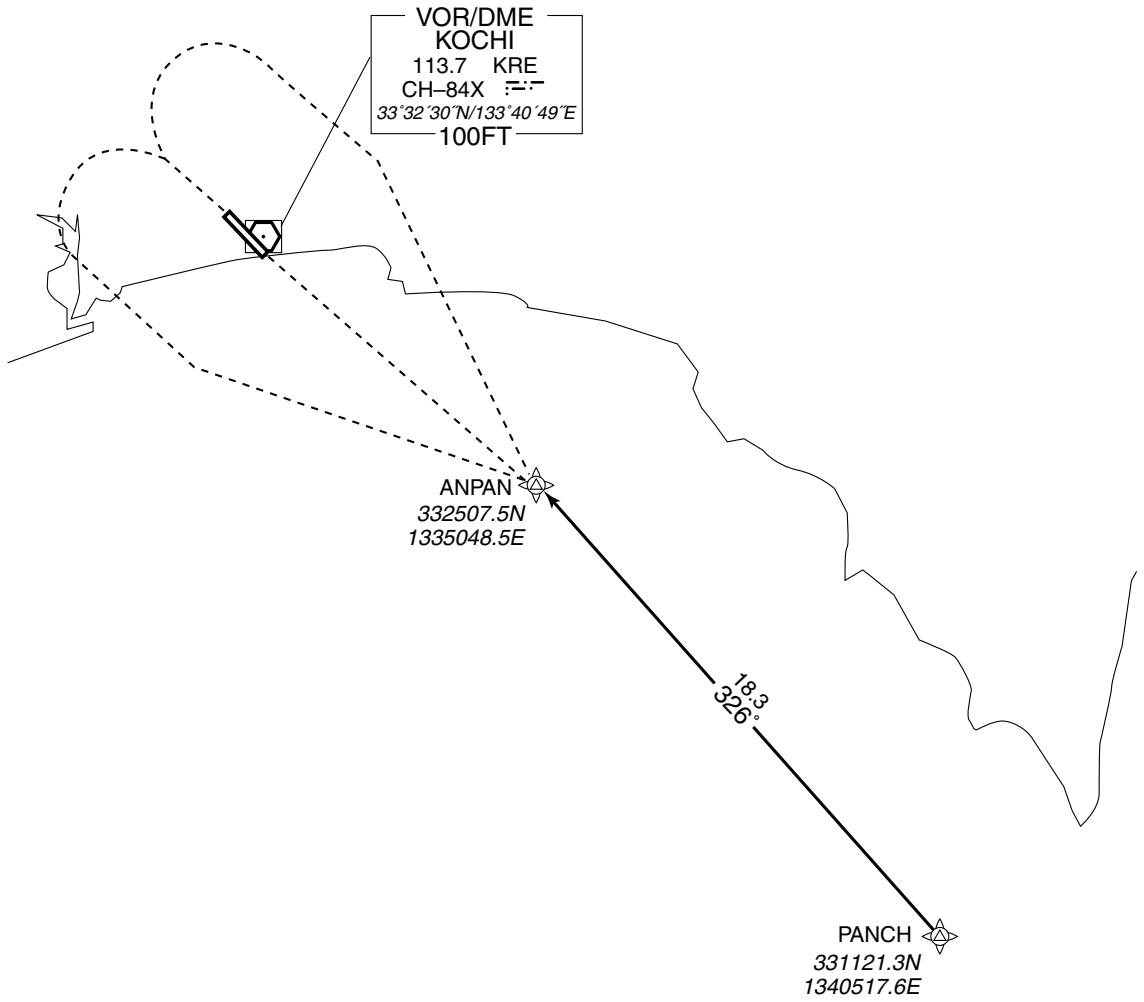
STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI RNAV STAR

YOSAKOI EAST ARRIVAL	RNAV 1

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

VAR 7° W(2012)



From PANCH, to ANPAN.

Critical DME	KRE	PANCH - ANPAN
	SUC	8NM to ANPAN - ANPAN
DME GAP	–	
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

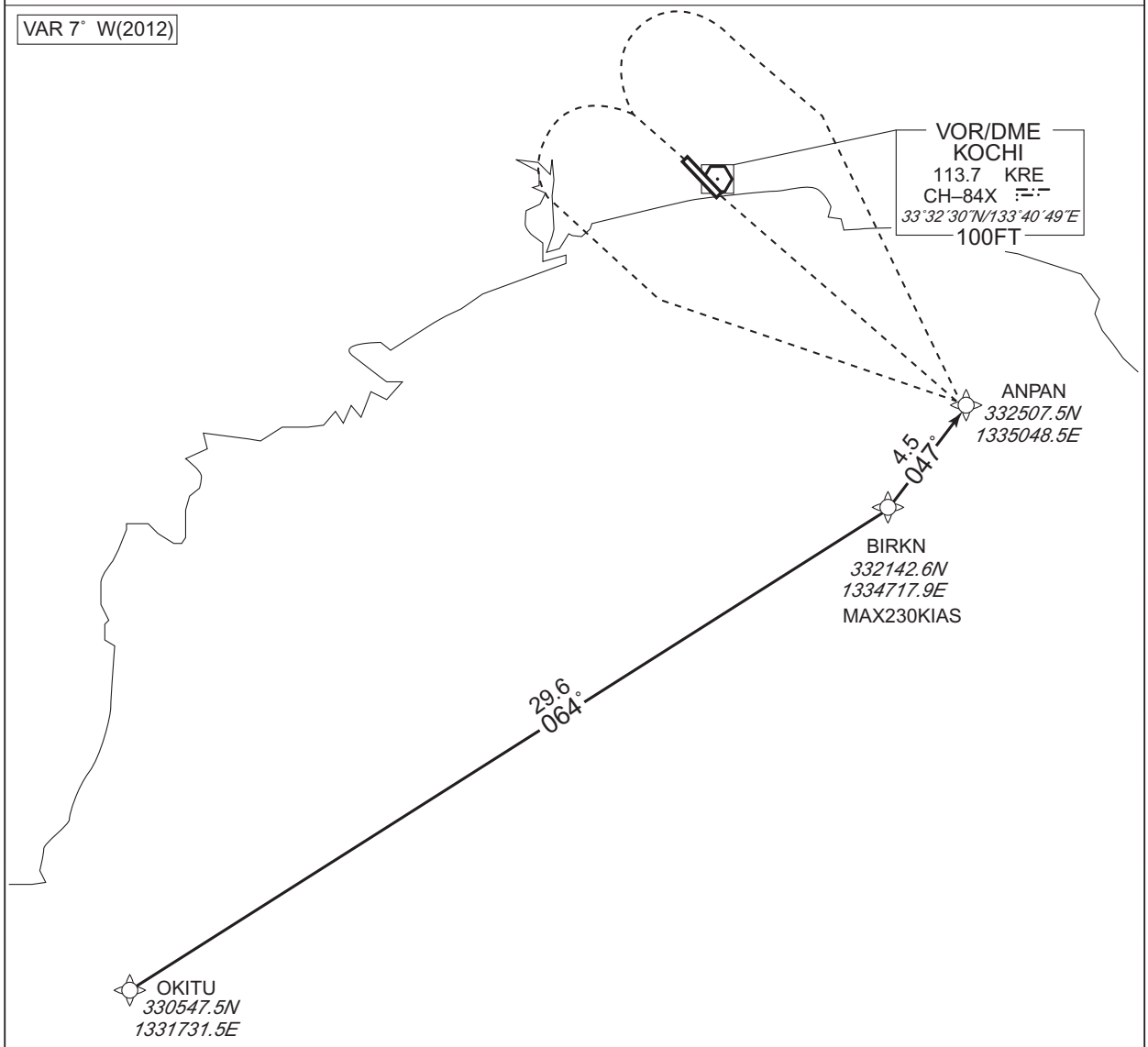
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course [°M(°T)]	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	PANCH	—	—	-6.9	—	—	—	—	—	RNAV1
002	TF	ANPAN	—	326 (318.7)	-6.9	18.3	—	—	—	—	RNAV1

STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI — RNAV STAR

YOSAKOI SOUTH ARRIVAL	RNAV 1

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



From OKITU, to BIRKN, to ANPAN.

