

## RJSY / SHONAI

## AD CHART



**INTENTIONALLY LEFT BLANK**

## STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

SID

SHONAI REVERSAL THREE DEPARTURE

RWY 09 : Climb RWY HDG to 600FT, turn left HDG 285° to intercept and proceed via YSE R330 to YSE R330/8.5DME, turn left,...

RWY 27 : Climb via YSE R278 to YSE R278/7.0DME, turn right,...  
...direct to YSE VOR/DME.  
Cross YSE VOR/DME at or above 6000FT.

SHONAI REVERSAL THREE DEPARTURE

## STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

## ZUNDA ONE DEPARTURE

Basic RNP1

Note GNSS required.

VAR 8°W (2013)

ZUNDA ONE DEPARTURE

RWY09 : Climb on HDG 088° at or above 500FT, turn right direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.

RWY27 : Climb on HDG 268° at or above 900FT, turn left direct to SY900, to TADAT at or above 11000FT, to YTE, to ZUNDA at or above FL200.

NOTE RWY09 : 4.8% climb gradient required up to 5000FT.  
OBST ALT 4758FT located at 17.2NM 150°FM end of RWY09.

RWY27 : 4.4% climb gradient required up to 3500FT.  
OBST ALT 1117FT located at 3.1NM 212°FM end of RWY27.

## STANDARD DEPARTURE CHART - INSTRUMENT

RJSY / SHONAI

RNAV SID

ZUNDA ONE DEPARTURE

## RWY09

| 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              | —                   | —        | 088<br>(079.5) | -8.1               | —             | —              | +500          | —            | —              | Basic RNP1               |
| 002           | DF              | SY900               | —        | —              | -8.1               | —             | R              | —             | —            | —              | Basic RNP1               |
| 003           | TF              | TADAT               | —        | 142<br>(134.0) | -8.1               | 11.2          | —              | +11000        | —            | —              | Basic RNP1               |
| 004           | TF              | YTE                 | —        | 142<br>(134.1) | -8.1               | 10.3          | —              | —             | —            | —              | Basic RNP1               |
| 005           | TF              | ZUNDA               | —        | 169<br>(161.1) | -8.1               | 13.7          | —              | +FL200        | —            | —              | Basic RNP1               |

## RWY27

| 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              | —                   | —        | 268<br>(259.5) | -8.1               | —             | —              | +900          | —            | —              | Basic RNP1               |
| 002           | DF              | SY900               | —        | —              | -8.1               | —             | L              | —             | —            | —              | Basic RNP1               |
| 003           | TF              | TADAT               | —        | 142<br>(134.0) | -8.1               | 11.2          | —              | +11000        | —            | —              | Basic RNP1               |
| 004           | TF              | YTE                 | —        | 142<br>(134.1) | -8.1               | 10.3          | —              | —             | —            | —              | Basic RNP1               |
| 005           | TF              | ZUNDA               | —        | 169<br>(161.1) | -8.1               | 13.7          | —              | +FL200        | —            | —              | Basic RNP1               |

STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

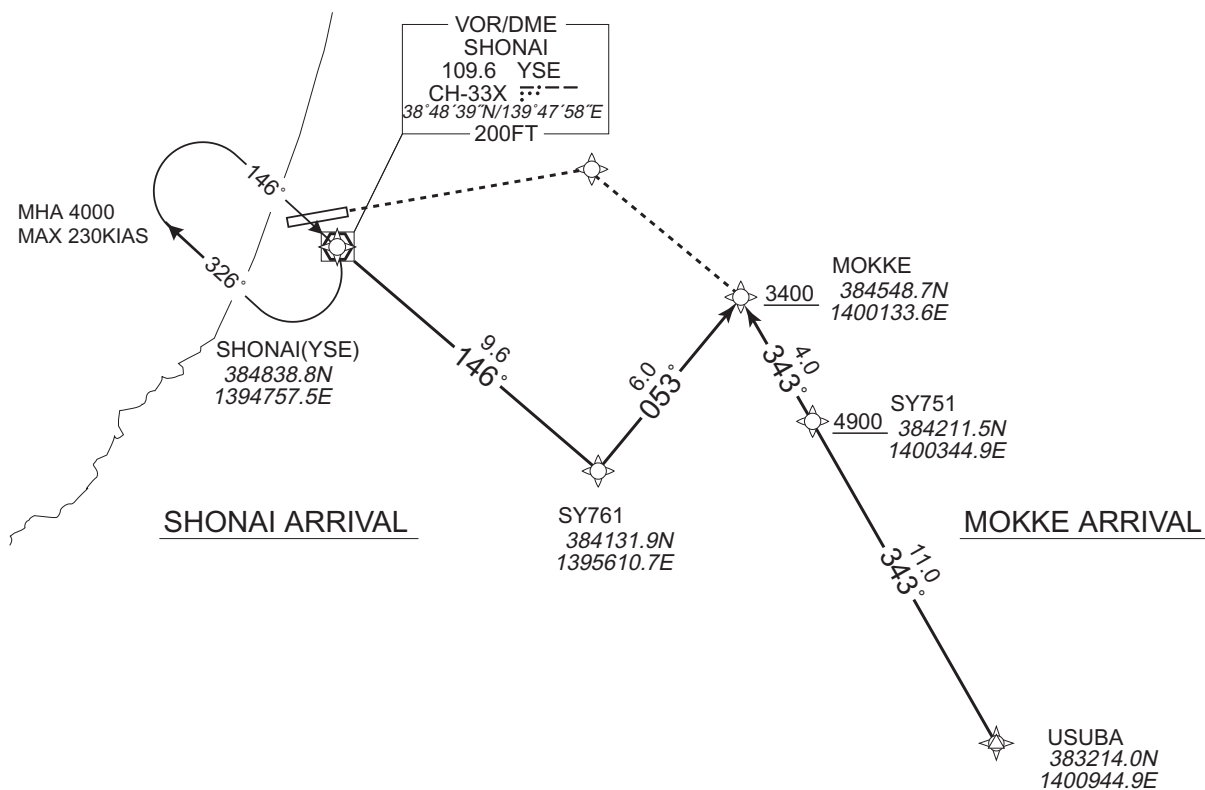
RNAV STAR RWY27

MOKKE ARRIVAL  
SHONAI ARRIVAL

Basic RNP1

Note GNSS required.

VAR 8°W (2013)



## STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY27

MOKKE ARRIVAL

From USUBA, to SY751 at or above 4900FT, to MOKKE at or above 3400FT.

| 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              | USUBA               | —        | —              | -8.1               | —             | —              | —             | —            | —              | Basic RNP1               |
| 002           | TF              | SY751               | —        | 343<br>(334.8) | -8.1               | 11.0          | —              | +4900         | —            | —              | Basic RNP1               |
| 003           | TF              | MOKKE               | —        | 343<br>(334.8) | -8.1               | 4.0           | —              | +3400         | —            | —              | Basic RNP1               |

SHONAI ARRIVAL

From YSE, to SY761, to MOKKE at or above 3400FT.

| 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              | YSE                 | —        | —              | -8.1               | —             | —              | —             | —            | —              | Basic RNP1               |
| 002           | TF              | SY761               | —        | 146<br>(137.9) | -8.1               | 9.6           | —              | —             | —            | —              | Basic RNP1               |
| 003           | TF              | MOKKE               | —        | 053<br>(044.4) | -8.1               | 6.0           | —              | +3400         | —            | —              | Basic RNP1               |

## STANDARD ARRIVAL CHART -INSTRUMENT

RJSY / SHONAI

RNAV STAR RWY09

## YURAH ARRIVAL

Basic RNP1

Note GNSS required.

