



RJOM / MATSUYAMA SID

### MATSUYAMA REVERSAL FIVE DEPARTURE

RWY32 : Climb RWY HDG to 500FT, turn left HDG 270° to 3500FT, turn left...

RWY14 : Climb RWY HDG to 1300FT, turn right HDG 270  $^{\circ}$  to 3500FT, turn right...

...direct to MYE VOR/DME.

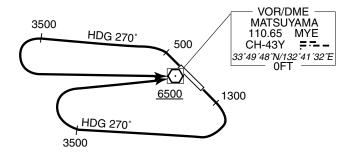
Cross MYE VOR/DME at or above 6500FT.

Note RWY14: 7.0% climb gradient required up to 3200FT.

OBST ALT 2822FT located at 7.6NM 172° FM end of RWY14.

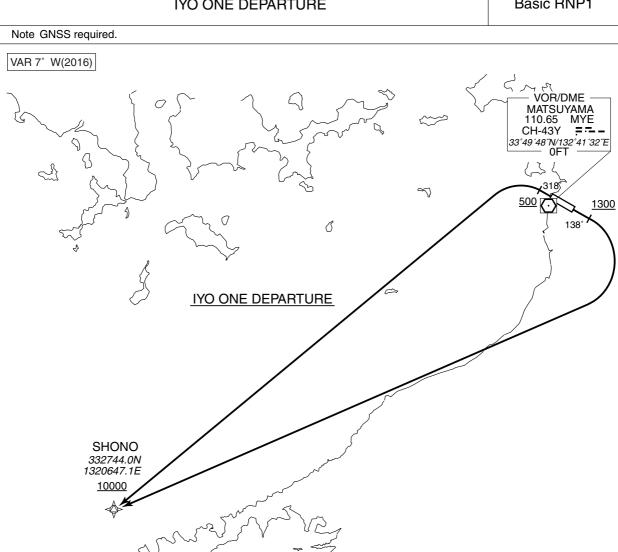
No turn before DER.

# MATSUYAMA REVERSAL FIVE DEPARTURE



RJOM / MATSUYAMA RNAV SID

IYO ONE DEPARTURE Basic RNP1



#### IYO ONE DEPARTURE

RWY14 : Climb on HDG138° at or above 1300FT, turn right direct to SHONO at or above 10000FT. RWY32 : Climb on HDG318° at or above 500FT, turn left direct to SHONO at or above 10000FT.

NOTE RWY14: 7.0% climb gradient required up to 1800FT.

OBST ALT 1464FT located at 4.3NM 154° FM end of RWY14.

No turn before DER.

### RJOM / MATSUYAMA

**RNAV SID** 

## IYO ONE DEPARTURE

### RWY14

| 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         | _          | _    | 138<br>(130.7) | -7.4      | _        | _         | +1300    | _      | _        | Basic RNP1    |
| 002    | DF         | SHONO      | _    | _              | -7.4      | _        | R         | +10000   | _      | _        | Basic RNP1    |

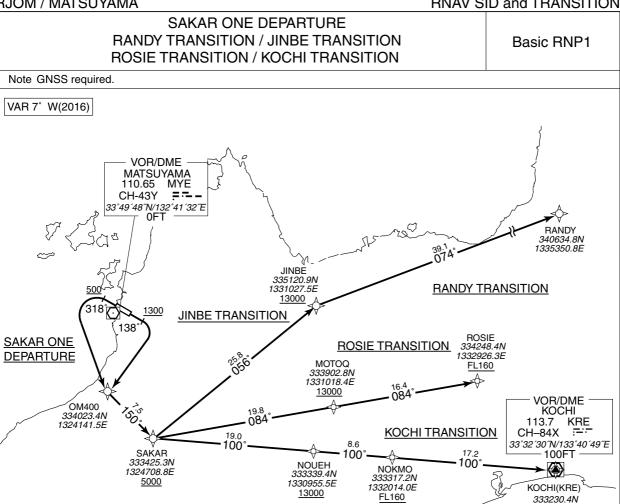
### RWY32

| 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         | _          | _    | 318<br>(310.7) | -7.4      | _        | _         | +500     | _      | _        | Basic RNP1    |
| 002    | DF         | SHONO      | _    | _              | -7.4      | _        | L         | +10000   | _      | _        | Basic RNP1    |

#### **RJOM / MATSUYAMA**

#### RNAV SID and TRANSITION

1334048 6F



#### SAKAR ONE DEPARTURE

RWY14 : Climb on HDG138° at or above 1300FT, turn right direct to OM400, to SAKAR at or above 5000FT.

RWY32 : Climb on HDG318° at or above 500FT, turn left direct to OM400, to SAKAR at or above 5000FT.

NOTE RWY14: 7.0% climb gradient required up to 3200FT.

OBST ALT 2822FT located at 7.6NM 172° FM end of RWY14.