Critical DME	SUC	12NM to BIRKN - ANPAN
	KRE	12NM to BIRKN - ANPAN
DME GAP	OKITU - 12NM to BIRKN	
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	OKITU	—	—	-6.9	—	—	—	—	—	RNAV1
002	TF	BIRKN	—	064 (057.3)	-6.9	29.6	—	—	-230	—	RNAV1
003	TF	ANPAN	—	047 (040.6)	-6.9	4.5	—	—	—	—	RNAV1

CHANGE : Critical DME(IWT) deleted. DME GAP.

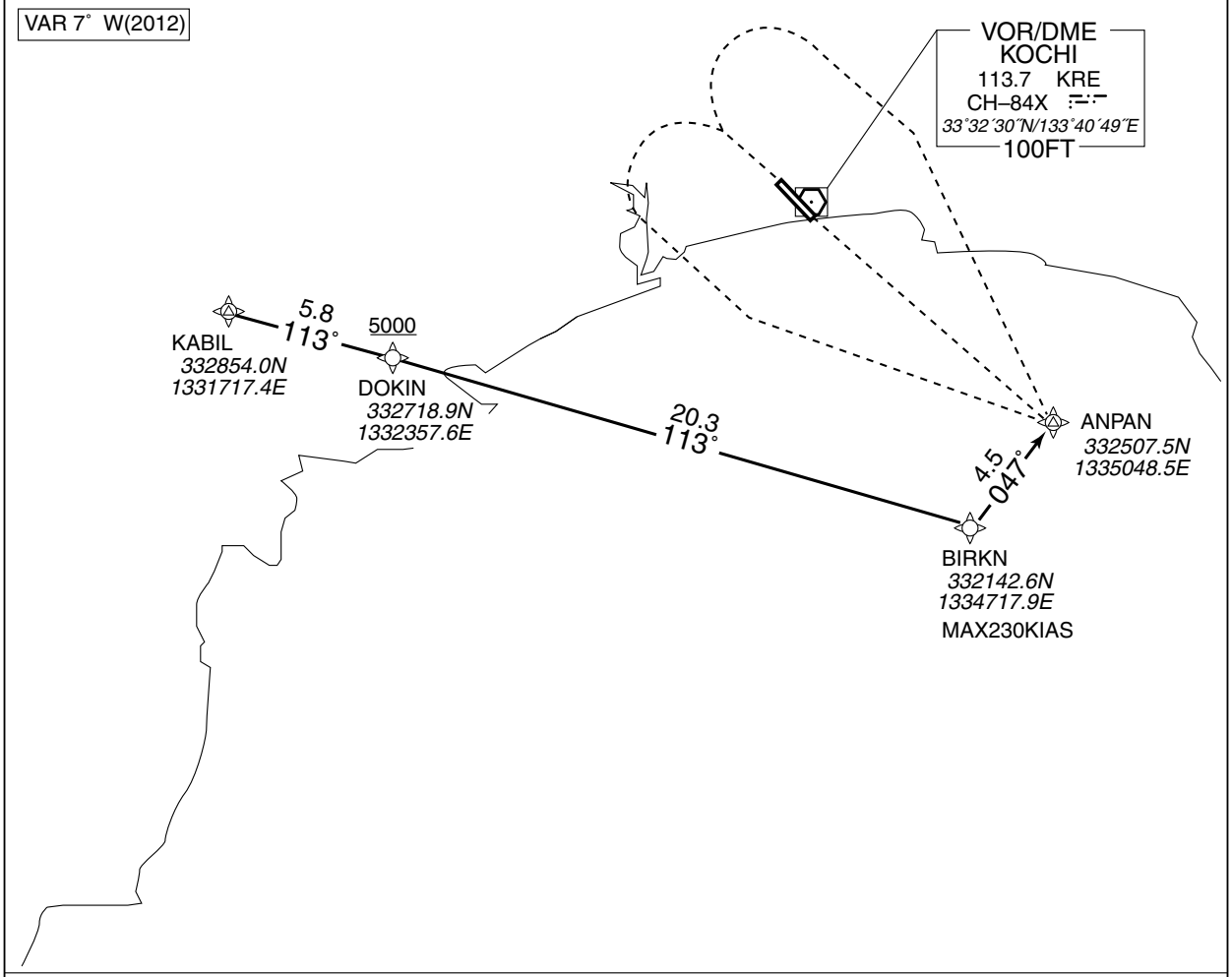
STANDARD ARRIVAL CHART -INSTRUMENT

RJOK / KOCHI

RNAV STAR

YOSAKOI WEST ARRIVAL	RNAV 1

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



From KABIL, to DOKIN at or above 5000FT, to BIRKN, to ANPAN.

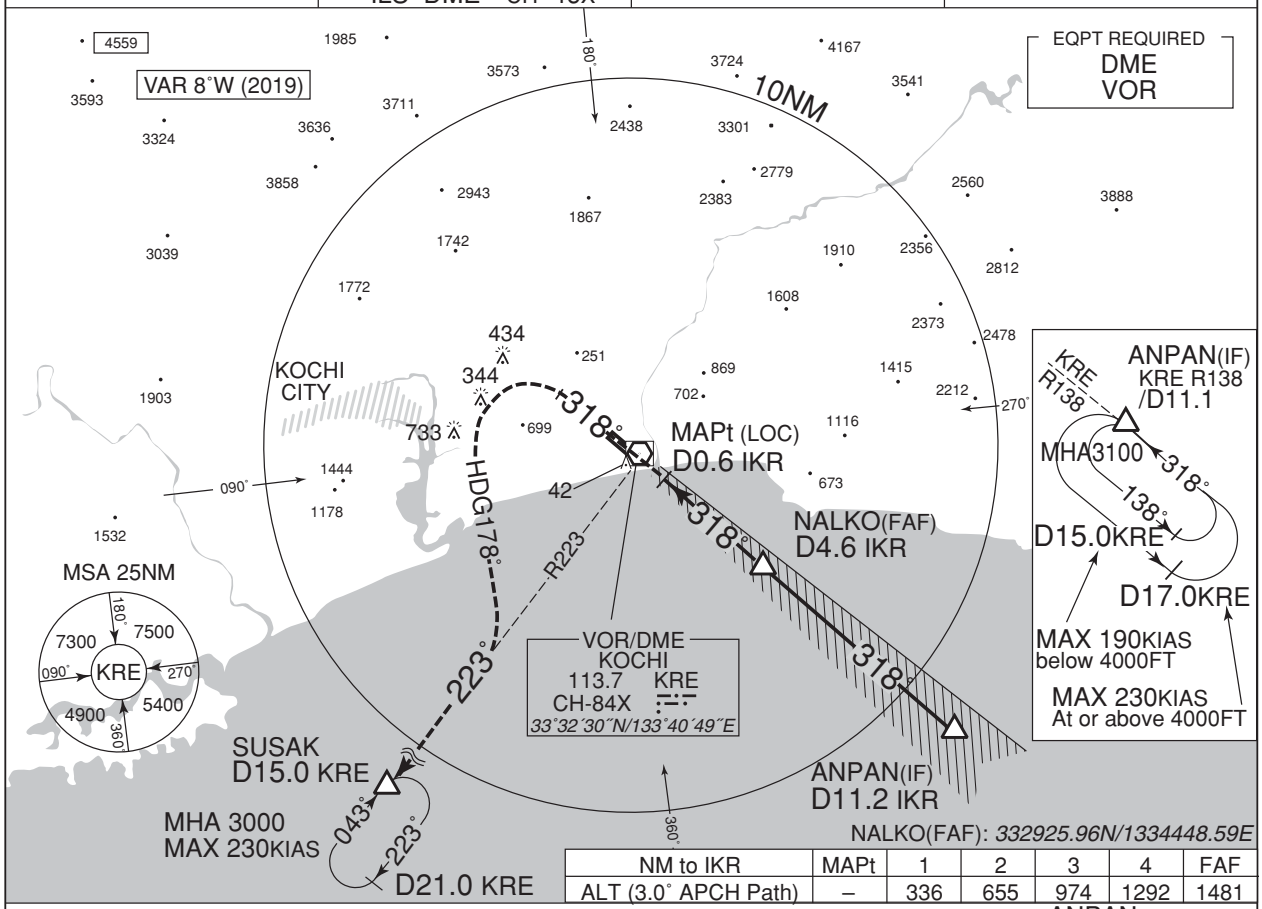
Critical DME	KRE	1NM to DOKIN - 16NM to BIRKN 7NM to BIRKN - ANPAN
	SUC	1NM to DOKIN - 16NM to BIRKN 7NM to BIRKN - ANPAN
DME GAP	16NM to BIRKN - 7NM to BIRKN	
Inappropriate Navaids	See AD1.1.6.10.3. Inappropriate NAVAIDs for RNAV1	