VAR 8°W (2013)

YURAH ARRIVAL

From USUBA, to SY951 at or above 7600FT, to SY952 at or above 4200FT, to SY953 at or above 2700FT, to YURAH at or above 2200FT.

| 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              | USUBA               | —        | —             | -8.1               | —             | —              | —             | —            | —              | Basic RNP1               |
| 002           | TF              | SY951               | —        | 297 (288.4)   | -8.1               | 10.0          | —              | +7600         | —            | —              | Basic RNP1               |
| 003           | TF              | SY952               | —        | 296 (288.3)   | -8.1               | 15.0          | —              | +4200         | —            | —              | Basic RNP1               |
| 004           | TF              | SY953               | —        | 296 (288.1)   | -8.1               | 5.0           | —              | +2700         | —            | —              | Basic RNP1               |
| 005           | TF              | YURAH               | —        | 357 (349.3)   | -8.1               | 5.0           | —              | +2200         | —            | —              | Basic RNP1               |



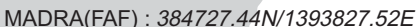
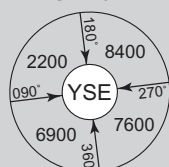
**INTENTIONALLY LEFT BLANK**

## RJSY / SHONAI

ILS Z or LOC Z RWY09

VAR 9°W (2019)

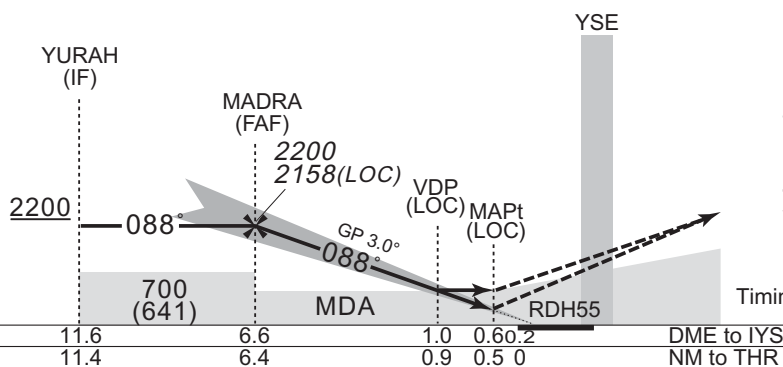
MSA 25NM



### MISSED APPROACH

Climb to 500FT on HDG088°, turn left HDG244° to intercept and proceed via YSE R289 to 4000FT, turn left, direct to YSE VOR/DME and hold. Contact SHONAI REMOTE.

Timing not authorized for defining the MAPt.



Missed APCH climb gradient MNM 5.0%

CHANGE : MINIMA.

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

## INSTRUMENT APPROACH CHART

RJSY / SHONAI

ILS Y or LOC Y RWY09



Missed APCH climb gradient MNM 5.0%

MINIMA THR elev. 59 AD elev. 72

| CAT | CAT I     |             | LOC       |             | CIRCLING  |      |
|-----|-----------|-------------|-----------|-------------|-----------|------|
|     | DA(H)     | RVR/<br>CMV | MDA(H)    | RVR/<br>CMV | MDA(H)    | VIS  |
| A   | 259 (200) | 550         | 380 (321) | 900         | 530 (458) | 1600 |
| B   |           |             |           | 1000        |           |      |
| C   |           |             |           |             |           |      |
| D   |           |             |           | 1400        | 700 (628) | 3200 |

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

Circling to NORTH side of RWY only.