No turn before DER.

RWY32: 5.3% climb gradient required up to 3600FT.

OBST ALT 3084FT located at 10.5NM 177° FM end of RWY32.

#### **RANDY TRANSITION**

From SAKAR at or above 5000FT, to JINBE at or above 13000FT, to RANDY.

#### JINBE TRANSITION

From SAKAR at or above 5000FT, to JINBE at or above 13000FT.

#### **ROSIE TRANSITION**

From SAKAR at or above 5000FT, to MOTOQ at or above 13000FT, to ROSIE at or above FL160.

#### **KOCHI TRANSITION**

From SAKAR at or above 5000FT, to NOUEH at or above 13000FT, to NOKMO at or above FL160, to KRE.

### RJOM / MATSUYAMA

## RNAV SID and TRANSITION

## SAKAR ONE DEPARTURE

### RWY14

| 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         | _          | _    | 138<br>(130.7) | -7.4      | _        | _         | +1300    | _      | _        | Basic RNP1    |
| 002    | DF         | OM400      | _    | _              | -7.4      | _        | R         | _        | _      | _        | Basic RNP1    |
| 003    | TF         | SAKAR      | _    | 150<br>(142.7) | -7.4      | 7.5      | _         | +5000    | _      | _        | Basic RNP1    |

#### RWY32

| 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         | _          | _    | 318<br>(310.7) | -7.4      | _        | ı         | +500     | _      | _        | Basic RNP1    |
| 002    | DF         | OM400      | _    | _              | -7.4      | _        | L         | _        | _      | _        | Basic RNP1    |
| 003    | TF         | SAKAR      | _    | 150<br>(142.7) | -7.4      | 7.5      | _         | +5000    | _      | _        | Basic RNP1    |

## RANDY TRANSITION

| 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         | SAKAR      | _    | _              | -7.4      | _        | _         | +5000    | _      | _        | Basic RNP1    |
| 002    | TF         | JINBE      | _    | 056<br>(048.8) | -7.4      | 25.8     | _         | +13000   | _      | _        | Basic RNP1    |
| 003    | TF         | RANDY      | _    | 074<br>(066.9) | -7.4      | 39.1     | _         | _        | _      | _        | Basic RNP1    |

## JINBE TRANSITION

| 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         | SAKAR      | _    | _              | -7.4      | _        | _         | +5000    | _      | _        | Basic RNP1    |
| 002    | TF         | JINBE      | _    | 056<br>(048.8) | -7.4      | 25.8     | _         | +13000   | _      | _        | Basic RNP1    |

### RJOM / MATSUYAMA

### RNAV SID and TRANSITION

## **ROSIE TRANSITION**

| 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         | SAKAR      | _    | _              | -7.4      | _        | _         | +5000    | _      | _        | Basic RNP1    |
| 002    | TF         | MOTOQ      | -    | 084<br>(076.4) | -7.4      | 19.8     | -         | +13000   | _      | _        | Basic RNP1    |
| 003    | TF         | ROSIE      | _    | 084<br>(076.6) | -7.4      | 16.4     | _         | +FL160   | _      | _        | Basic RNP1    |

## **KOCHI TRANSITION**

| 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         | SAKAR      | _    | _              | -7.4      | _        | _         | +5000    | _      | _        | Basic RNP1    |
| 002    | TF         | NOUEH      | _    | 100<br>(092.2) | -7.4      | 19.0     | _         | +13000   | _      | _        | Basic RNP1    |
| 003    | TF         | NOKMO      | _    | 100<br>(092.4) | -7.4      | 8.6      | _         | +FL160   | _      | _        | Basic RNP1    |
| 004    | TF         | KRE        | _    | 100<br>(092.5) | -7.4      | 17.2     | _         | _        | _      | _        | Basic RNP1    |

## RJOM / MATSUYAMA **RNAV SID** Basic RNP1 MARCO ONE DEPARTURE Note GNSS required. VAR 7° W(2016) $\approx$ **MARCO** 340446.0N 1320850.2E MARCO ONE DEPARTURE 110.65 CH-43Y **500** 🛭 1300 OM402 335129.5N 138° 1322924.1E OM401 334603.4N 1323745.6E

#### MARCO ONE DEPARTURE

RWY14: Climb on HDG138° at or above 1300FT, turn right direct to OM401, to OM402, to MARCO.

RWY32 : Climb on HDG318° at or above 500FT, turn left direct to OM402, to MARCO.

NOTE RWY14: 7.0% climb gradient required up to 1800FT.

OBST ALT 1464FT located at 4.3NM 154° FM end of RWY14.

No turn before DER.