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	KABIL	—	—	-6.9	—	—	—	—	—	RNAV1
002	TF	DOKIN	—	113 (105.9)	-6.9	5.8	—	+5000	—	—	RNAV1
003	TF	BIRKN	—	113 (105.9)	-6.9	20.3	—	—	-230	—	RNAV1
004	TF	ANPAN	—	047 (040.6)	-6.9	4.5	—	—	—	—	RNAV1

INSTRUMENT APPROACH CHART

RJOK / KOCHI — ILS Z or LOC Z RWY32

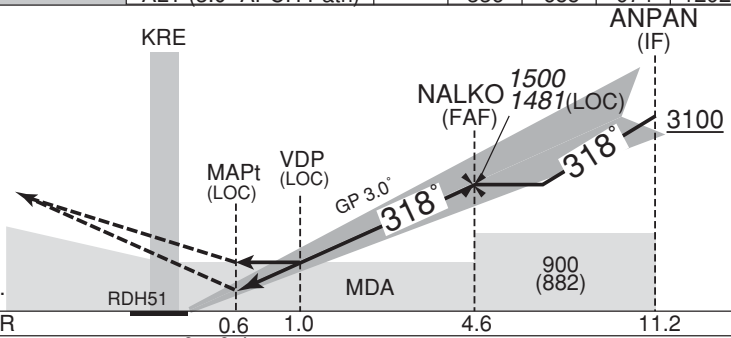
KANSAI APP	ILS - LOC	KOCHI TOWER	RADAR AVBL
125.0 – 124.8	110.9 IKR ILS–GP 330.8 ILS–DME CH–46X	118.75 – 126.2	ATIS 126.45



NM to IKR	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	336	655	974	1292	1481

MISSED APPROACH
Climb to 800FT on HDG318°, turn left HDG178° to intercept and proceed via KRE R223 to SUSAK and hold at 3000FT. Contact KANSAI APP.

Timing not authorized for defining the MAPt.



DME to IKR		0.6	1.0	4.6	11.2
NM to THR	0	0.4	0.8	4.4	11.0

Missed APCH climb gradient MNM 5.0%

MINIMA THR elev.18 AD elev. 29

CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/CMV	MDA(H)	RVR/CMV	MDA(H)	VIS
A	218 (200)	700	320 (302)	1200	690 (661)	1600
B				1300		
C				1400	760 (731)	2400
D				1600	830 (801)	3200

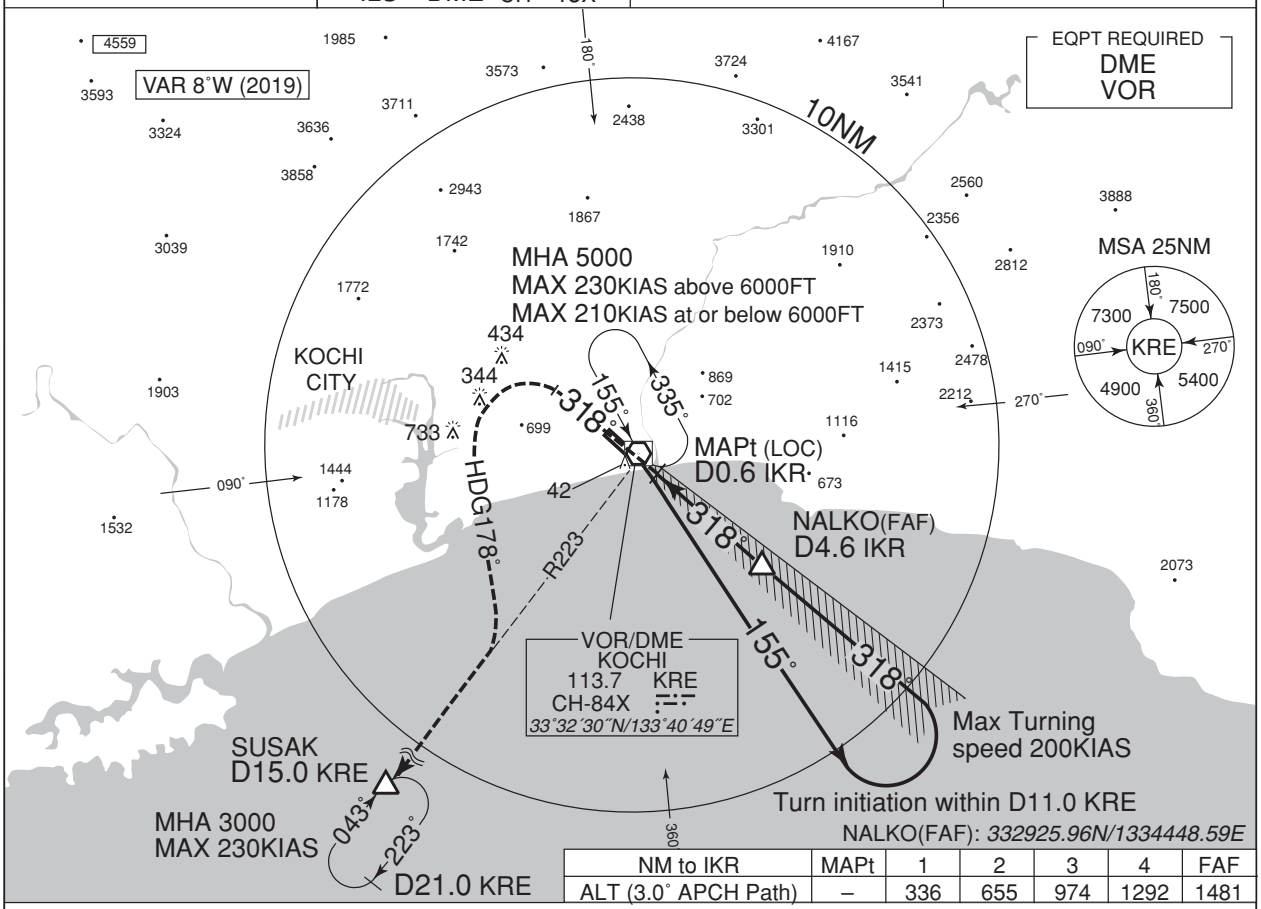
Circling to EAST side of RWY only.
MINIMA with Missed APCH climb gradient of 2.5% are not established.

