



## WR90 Waveguide Circulator 8-12.4GHz 250W



- High power handle capability up to 250W
- Wide band operation
- High isolation within operational band
- Low Insertion loss
- Low temperature coefficient ferrite material offer stable performance over temperature
- Aerospace and military application
- LMDS multi-carrier operation
- High peak to average handle capability
- All specifications can be modified upon request

| Parameter               | Min                                                      | Type | Max  | Units    |
|-------------------------|----------------------------------------------------------|------|------|----------|
| Frequency Range         | 8-12.4                                                   |      |      | GHz      |
| Insertion Loss          | 0.20                                                     | 0.25 | 0.30 | dB       |
| Isolation (Note 1)      | 20                                                       | 21   | 22   | dB       |
| VSWR                    | 1.10                                                     | 1.15 | 1.18 | :1       |
| Forward Power (CW)      |                                                          |      | 250  | W        |
| Rotation                | Clockwise (Standard)<br>Counter Clockwise (upon request) |      |      |          |
| Input /Output Connector | COVER flat 4 holes                                       |      |      |          |
| Finishing               | oxidation by color                                       |      |      |          |
| Case Material           | Aluminum alloy                                           |      |      |          |
| Operational Temp.       | -10                                                      |      | 55   | °C       |
| Storage Temp.           | -50                                                      |      | 125  | °C       |
| Altitude                | 15000                                                    |      | TBD  | ft.      |
| Weight                  | 200                                                      |      |      | g        |
| Impedance               |                                                          |      |      | $\Omega$ |
| Vibration               | 10g 15 degree 2KHz                                       |      |      | RMS      |
| Humidity                | 100% RH at 35c, 95%RH at 40°C                            |      |      |          |
| Shock                   | 20G for 11msc.                                           |      |      |          |

Note 1: Unit has narrow frequency bandwidth can achieve higher isolation & low insertion loss

Bandwidth (5 ~10) % x Center Frequency (Isolation >25dB)

Bandwidth (20~30) % x Center Frequency (Isolation >23dB)

Bandwidth (40~60) % x Center Frequency (Isolation >21dB)

Ask manufacture for detail

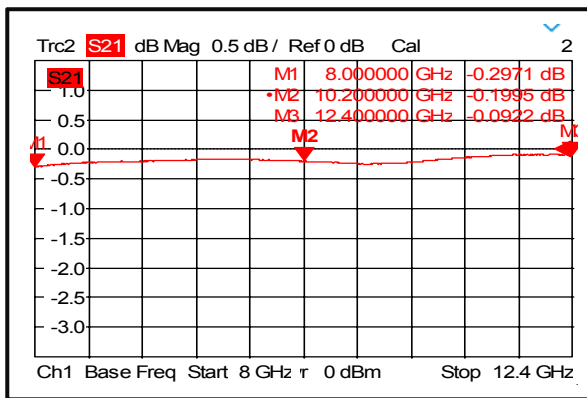


## Environment specifications

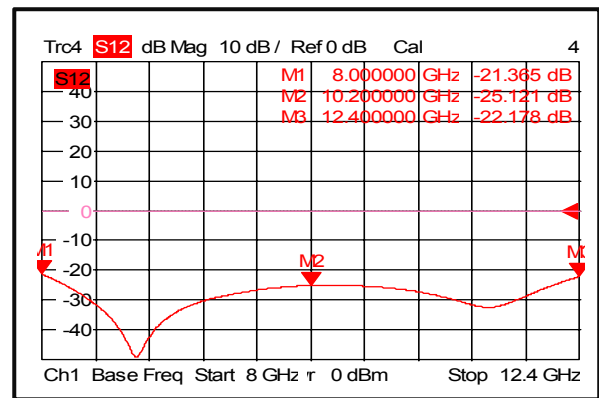
|                              |                                                                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Operational Temperature (C°) | -10 ~ +55                                                                                                                         |
| Storage Temperature (C°)     | -50~ +125                                                                                                                         |
| Altitude                     | 30,000 ft. (Epoxy Seal Controlled environment)<br>60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) ( Optional ) |
| Vibration                    | 25g rms (15 degree 2KHz) endurance, 1 hour per axis                                                                               |
| Humidity                     | 100% RH at 35c, 95%RH at 40 deg c                                                                                                 |
| Shock                        | 20G for 11msc half sin wave,3 axis both directions                                                                                |