## RJOM / MATSUYAMA RNAV SID

## MARCO ONE DEPARTURE

#### RWY14

| 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         | _          | _    | 138<br>(130.7) | -7.4      | _        | _         | +1300    | _      | _        | Basic RNP1    |
| 002    | DF         | OM401      | _    | _              | -7.4      | _        | R         | _        | _      | _        | Basic RNP1    |
| 003    | TF         | OM402      | _    | 315<br>(308.1) | -7.4      | 8.8      | _         | _        | _      | _        | Basic RNP1    |
| 004    | TF         | MARCO      | _    | 315<br>(308.1) | -7.4      | 21.6     | _         | _        | _      | _        | Basic RNP1    |

#### RWY32

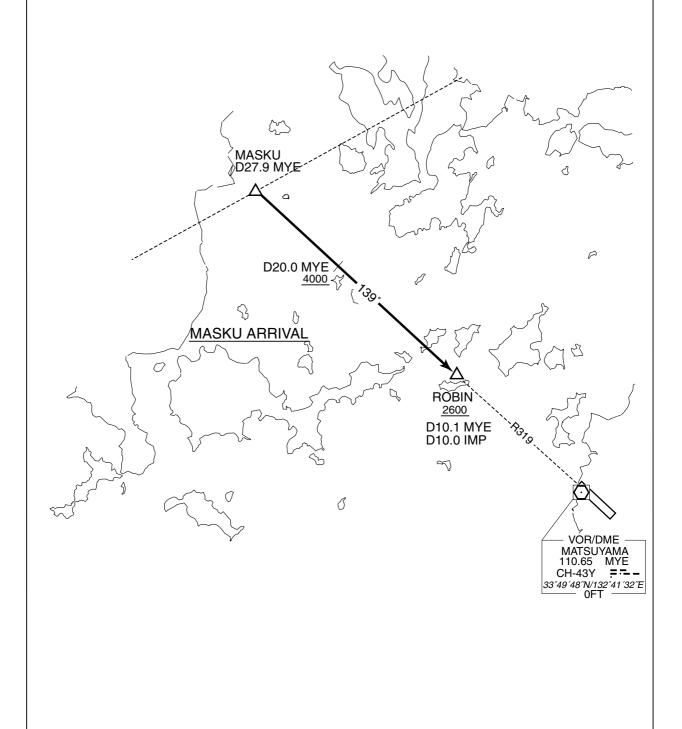
| Serial | Path       | Waypoint   | Fly  | Course         | Magnetic  | Distance | Turn      | Altitude | Speed  | Vertical | Navigation    |
|--------|------------|------------|------|----------------|-----------|----------|-----------|----------|--------|----------|---------------|
| Number | Descriptor | Identifier | Over | °M(°T)         | Variation | (NM)     | Direction | (FT)     | (KIAS) | Angle    | Specification |
| 001    | VA         | _          | _    | 318<br>(310.7) | -7.4      | _        | -         | +500     | _      | _        | Basic RNP1    |
| 002    | DF         | OM402      | _    | _              | -7.4      | _        | L         | _        | _      | _        | Basic RNP1    |
| 003    | TF         | MARCO      | _    | 315<br>(308.1) | -7.4      | 21.6     | -         | _        | _      | _        | Basic RNP1    |

RJOM / MATSUYAMA STAR

### MASKU ARRIVAL

From over MASKU, via MYE R319 to ROBIN.

Cross MASKU at or above 5000FT, cross MYE R319/20.0DME at or above 4000FT, cross ROBIN at or above 2600FT.



## **RNAV STAR RWY14** RJOM / MATSUYAMA **ROBIN WEST ARRIVAL** Basic RNP1 Note GNSS required. VAR 7°W (2016) ROBIN WEST ARRIVAL 00 **MARCO** 340446.0N 1320850.2E 10.0 TACAN P 120 KUGA 1177 IWT CH-90X **:**--0 34°04′48″N/132°08′50″E 2100FT ROMAN 340052.1N 1321955.0E RÓBIN 335627.6N 1323221.8E 2600 $\otimes$ – VOR/DME – MATSUYAMA 110.65 MYE CH-43Y 33°49′48″N/132°41′32″E 0FT