INSTRUMENT APPROACH CHART

RJOK / KOCHI

ILS Y or LOC Y RWY32

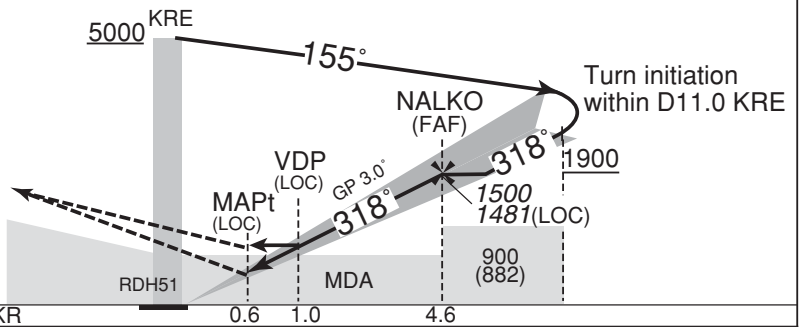
KANSAI APP	ILS - LOC 110.9 IKR ILS – GP 330.8 ILS – DME CH– 46X	KOCHI TOWER	RADAR AVBL
125.0 – 124.8		118.75 – 126.2	ATIS 126.45



NM to IKR	MAPt	1	2	3	4	FAF
ALT (3.0° APCH Path)	–	336	655	974	1292	1481

MISSED APPROACH
Climb to 800FT on HDG318°, turn left HDG178° to intercept and proceed via KRE R223 to SUSAK and hold at 3000FT. Contact KANSAI APP.

Timing not authorized for defining the MAPt.



DME to IKR		0.6	1.0	4.6
NM to THR	0	0.4	0.8	4.4

Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 18 AD elev. 29

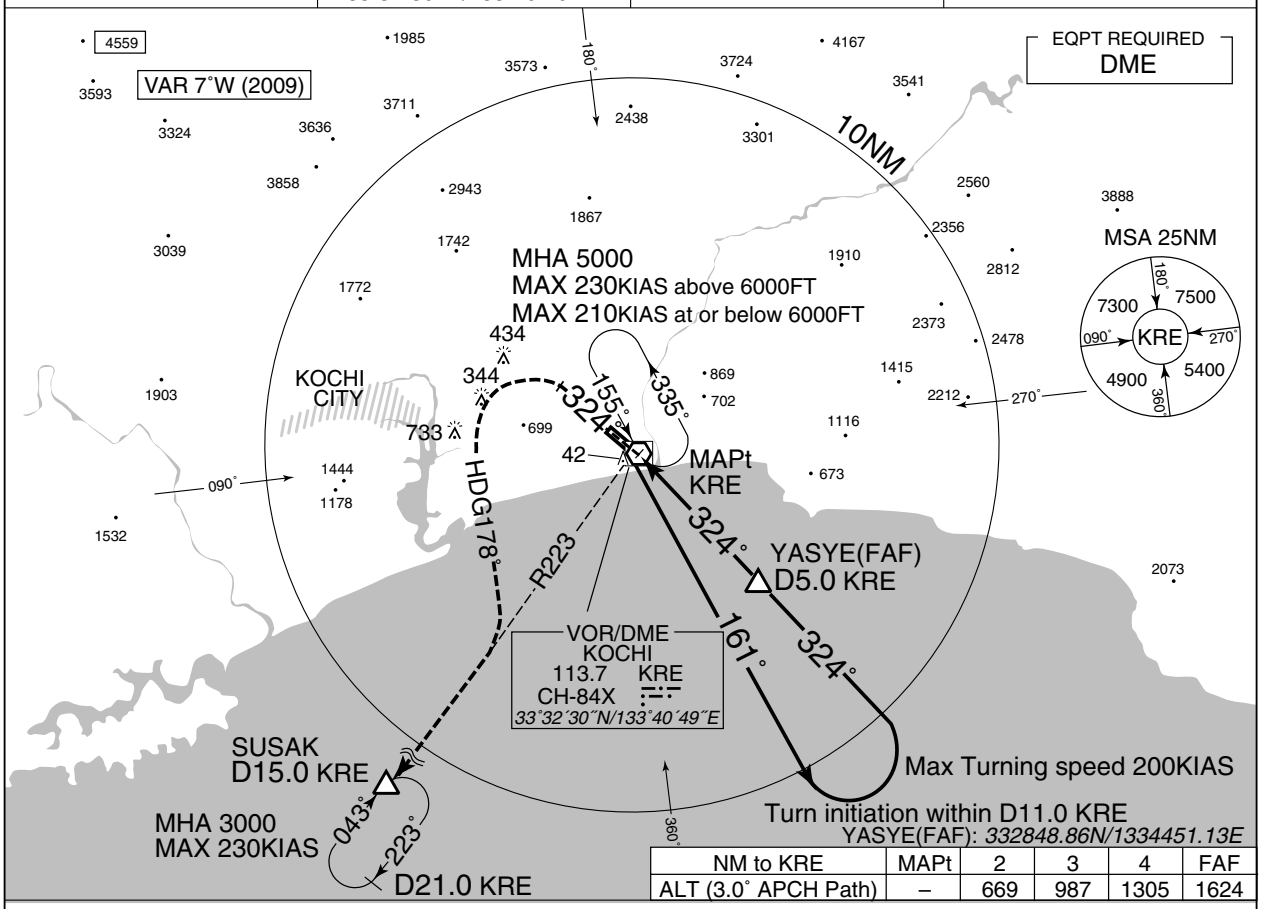
CAT	CAT I		LOC		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	218 (200)	700	320 (302)	1200	690 (661)	1600
B				1300		
C				1400	760 (731)	2400
D				1600	830 (801)	3200

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

INSTRUMENT APPROACH CHART

RJOK / KOCHI VOR RWY32

KANSAI APP	KOCHI VOR/DME 113.7 KRE CH–84X 33°32′30″N/133°40′49″E	KOCHI TOWER	RADAR AVBL
125.0 – 124.8		118.75 – 126.2	ATIS 126.45

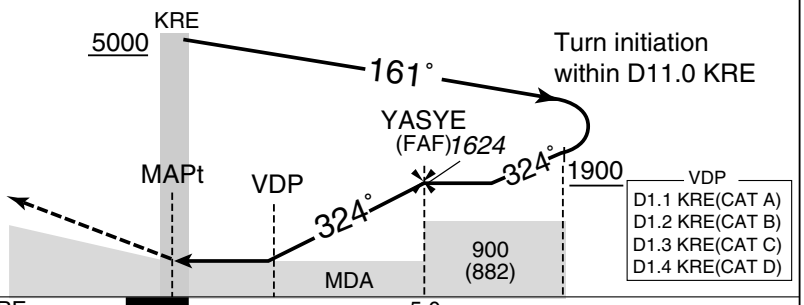


NM to KRE	MAPt	2	3	4	FAF
ALT (3.0° APCH Path)	–	669	987	1305	1624

MISSED APPROACH

Climb via KRE R324 to 500FT, turn left HDG178° to intercept and proceed via KRE R223 to SUSAK and hold at 3000FT. Contact KANSAI APP.