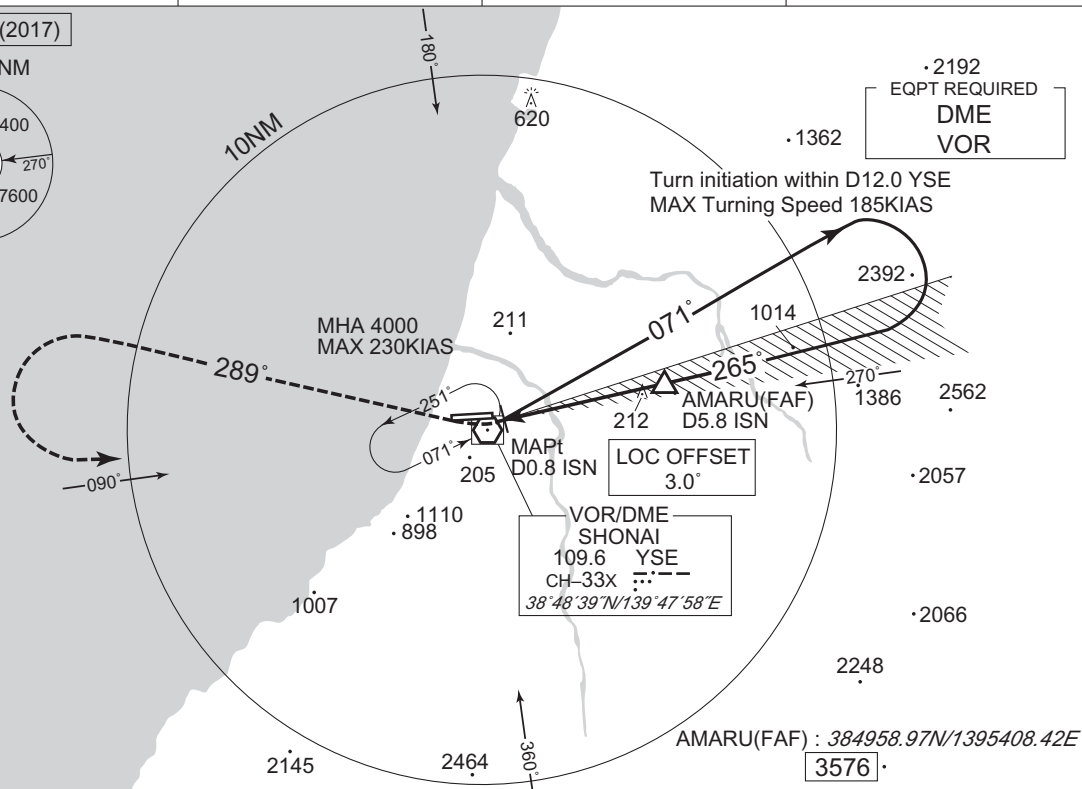
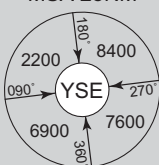
CHANGE : MINIMA.

## RJSY / SHONAI

LOC RWY27

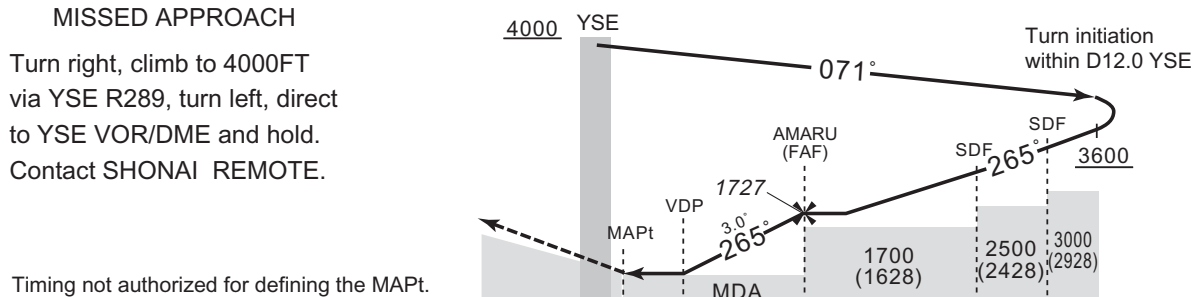
VAR 8°W (2017)

MSA 25NM



### MISSED APPROACH

Turn right, climb to 4000FT  
via YSE R289, turn left, direct  
to YSE VOR/DME and hold.  
Contact SHONAI REMOTE.



| MINIMA |           | THR elev. 86 | AD elev. 72 |      |
|--------|-----------|--------------|-------------|------|
| CAT    |           |              | CIRCLING    |      |
|        | MDA(H)    | CMV          | MDA(H)      | VIS  |
| A      | 460 (388) | 1200         | 530 (458)   | 1600 |
| B      |           | 1300         |             |      |
| C      |           | 1400         |             | 2400 |
| D      |           | 1600         | 700 (628)   | 3200 |

Circling to NORTH side of RWY only

CHANGE : MINIMA.