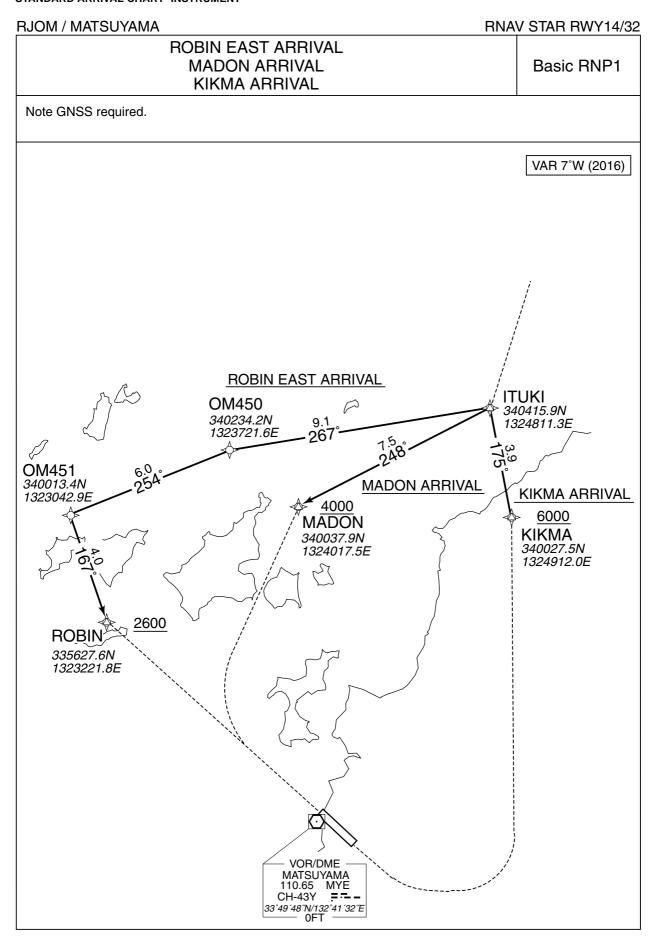
## RJOM / MATSUYAMA

**RNAV STAR RWY14** 

### **ROBIN WEST ARRIVAL**

From MARCO, to ROMAN at or above 4000FT, to ROBIN at or above 2600FT.

| Serial<br>Number | Path<br>Descriptor | Waypoint<br>Identifier |   |                | Magnetic<br>Variation |      | Turn<br>Direction |       |   |   | Navigation<br>Specification |
|------------------|--------------------|------------------------|---|----------------|-----------------------|------|-------------------|-------|---|---|-----------------------------|
| 001              | IF                 | MARCO                  | _ | _              | -7.4                  | _    | _                 | _     | _ | _ | Basic RNP1                  |
| 002              | TF                 | ROMAN                  | _ | 120<br>(113.0) | -7.4                  | 10.0 | _                 | +4000 | _ | _ | Basic RNP1                  |
| 003              | TF                 | ROBIN                  | _ | 120<br>(113.1) | -7.4                  | 11.2 | _                 | +2600 | _ | _ | Basic RNP1                  |



#### RJOM / MATSUYAMA

RNAV STAR RWY14/32

### **ROBIN EAST ARRIVAL**

From ITUKI, to OM450, to OM451, to ROBIN at or above 2600FT.

| П |        |            |            |      |                |           |      |           |       |        |       |               |
|---|--------|------------|------------|------|----------------|-----------|------|-----------|-------|--------|-------|---------------|
|   | Serial |            | Waypoint   | , ,  |                | Magnetic  |      |           |       |        |       | Navigation    |
|   | Number | Descriptor | Identifier | Over | °M(°T)         | Variation | (NM) | Direction | (FT)  | (KIAS) | Angle | Specification |
|   | 001    | IF         | ITUKI      | _    | _              | -7.4      | _    | _         | _     | _      | _     | Basic RNP1    |
|   | 002    | TF         | OM450      | _    | 267<br>(259.4) | -7.4      | 9.1  | _         | _     | _      | 1     | Basic RNP1    |
|   | 003    | TF         | OM451      | -    | 254<br>(247.0) | -7.4      | 6.0  | -         | _     | _      | ı     | Basic RNP1    |
|   | 004    | TF         | ROBIN      | _    | 167<br>(160.0) | -7.4      | 4.0  | _         | +2600 | _      | _     | Basic RNP1    |

### MADON ARRIVAL

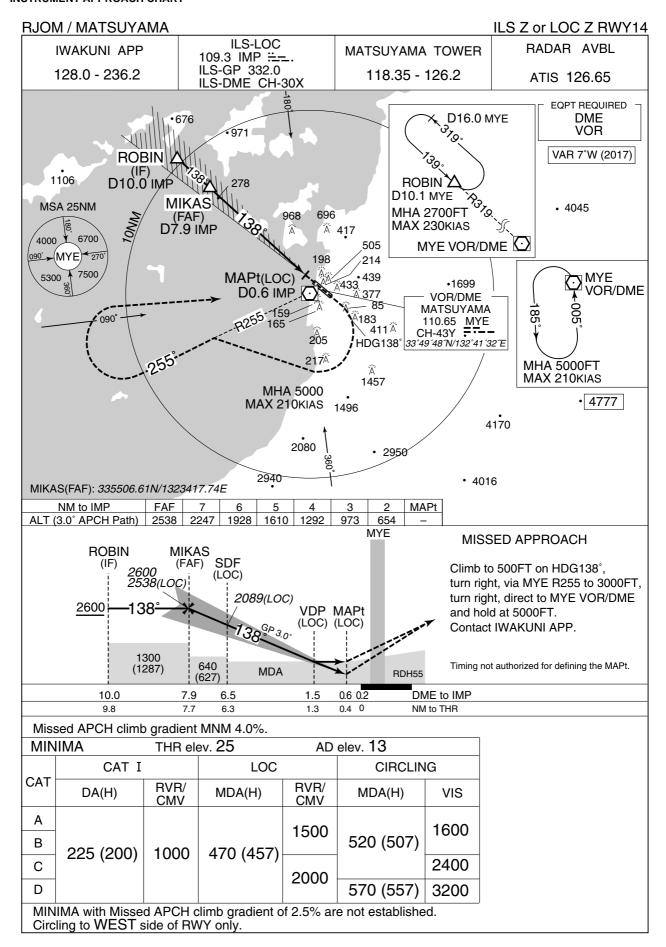
From ITUKI, to MADON at or above 4000FT.