Timing not authorized for defining the MAPt.



DME to KRE	0	5.0
NM to THR	0	4.9

Missed APCH climb gradient MNM 4.5%

MINIMA THR elev. 18 AD elev. 29

CAT			CIRCLING	
	MDA(H)	RVR/ CMV	MDA(H)	VIS
A	360 (342)	1200	690 (661)	1600
B	400 (382)	1300		
C	430 (412)	1400	760 (731)	2400
D	450 (432)	1600	830 (801)	3200

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

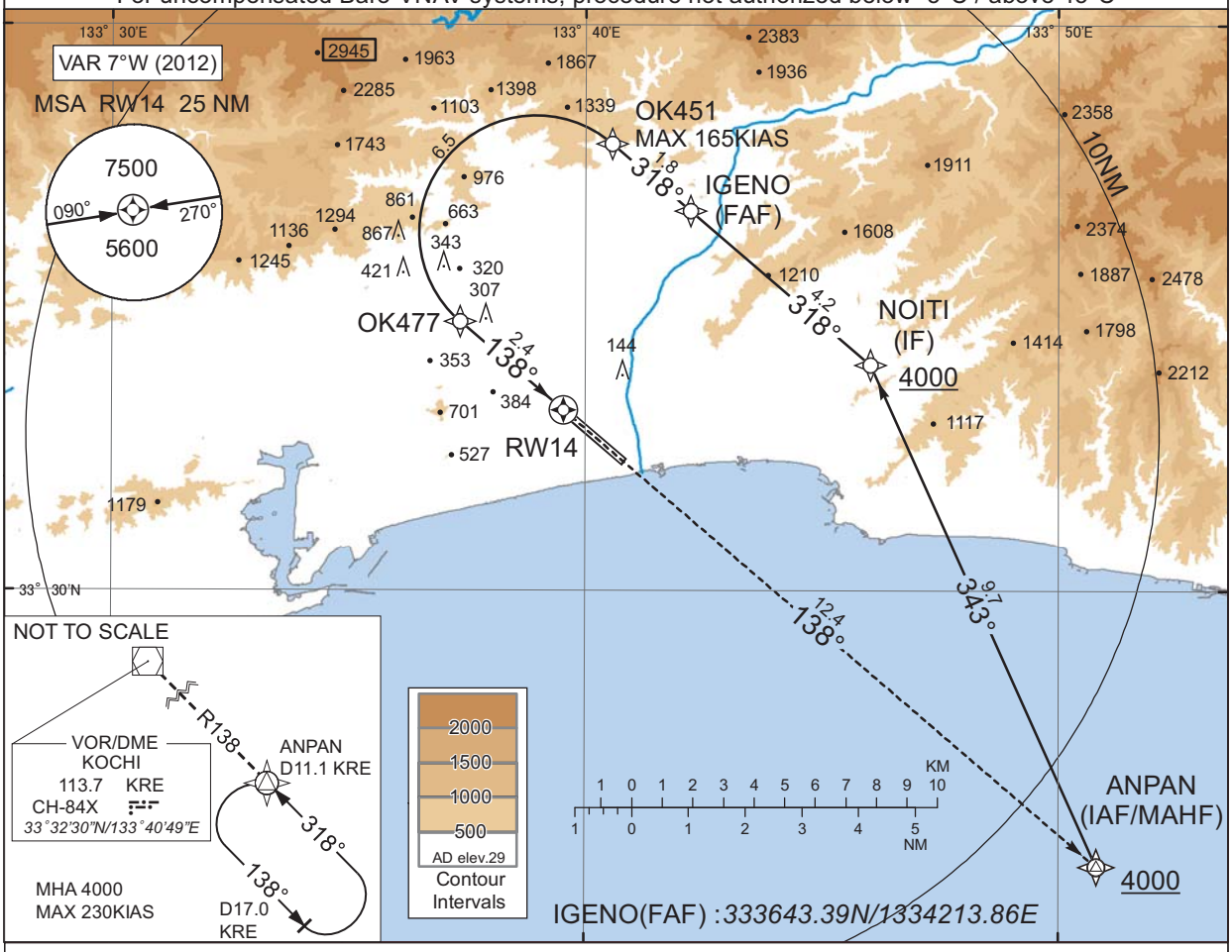
INSTRUMENT APPROACH CHART

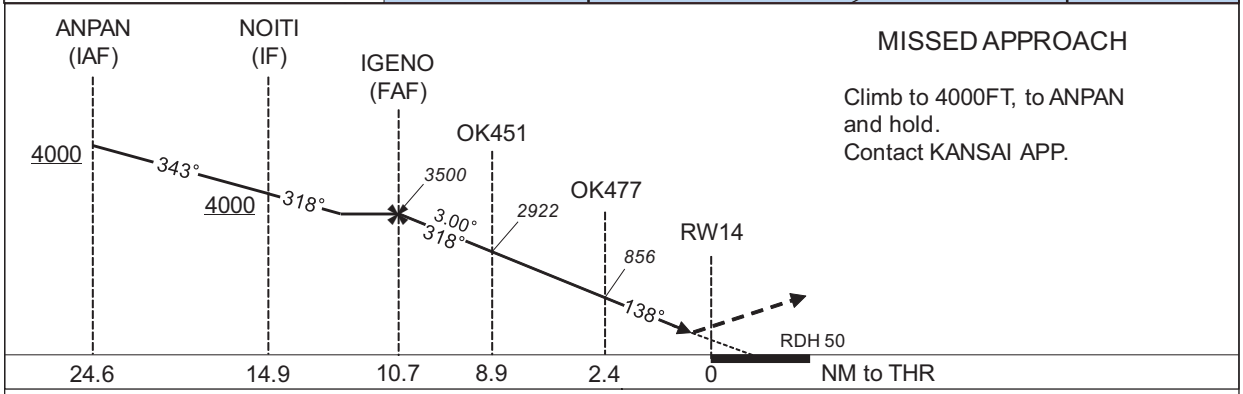
RJOK / KOCHI

RNP Z RWY14(AR)

KANSAI APP 125.0 - 124.8	RNP AR RF required.	KOCHI TOWER 118.75 - 126.2	RADAR AVBL ATIS 126.45

For uncompensated Baro-VNAV systems, procedure not authorized below -5°C / above 45°C





MISSED APPROACH

Climb to 4000FT, to ANPAN
and hold.
Contact KANSAI APP.

MINIMA	THR elev. 42		AD elev. 29	
CAT	RNP 0.14		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B				
C	342(300)	1400	611(569)	1600
D		1600		1800

Authorization Required

CHANGE : PROC renamed. Requirement for RNP.

INSTRUMENT APPROACH CHART

RJOK / KOCHI RNP Z RWY14(AR)

CHANGE : PROC renamed.