## INSTRUMENT APPROACH CHART

RJSY / SHONAI

VOR RWY09



CHANGE : MINIMA.

| MINIMA |           | THR elev. 59 | AD elev. 72 |      |
|--------|-----------|--------------|-------------|------|
| CAT    |           |              | CIRCLING    |      |
|        | MDA(H)    | RVR/<br>CMV  | MDA(H)      | VIS  |
| A      | 470 (411) | 900          | 530 (458)   | 1600 |
| B      |           | 1000         |             |      |
| C      |           |              |             | 2400 |
| D      |           | 1400         | 700 (628)   | 3200 |

Circling to NORTH side of RWY only

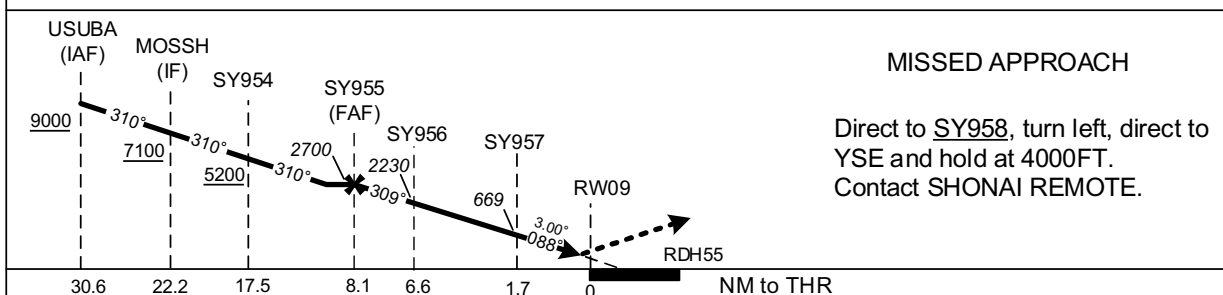
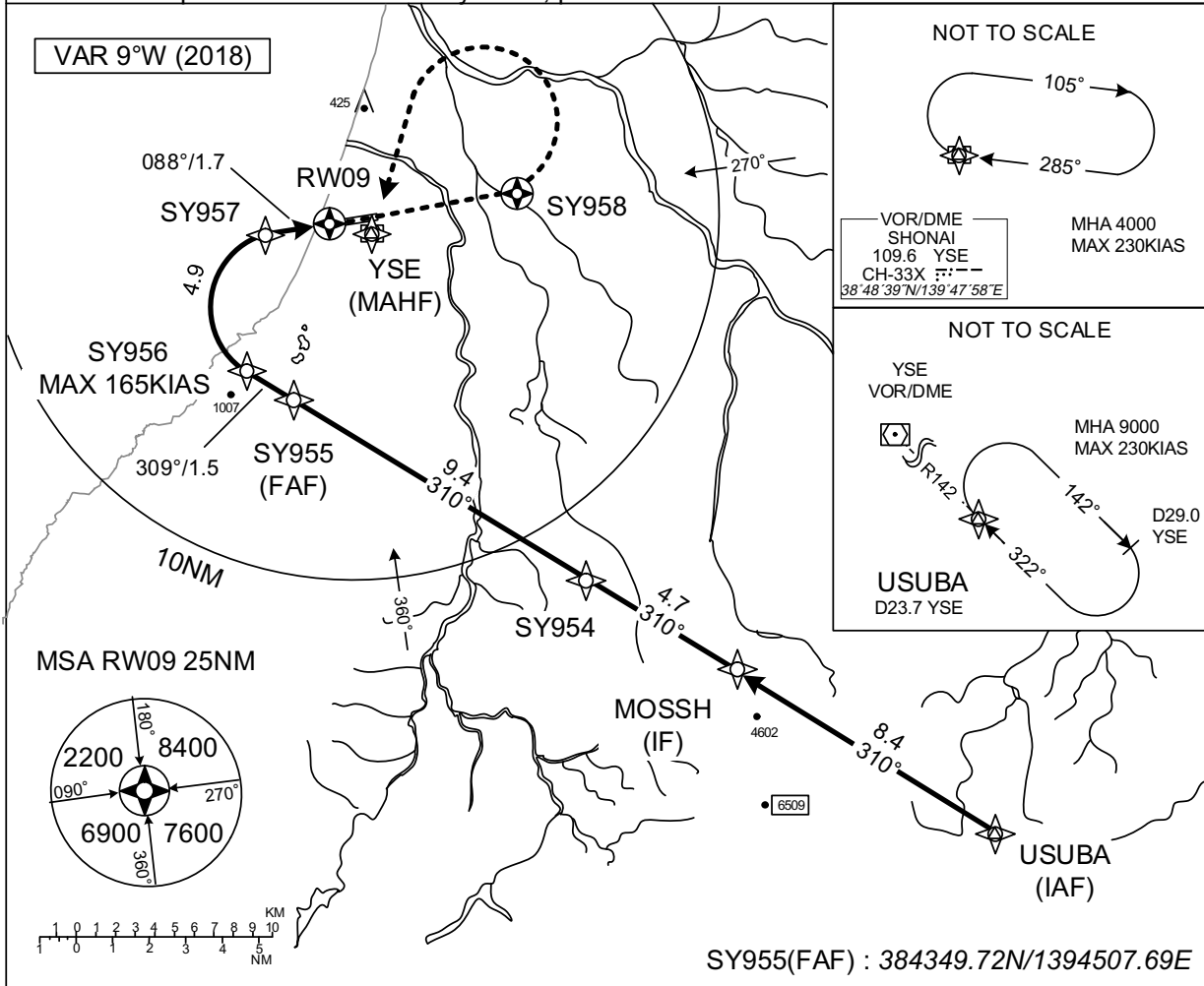
INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) RWY09