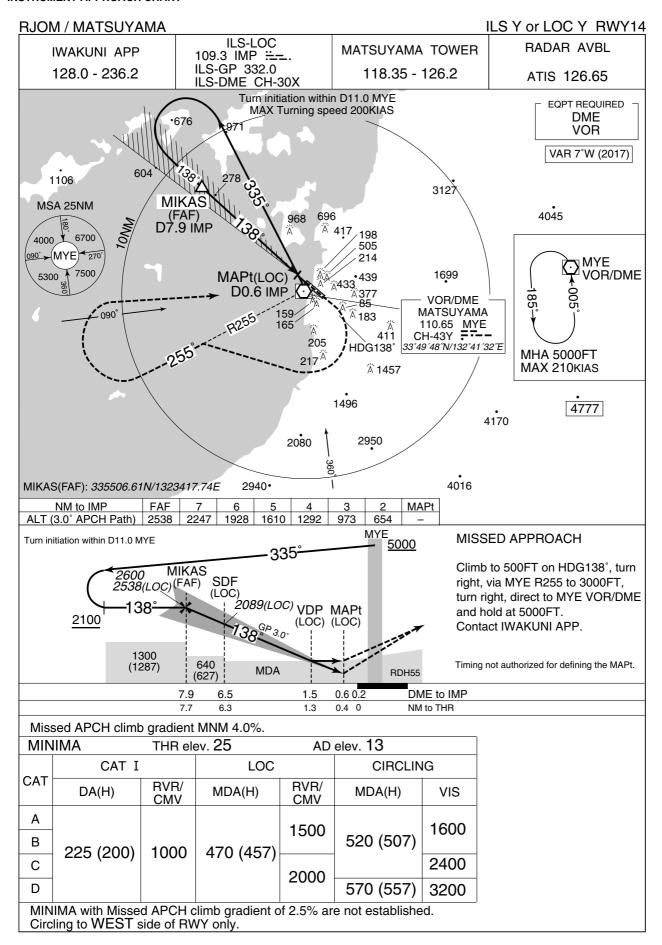
| Serial<br>Number | Path<br>Descriptor | Waypoint<br>Identifier | 1 |                | Magnetic<br>Variation |     | Turn<br>Direction |       | • |   | Navigation<br>Specification |
|------------------|--------------------|------------------------|---|----------------|-----------------------|-----|-------------------|-------|---|---|-----------------------------|
| 001              | IF                 | ITUKI                  | _ | _              | -7.4                  | _   | _                 | _     | _ | _ | Basic RNP1                  |
| 002              | TF                 | MADON                  | _ | 248<br>(241.0) | -7.4                  | 7.5 | _                 | +4000 | _ | _ | Basic RNP1                  |