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	ANPAN	-	-	-6.9	-	-	+4000	-	-	-
002	TF	NOITI	-	343 (335.9)	-6.9	9.7	-	+4000	-	-	1.0
003	TF	IGENO	-	318 (310.7)	-6.9	4.2	-	3500	-	-	1.0
004	TF	OK451	-	318 (310.7)	-6.9	1.8	-	2922	-165	-3.00	0.14 0.30
005	RF Center: OKRF1 r=2.07NM	OK477	-	-	-6.9	6.5	L	856	-	-3.00	0.14 0.30
006	TF	RW14	Y	138 (130.6)	-6.9	2.4	-	92	-	-3.00/50	0.14 0.30
007	TF	ANPAN	-	138 (130.6)	-6.9	12.4	-	4000	-	-	1.0

Waypoint Coordinates

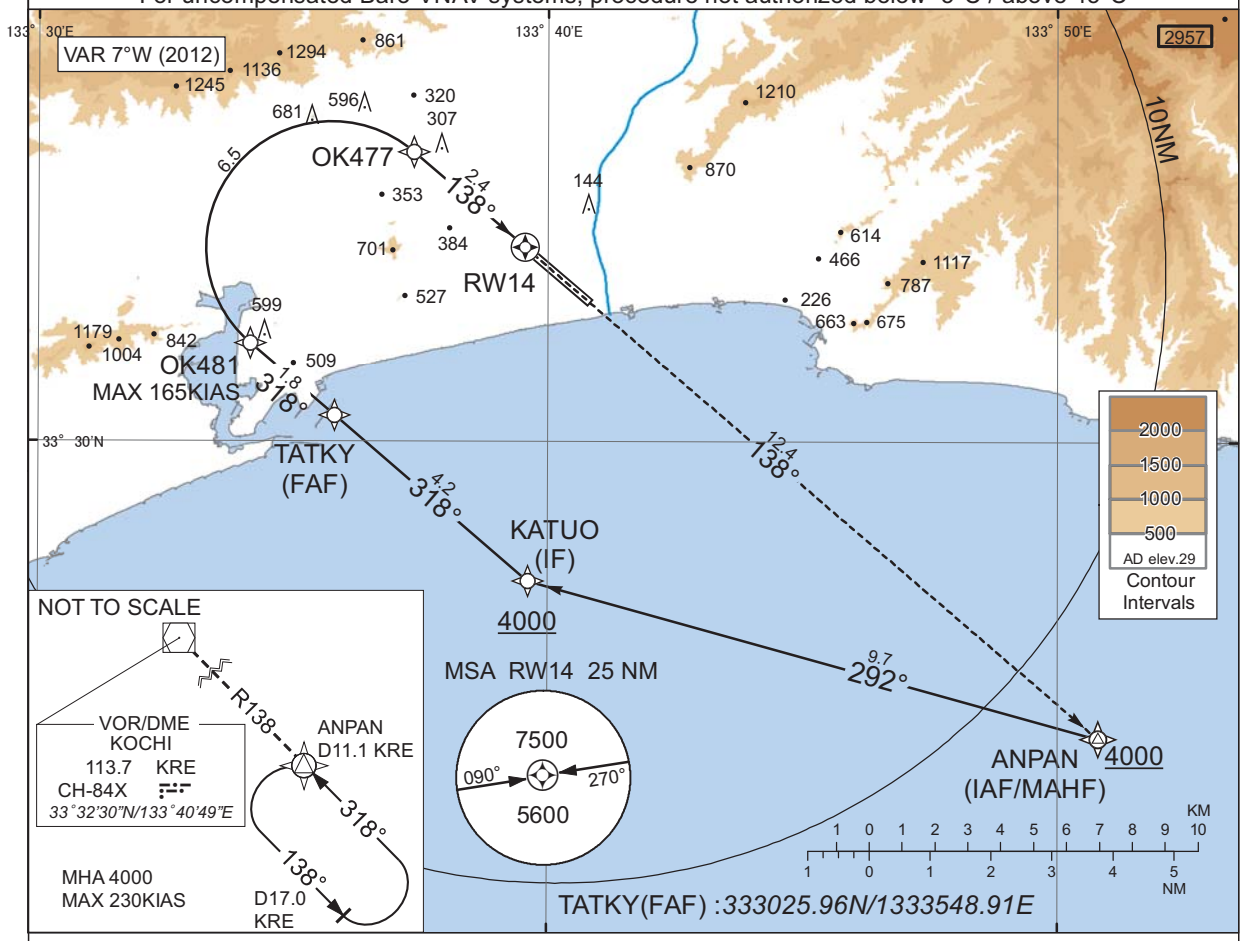
Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
ANPAN	*332507.54N / 1335048.52E*	OKRF1	*333620.13N / 1333858.11E*
NOITI	*333400.03N / 1334602.07E*		
IGENO	*333643.39N / 1334213.86E*		
OK451	*333754.48N / 1334034.43E*		
OK477	*333445.76N / 1333721.85E*		
RW14	*333312.04N / 1333932.98E*		

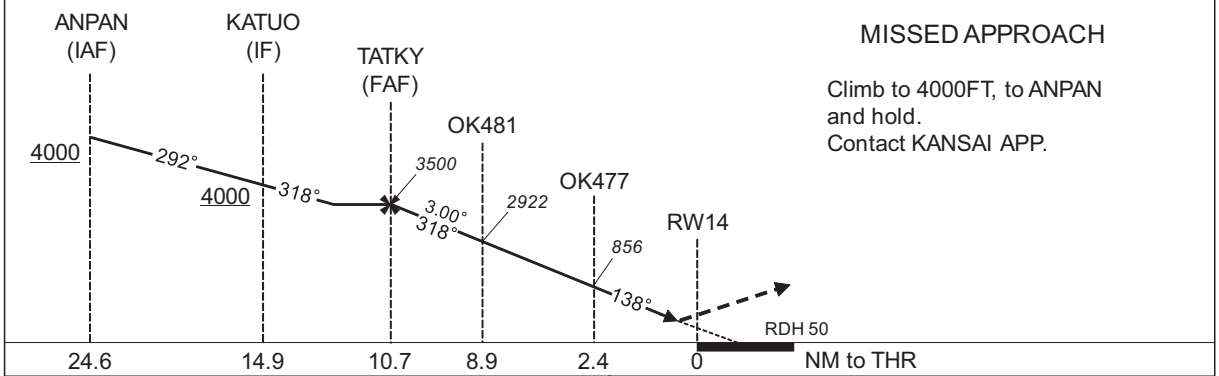
INSTRUMENT APPROACH CHART

RJOK / KOCHI — RNP Y RWY14(AR)

KANSAI APP 125.0 - 124.8	RNP AR RF required.	KOCHI TOWER 118.75 - 126.2	RADAR AVBL ATIS 126.45

For uncompensated Baro-VNAV systems, procedure not authorized below -5°C / above 45°C





MISSED APPROACH

Climb to 4000FT, to ANPAN
and hold.
Contact KANSAI APP.

MINIMA	THR elev. 42		AD elev. 29	
CAT	RNP 0.14		RNP 0.30	
	DA(H)	CMV	DA(H)	CMV
A	-	-	-	-
B				
C	342(300)	1400	611(569)	1600
D		1600		1800

Authorization Required

CHANGE : PROC renamed. Requirement for RNP.

INSTRUMENT APPROACH CHART

RJOK / KOCHI RNP Y RWY14(AR)

CHANGE : PROC renamed.