|   |                      |                                |          |
|---|----------------------|--------------------------------|----------|
| TOKYO CONTROL<br>132.3 - 300.2<br>135.9 - 230.6 | GNSS and RF required | SHONAI REMOTE<br>118.8 - 126.2 | NO RADAR |
|---|----------------------|--------------------------------|----------|

For uncompensated Baro-VNAV systems, procedure not authorized below -10°C / above 45°C



CHANGE : New PROC

|                                     |              |         |             |         |
|-------------------------------------|--------------|---------|-------------|---------|
| Missed APCH climb gradient MNM 5.0% |              |         |             |         |
| CAT                                 | THR elev. 59 |         | AD elev. 72 |         |
|                                     | RNP 0.10     |         | RNP 0.30    |         |
|                                     | DA(H)        | RVR/CMV | DA(H)       | RVR/CMV |
| A                                   | —            | —       | —           | —       |
| B                                   | —            | —       | —           | —       |
| C                                   | 372 (313)    | 1000    | 424 (365)   | 1000    |
| D                                   | 372 (313)    | 1400    | 424 (365)   | 1400    |

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

**RNP AR**  
Special Authorization Required

## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) RWY09

RNAV(RNP) RWY09Coding 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                               | USUBA               | -        | -              | -8.5               | -             | -              | +9000         | -            | -               | -          |
| 002           | TF                               | MOSSH               | -        | 310<br>(301.2) | -8.5               | 8.4           | -              | +7100         | -            | -               | 1.0        |
| 003           | TF                               | SY954               | -        | 310<br>(301.1) | -8.5               | 4.7           | -              | +5200         | -            | -               | 1.0        |
| 004           | TF                               | SY955               | -        | 310<br>(301.1) | -8.5               | 9.4           | -              | 2700          | -            | -               | 1.0        |
| 005           | TF                               | SY956               | -        | 309<br>(301.0) | -8.5               | 1.5           | -              | 2230          | -165         | -3.00           | 0.1<br>0.3 |
| 006           | RF<br>Center:<br>SYRF1<br>r=2.03 | SY957               | -        | -              | -8.5               | 4.9           | R              | 669           | -            | -3.00           | 0.1<br>0.3 |
| 007           | TF                               | RW09                | Y        | 088<br>(079.4) | -8.5               | 1.7           | -              | 114           | -            | -3.00/55        | 0.1<br>0.3 |
| 008           | DF                               | SY958               | Y        | -              | -8.5               | -             | -              | -             | -            | -               | 1.0        |
| 009           | DF                               | YSE                 | -        | -              | -8.5               | -             | L              | 4000          | -            | -               | 1.0        |