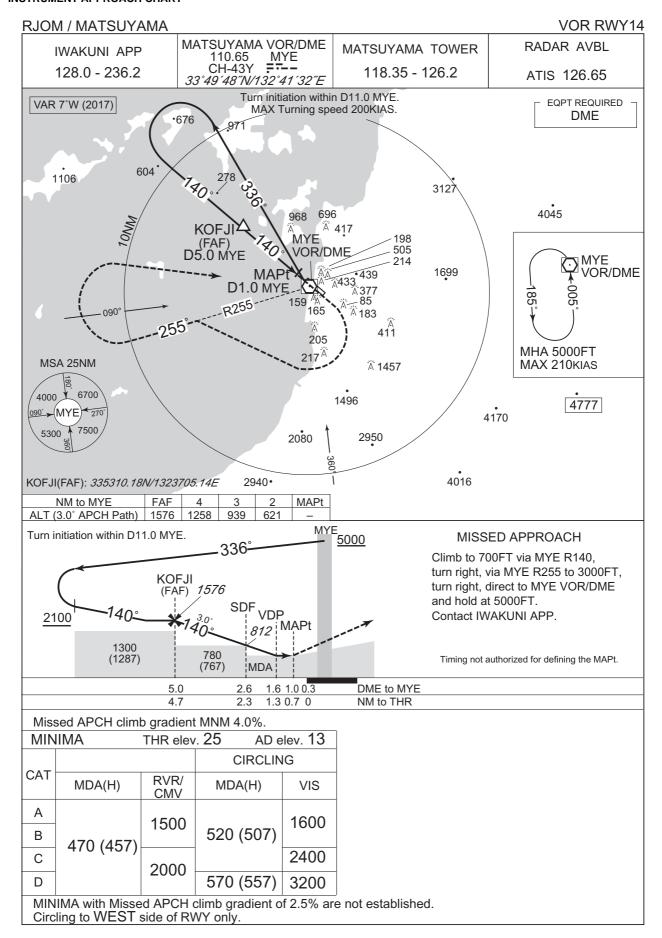
## KIKMA ARRIVAL

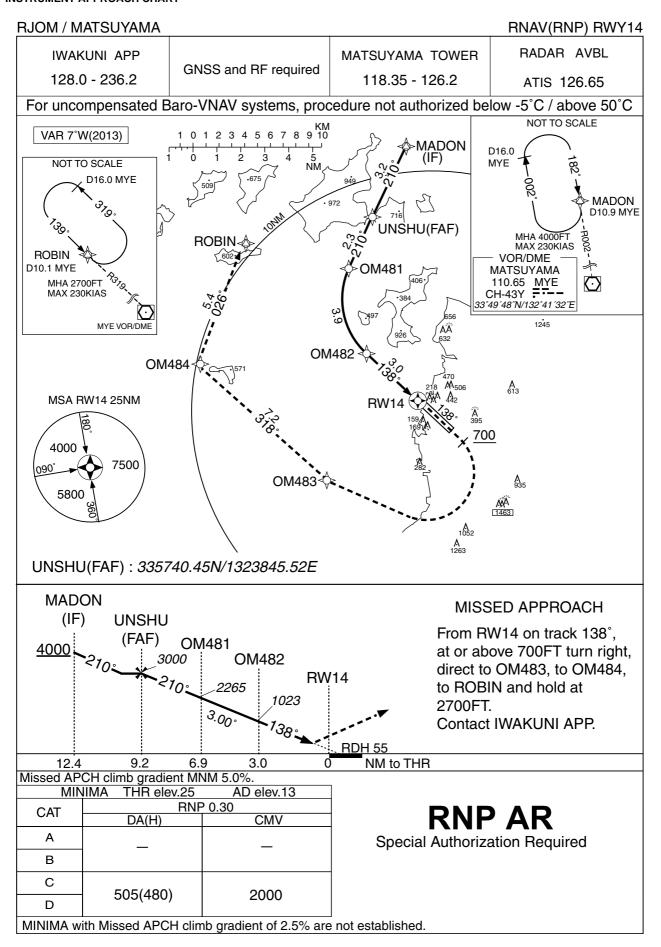
From ITUKI, to KIKMA at or above 6000FT.

| Serial<br>Number | Path<br>Descriptor | Waypoint<br>Identifier |   |                |      |     |   |       |   |   | Navigation<br>Specification |
|------------------|--------------------|------------------------|---|----------------|------|-----|---|-------|---|---|-----------------------------|
| 001              | IF                 | ITUKI                  | _ | _              | -7.4 | _   | _ | _     | _ | _ | Basic RNP1                  |
| 002              | TF                 | KIKMA                  | _ | 175<br>(167.6) | -7.4 | 3.9 | _ | +6000 | _ | _ | Basic RNP1                  |









