



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RMX140G220GA

Millimeter-Wave Harmonic Mixer 140 - 220GHz

Features

- Broadband, up to 325GHz
- Fundamental and harmonic mixer
- High dynamic range, low noise figure
- Customization available upon request



Electrical Specifications, $T_A=25^\circ\text{C}$

| Parameters | Min. | Typ. | Max. | Units |
|-------------------------------------|---------------------------------|------|------|-------|
| RF Input Frequency | 140 | | 220 | GHz |
| IF Output Frequency | 17.5 | | 27.5 | MHz |
| Conversion Loss | | | 36 | dB |
| Input 1dB Compression (P_{1dB}) | | 5 | | dBm |
| In-Band Spurious Rejection | | -50 | | dBc |
| Harmonic Number | | 7 | | |
| LO Power | 7 | | 12 | dBm |
| Conversion Response | | / | | dB |
| Bias Voltage | | | +5 | V |
| RF / LO/ IF Connectors | WR-05/2.4mm-Female/3.5mm-Female | | | |

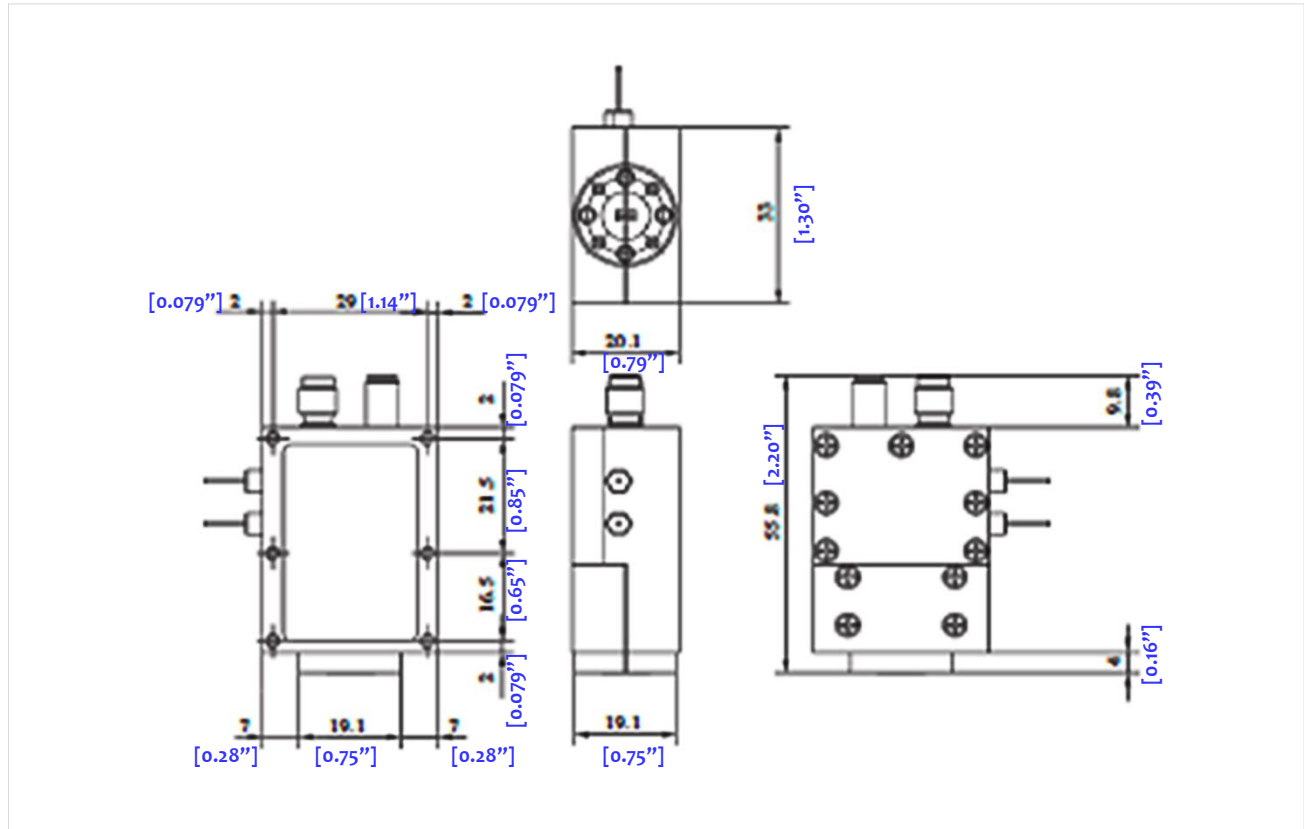
Environmental Specifications and Test Standards

| Parameter | Standard | Description |
|----------------------------------|---------------|--|
| Operational Temperature | MIL-STD-39016 | -40°C~+85°C |
| Storage Temperature | | -55°C~+125°C |
| Thermal Shock | | 1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles) |
| Random Vibration | | Acceleration Spectral Density 6 (m/s) Total 92.6 RMS |
| Electrical & Temperature Burn In | | Temperature +85°C for 72 Hours |
| Shock | | 1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight ≤20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction). |
| Altitude | | Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min) |
| Hermetically Sealed (Optional) | MIL-STD-883 | MIL-STD-883 (For Hermetically Sealed Units) |

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Outline Drawing:

All Dimensions in mm [inches]



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