Waypoint Coordinates

| Waypoint Identifier | Coordinates              | RF Arc Center Identifier | Coordinates              |
|---------------------|--------------------------|--------------------------|--------------------------|
| USUBA               | 383214.02N / 1400944.88E | SYRF1                    | 384619.71N / 1394450.17E |
| MOSSH               | 383634.00N / 1400035.10E |                          |                          |
| SY954               | 383858.43N / 1395528.53E |                          |                          |
| SY955               | 384349.72N / 1394507.69E |                          |                          |
| SY956               | 384435.19N / 1394330.47E |                          |                          |
| SY957               | 384819.37N / 1394421.61E |                          |                          |
| RW09                | 384838.58N / 1394633.12E |                          |                          |
| SY958               | 384943.40N / 1395359.19E |                          |                          |
| YSE                 | 384838.81N / 1394757.51E |                          |                          |

CHANGE : Correction of misdescription (9Y957 → SY957)

## RJSY / SHONAI

RNAV(GNSS) Z RWY27





## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) Y RWY27



CHANGE : Correction of misdescription (Notes on plan view)

## INSTRUMENT APPROACH CHART

RJSY / SHONAI

RNAV(RNP) Y RWY27

RNAV(RNP) Y RWY27Coding 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                               | USUBA               | -        | -              | -8.5               | -             | -              | +9000         | -            | -              | -            |
| 002           | TF                               | ANNON               | -        | 333<br>(324.8) | -8.5               | 6.8           | -              | +5400         | -            | -              | 1.0          |
| 003           | TF                               | SY754               | -        | 333<br>(324.7) | -8.5               | 6.1           | -              | +4200         | -            | -              | 1.0          |
| 004           | TF                               | SY755               | -        | 333<br>(324.7) | -8.5               | 5.9           | -              | 2400          | -            | -              | 1.0          |
| 005           | TF                               | SY756               | -        | 333<br>(324.6) | -8.5               | 1.4           | -              | 1967          | -165         | -3.00          | 0.12<br>0.30 |
| 006           | RF<br>Center:<br>SYRF2<br>r=2.01 | SY757               | -        | -              | -8.5               | 2.3           | L              | 1240          | -            | -3.00          | 0.12<br>0.30 |
| 007           | TF                               | RW27                | Y        | 268<br>(259.5) | -8.5               | 3.5           | -              | 136           | -            | -3.00/50       | 0.12<br>0.30 |
| 008           | TF                               | SY758               | -        | 268<br>(259.4) | -8.5               | 0.6           | -              | -             | -            | -              | 0.12<br>0.30 |
| 009           | CF                               | SY753               | Y        | 268<br>(259.4) | -8.5               | 2.4           | -              | -             | -            | -              | 1.0          |
| 010           | DF                               | YSE                 | -        | -              | -8.5               | -             | R              | 4000          | -            | -              | 1.0          |