## RJOM / MATSUYAMA

## RNAV(RNP) RWY14

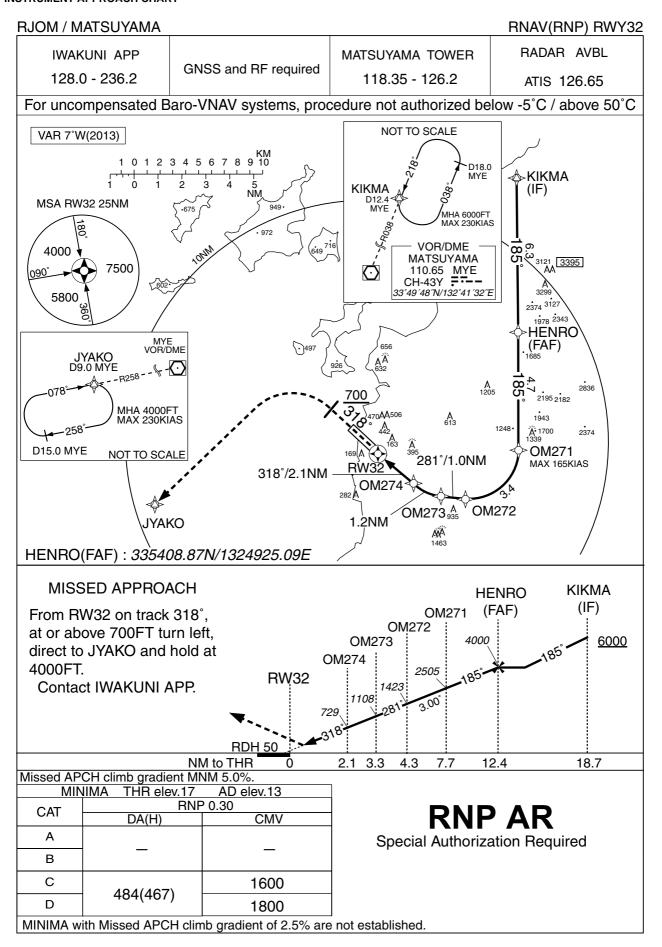
## RNAV(RNP) RWY14

## Coding Table

| Serial<br>Number | Path<br>Descriptor                 | Waypoint<br>Identifier | Fly<br>Over | Course<br>°M(°T) | Magnetic<br>Variation | Distance<br>(NM) | Turn<br>Direction | Altitude<br>(FT) | Speed<br>(KIAS) | VPA/<br>RDH<br>(°/FT) | RNP<br>Value |
|------------------|------------------------------------|------------------------|-------------|------------------|-----------------------|------------------|-------------------|------------------|-----------------|-----------------------|--------------|
| 001              | IF                                 | MADON                  | _           | _                | -7.1                  | _                | _                 | +4000            | _               | _                     | _            |
| 002              | TF                                 | UNSHU                  | _           | 210<br>(203.3)   | -7.1                  | 3.2              | _                 | 3000             | ı               | -                     | 1.0          |
| 003              | TF                                 | OM481                  | _           | 210<br>(203.2)   | -7.1                  | 2.3              | _                 | 2265             | _               | -3.00                 | 0.3          |
| 004              | RF<br>Center:<br>OMRF4<br>r=3.06NM | OM482                  | _           | _                | -7.1                  | 3.9              | L                 | 1023             | l               | -3.00                 | 0.3          |
| 005              | TF                                 | RW14                   | Y           | 138<br>(130.5)   | -7.1                  | 3.0              | _                 | 80               | _               | -3.00/55              | 0.3          |
| 006              | FA                                 | _                      | _           | 138<br>(130.5)   | -7.1                  | _                | _                 | +700             | _               | _                     | 1.0          |
| 007              | DF                                 | OM483                  | _           | _                | -7.1                  | _                | R                 | _                | _               | _                     | 1.0          |
| 008              | TF                                 | OM484                  | _           | 318<br>(310.5)   | -7.1                  | 7.2              | _                 |                  | ı               |                       | 1.0          |
| 009              | TF                                 | ROBIN                  | _           | 026<br>(018.6)   | -7.1                  | 5.4              | _                 | 2700             | _               | _                     | 1.0          |

## Waypoint Coordinates

| Waypoint Identifier | Coordinates            | RF Arc Center Identifier | Coordinates            |
|---------------------|------------------------|--------------------------|------------------------|
| MADON               | 340037.92N/1324017.47E | OMRF4                    | 335420.16N/1324102.43E |
| UNSHU               | 335740.45N/1323845.52E |                          |                        |
| OM481               | 335533.13N/1323739.63E |                          |                        |
| OM482               | 335159.96N/1323839.26E |                          |                        |
| RW14                | 335004.50N/1324121.73E |                          |                        |
| OM483               | 334643.12N/1323652.81E |                          |                        |
| OM484               | 335123.09N/1323018.19E |                          |                        |
| ROBIN               | 335627.62N/1323221.80E |                          |                        |