## performance plots

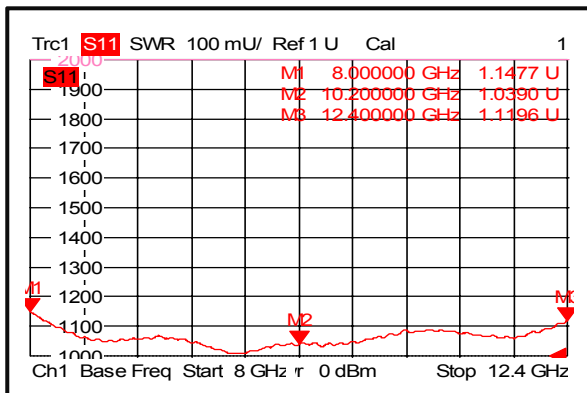
### Insertion Loss



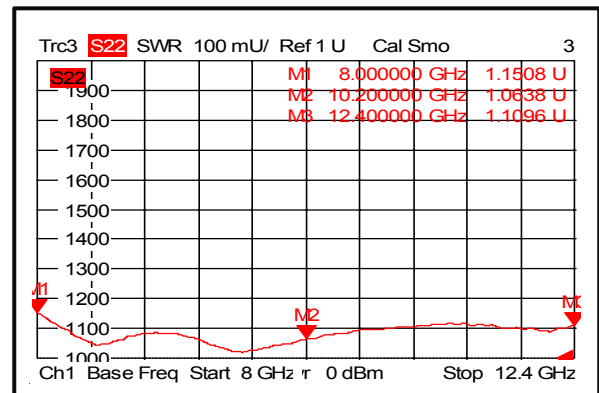
### Isolation



### VSWR 1



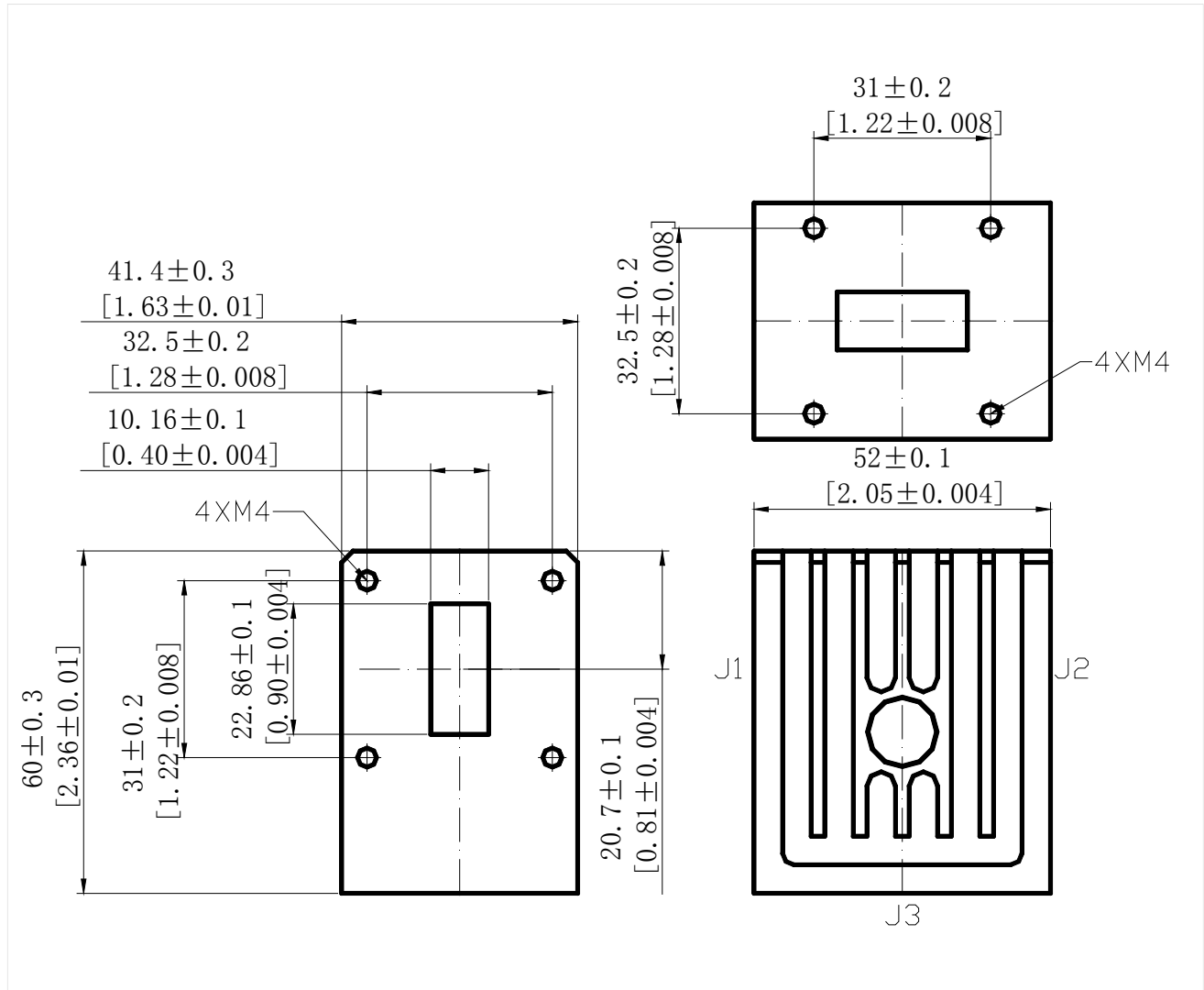
### VSWR2





## Outline Drawing:

All Dimensions in mm (inches)



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