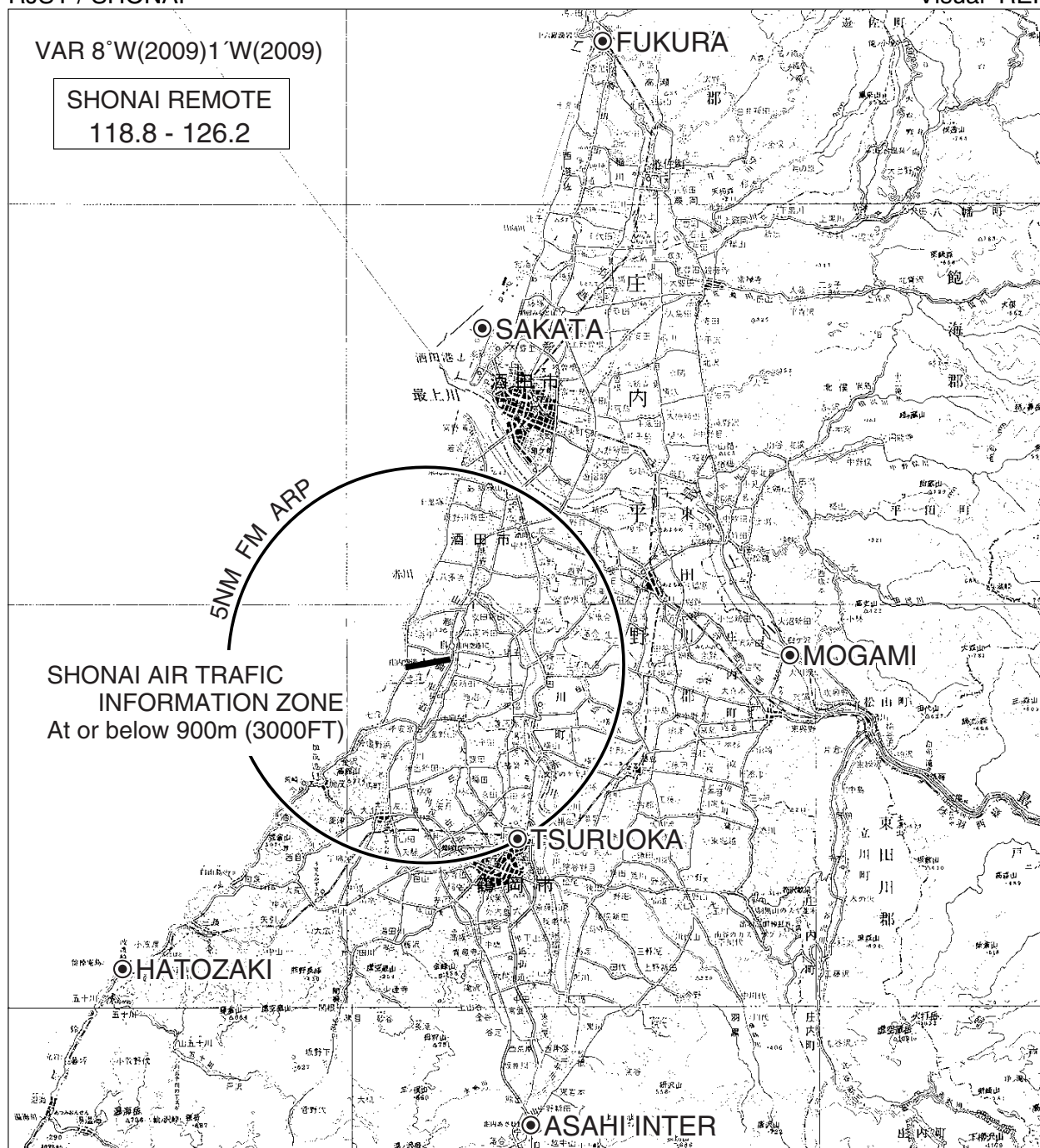
Waypoint Coordinates

| Waypoint Identifier | Coordinates              | RF Arc Center Identifier | Coordinates              |
|---------------------|--------------------------|--------------------------|--------------------------|
| USUBA               | 383214.02N / 1400944.88E | SYRF2                    | 384729.55N / 1395244.67E |
| ANNON               | 383745.37N / 1400445.25E |                          |                          |
| SY754               | 384245.22N / 1400013.26E |                          |                          |
| SY755               | 384733.27N / 1395551.21E |                          |                          |
| SY756               | 384839.83N / 1395450.54E |                          |                          |
| SY757               | 384928.52N / 1395216.49E |                          |                          |
| RW27                | 384850.46N / 1394754.61E |                          |                          |
| SY758               | 384843.80N / 1394708.93E |                          |                          |
| SY753               | 384817.41N / 1394408.18E |                          |                          |
| YSE                 | 384838.81N / 1394757.51E |                          |                          |

CHANGE : New PROC

RJSY / SHONAI

Visual REP



| Call sign              | BRG / DIST from ARP | Remarks                             |
|------------------------|---------------------|-------------------------------------|
| 吹 浦<br>Fukura          | 023°T / 16.1NM      | 吹浦港<br>Harbor                       |
| 酒 田<br>Sakata          | 015°T / 8.0NM       | 酒田港<br>Harbor                       |
| 最 上<br>Mogami          | 097°T / 9.0NM       | 最上川橋<br>Bridge                      |
| 鶴 岡<br>Tsuruoka        | 161°T / 4.9NM       | JR駅<br>Station                      |
| 波 渡 崎<br>Hatozaki      | 233°T / 10.6NM      | 岬<br>Cape                           |
| あさひインター<br>Asahi Inter | 167°T / 11.9NM      | 山形自動車道 庄内あさひインターチェンジ<br>Interchange |

RJSY / SHONAI

LDG CHART



RJSY / SHONAI

Minimum Vectoring Altitude CHART