Coding Table

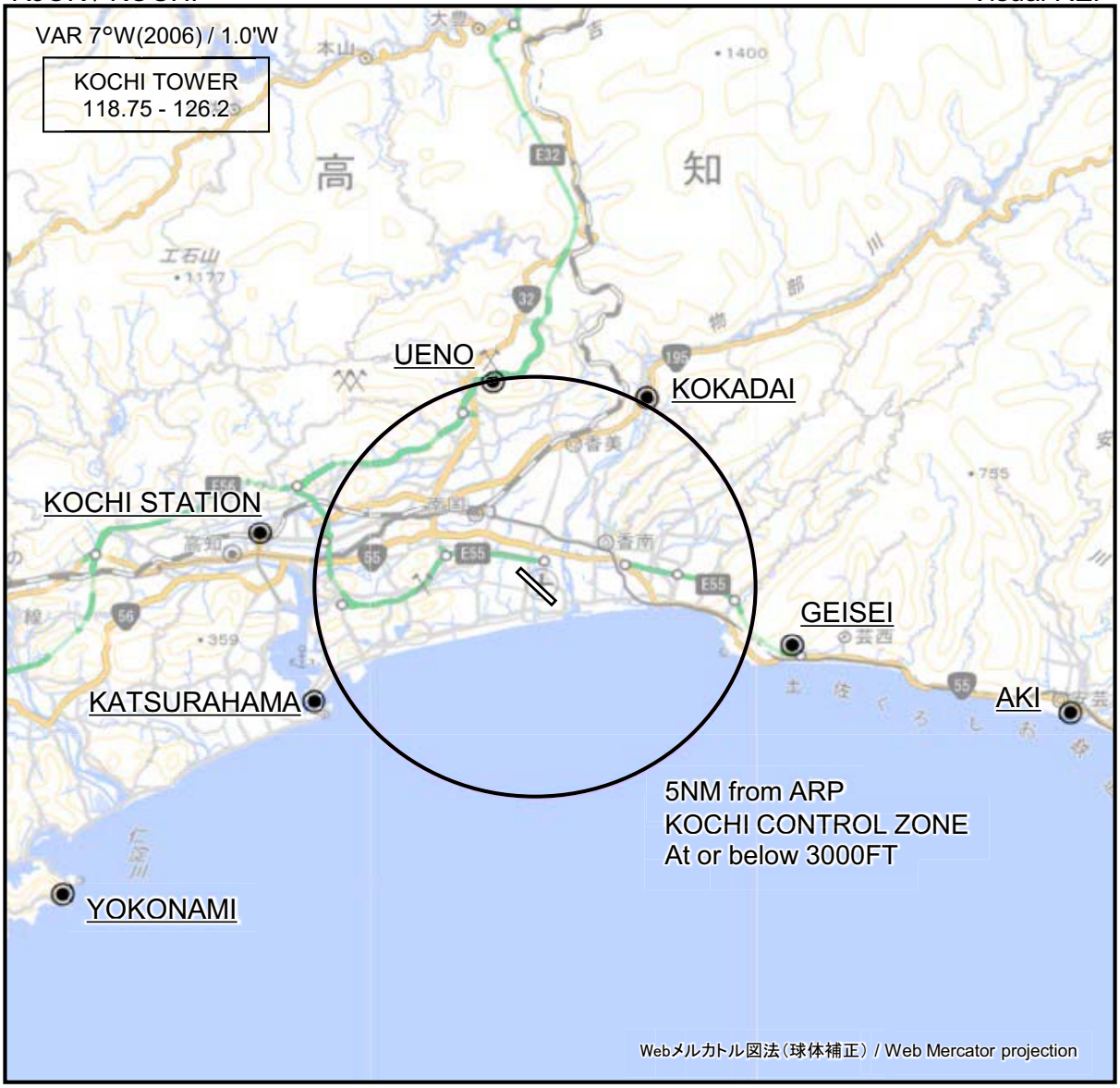
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	VPA/ RDH (°/FT)	RNP Value
001	IF	ANPAN	-	-	-6.9	-	-	+4000	-	-	-
002	TF	KATUO	-	292 (285.5)	-6.9	9.7	-	+4000	-	-	1.0
003	TF	TATKY	-	318 (310.6)	-6.9	4.2	-	3500	-	-	1.0
004	TF	OK481	-	318 (310.6)	-6.9	1.8	-	2922	-165	-3.00	0.14 0.30
005	RF Center: OKRF2 r=2.07NM	OK477	-	-	-6.9	6.5	R	856	-	-3.00	0.14 0.30
006	TF	RW14	Y	138 (130.6)	-6.9	2.4	-	92	-	-3.00/50	0.14 0.30
007	TF	ANPAN	-	138 (130.6)	-6.9	12.4	-	4000	-	-	1.0

Waypoint Coordinates

Waypoint Identifier	Coordinates	RF Arc Center Identifier	Coordinates
ANPAN	*332507.54N / 1335048.52E*	OKRF2	*333311.37N / 1333545.65E*
KATUO	*332742.79N / 1333937.02E*		
TATKY	*333025.96N / 1333548.91E*		
OK481	*333136.96N / 1333409.51E*		
OK477	*333445.76N / 1333721.85E*		
RW14	*333312.04N / 1333932.98E*		