### RJOM / MATSUYAMA

## RNAV(RNP) RWY32

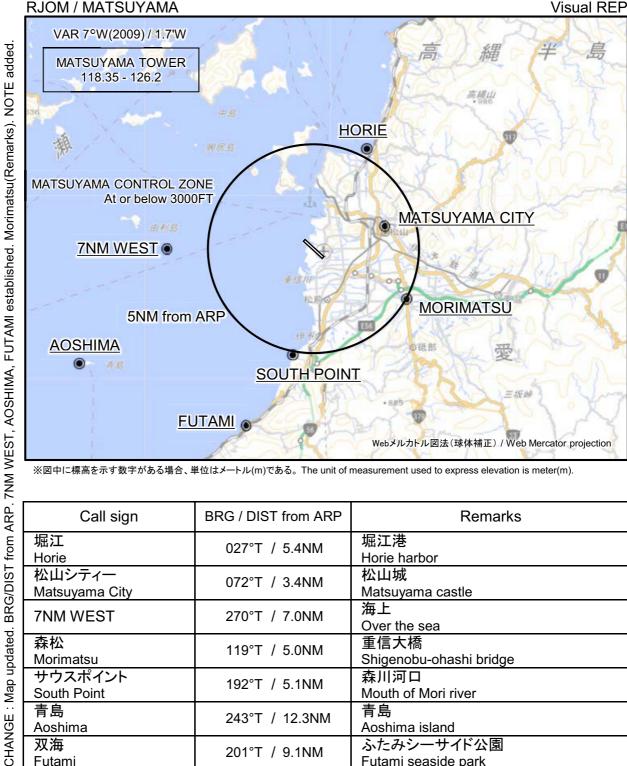
## RNAV(RNP) RWY32

## Coding Table

| Serial<br>Number | Path<br>Descriptor                 | Waypoint<br>Identifier | Fly<br>Over | Course<br>°M(°T) | Magnetic<br>Variation | Distance<br>(NM) | Turn<br>Direction | Altitude<br>(FT) | Speed<br>(KIAS) | VPA/<br>RDH<br>(°/FT) | RNP<br>Value |
|------------------|------------------------------------|------------------------|-------------|------------------|-----------------------|------------------|-------------------|------------------|-----------------|-----------------------|--------------|
| 001              | IF                                 | KIKMA                  | _           | _                | -7.1                  | _                | _                 | +6000            | _               | _                     | _            |
| 002              | TF                                 | HENRO                  | _           | 185<br>(178.4)   | -7.1                  | 6.3              | _                 | 4000             | _               | _                     | 1.0          |
| 003              | TF                                 | OM271                  |             | 185<br>(178.4)   | -7.1                  | 4.7              |                   | 2505             | -165            | -3.00                 | 0.3          |
| 004              | RF<br>Center:<br>OMRF1<br>r=2.04NM | OM272                  |             | _                | -7.1                  | 3.4              | R                 | 1423             | _               | -3.00                 | 0.3          |
| 005              | TF                                 | OM273                  |             | 281<br>(273.5)   | -7.1                  | 1.0              |                   | 1108             | _               | -3.00                 | 0.3          |
| 006              | RF<br>Center:<br>OMRF2<br>r=1.85NM | OM274                  |             | _                | -7.1                  | 1.2              | R                 | 729              | _               | -3.00                 | 0.3          |
| 007              | TF                                 | RW32                   | Υ           | 318<br>(310.7)   | -7.1                  | 2.1              | _                 | 67               | _               | -3.00/50              | 0.3          |
| 008              | FA                                 | _                      | _           | 318<br>(310.7)   | -7.1                  | _                | _                 | +700             | _               | _                     | 1.0          |
| 009              | DF                                 | JYAKO                  | _           | _                | -7.1                  | _                | L                 | 4000             | _               | _                     | 1.0          |

## Waypoint Coordinates

| Waypoint Identifier | Coordinates            | RF Arc Center Identifier | Coordinates            |
|---------------------|------------------------|--------------------------|------------------------|
| KIKMA               | 340027.49N/1324911.96E | OMRF1                    | 334923.23N/1324707.68E |
| HENRO               | 335408.87N/1324925.09E | OMRF2                    | 334915.02N/1324555.54E |
| OM271               | 334926.79N/1324934.83E |                          |                        |
| OM272               | 334720.59N/1324658.72E |                          |                        |
| OM273               | 334724.21N/1324547.47E |                          |                        |
| OM274               | 334750.46N/1324429.38E |                          |                        |
| RW32                | 334911.75N/1324235.61E |                          |                        |
| JYAKO               | 334643.83N/1323118.89E |                          |                        |



※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).

| Call sign                | BRG / DIST from ARP | Remarks                           |
|--------------------------|---------------------|-----------------------------------|
| 堀江<br>Horie              | 027°T / 5.4NM       | 堀江港<br>Horie harbor               |
| 松山シティー<br>Matsuyama City | 072°T / 3.4NM       | 松山城<br>Matsuyama castle           |
| 7NM WEST                 | 270°T / 7.0NM       | 海上<br>Over the sea                |
| 森松<br>Morimatsu          | 119°T / 5.0NM       | 重信大橋<br>Shigenobu-ohashi bridge   |
| サウスポイント<br>South Point   | 192°T / 5.1NM       | 森川河口<br>Mouth of Mori river       |
| 青島<br>Aoshima            | 243°T / 12.3NM      | 青島<br>Aoshima island              |
| 双海<br>Futami             | 201°T / 9.1NM       | ふたみシーサイド公園<br>Futami seaside park |

注:有視界飛行方式により松山空港に着陸しようとする航空機又は松山航空交通管制圏を通過しようとする 航空機は、南方向から進入する場合は双海ポイント付近で、南西~西方向から進入する場合は青島ポイ ント又は7NM WEST付近で、松山タワーと通信設定すること。

NOTE: When VFR flight is going to enter the control zone for landing or passing through, the pilot should contact with the control tower before passing following points;

FUTAMI in case of coming from south/

AOSHIMA or 7NM WEST in case of coming from southwest to west.