RJOK / KOCHI

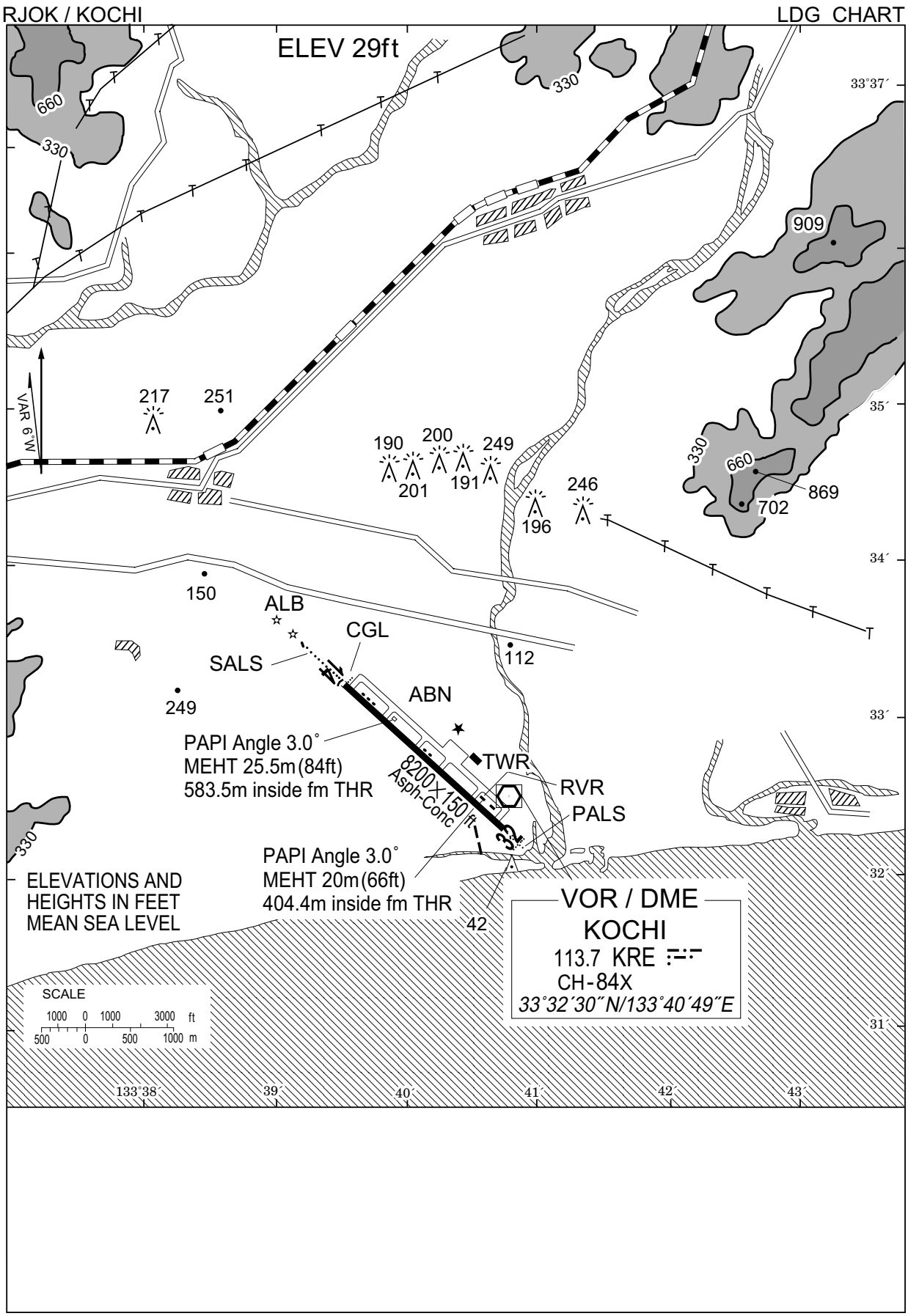
Visual REP



※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).

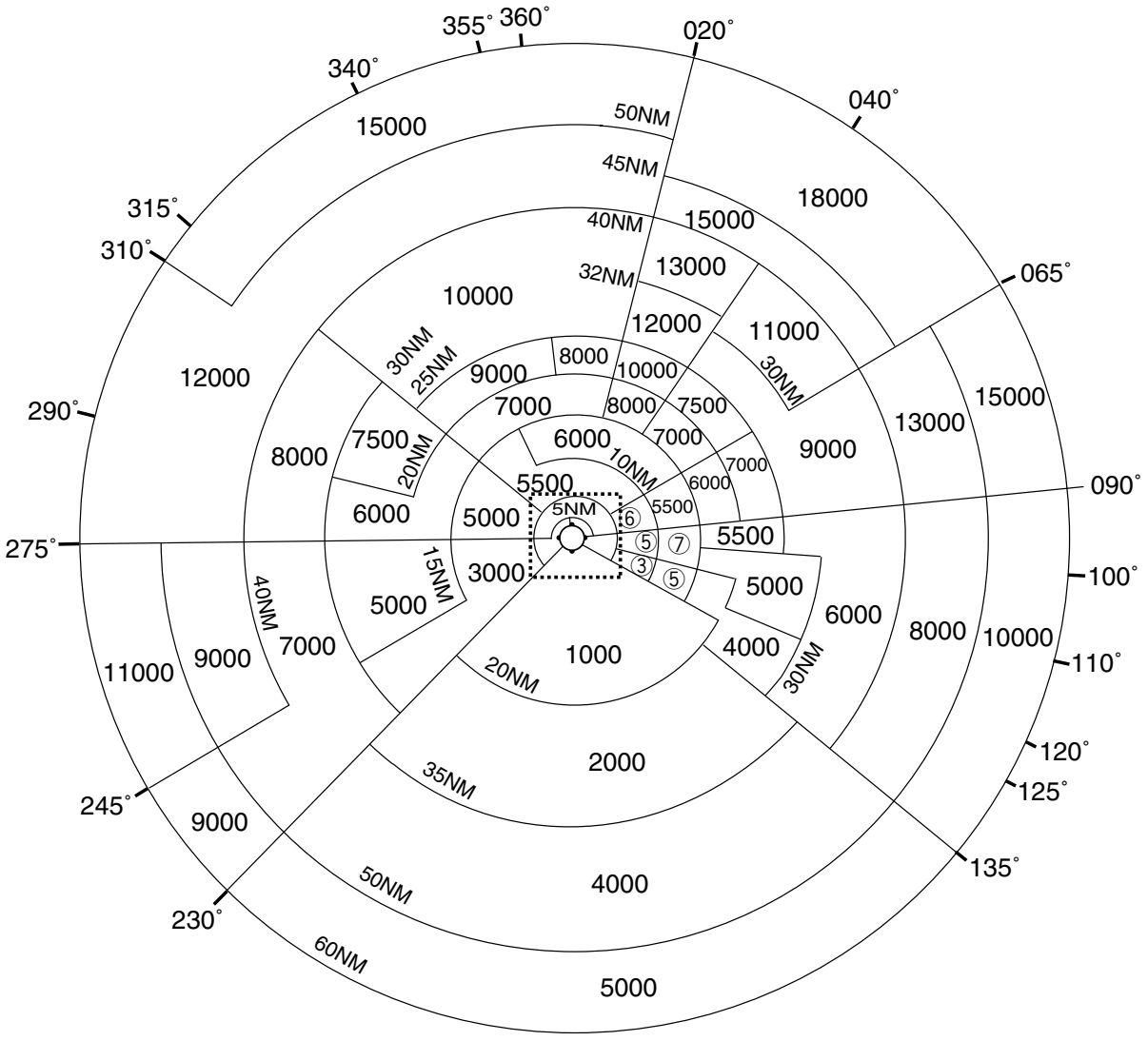
CHANGE : Map updated. BRG/DIST from ARP. Call sign(Kochi city → Kochi Station). Remarks(Geisei, Yokonami).

Call sign	BRG / DIST from ARP	Remarks
植野 Ueno	349°T / 5.0NM	ゴルフ場 Golf Course
工科大 Kokadai	029°T / 5.2NM	高知工科大学 Kochi University of Technology
高知駅 Kochi Station	281°T / 6.4NM	JR高知駅 Station
芸西 Geisei	104°T / 6.0NM	ホテル Hotel
桂浜 Katsurahama	242°T / 5.8NM	浦戸大橋 Bridge
安芸 Aki	104°T / 12.5NM	安芸川河口 River mouth
横浪 Yokonami	236°T / 13.0NM	ホテル Hotel

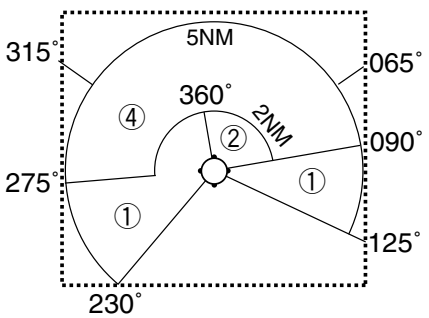

RJOK / KOCHI
LDG CHART
ELEV 29ft
660
330
330
909
33°37′
VAR 6°W
217
251
190
200
249
201
191
196
246
330
660
869
702
35′
34′
150
ALB
CGL
SALS
112
249
ABN
33′
PAPI Angle 3.0°
MEHT 25.5m(84ft)
583.5m inside fm THR
TWR
RVR
8200×150ft
Asph-Conc
PALS
PAPI Angle 3.0°
MEHT 20m(66ft)
404.4m inside fm THR
330
ELEVATIONS AND
HEIGHTS IN FEET
MEAN SEA LEVEL
42
VOR / DME
KOCHI
113.7 KRE
CH-84X
33°32′30″N/133°40′49″E
32′
SCALE
1000 0 1000 3000 ft
500 0 500 1000 m
31′
133°38′
39′
40′
41′
42′
43′

RJOK / KOCHI Minimum Vectoring Altitude CHART

VAR 7˚W (2009)



① 2000
② 2300
③ 2500
④ 3000
⑤ 3500
⑥ 4000
⑦ 4500



CENTER : *333245N/1334039E* (RADAR SITE)