

Mixer (Down-Converting) 140 - 220GHz

Features

- Ultra Wide Band Mixer
- High Dynamic Range

Typical Applications

- Research and Development
- Test and Measurement
- Wireless Infrastructure

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

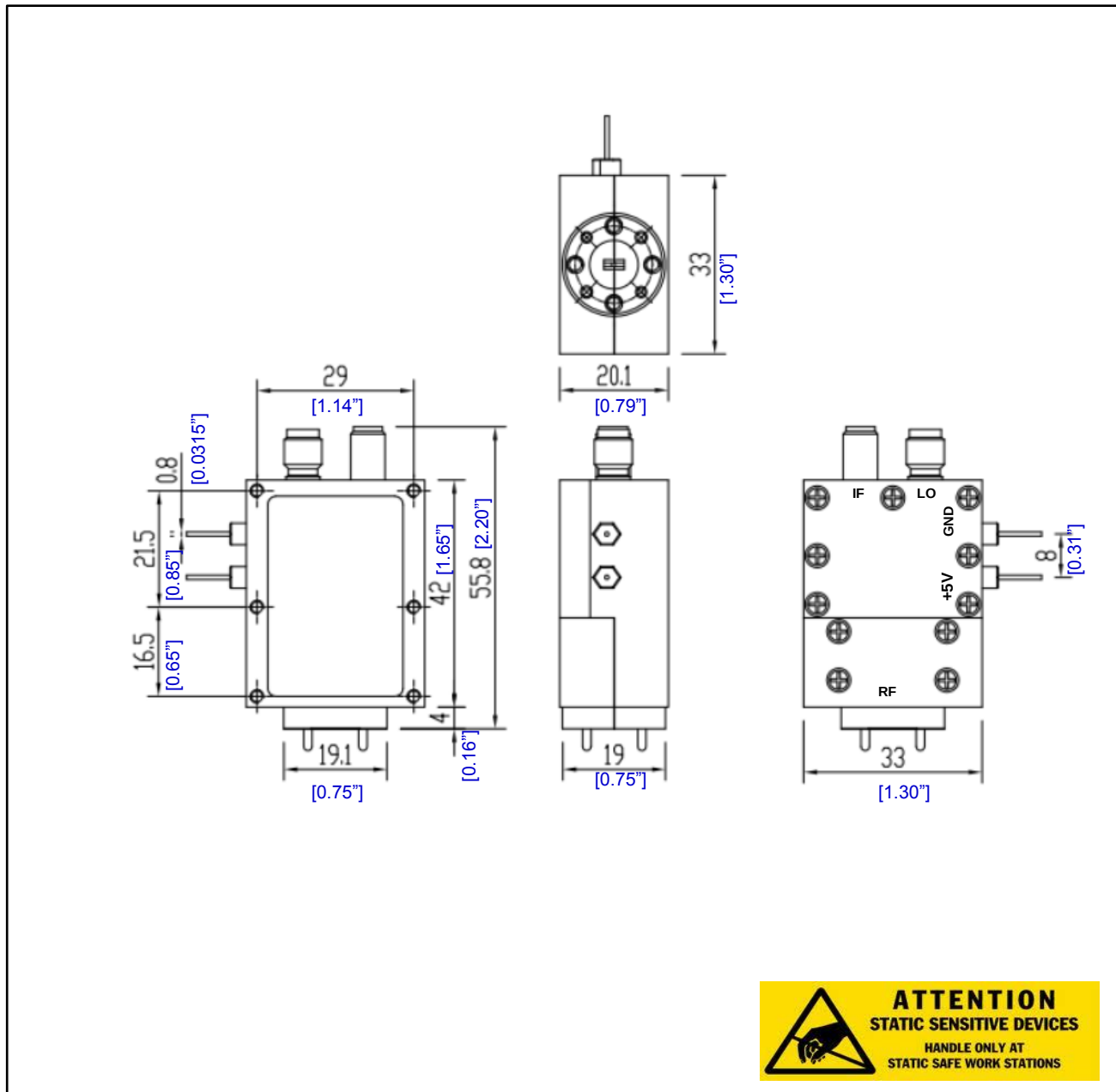
Parameters	Min.	Typ.	Max.	Units
RF Input Frequency	140		220	GHz
IF Output Frequency	DC		1	GHz
LO Power	8		12	dBm
Conversion Gain		-40		dB
Input 1dB Compression Point (P1dB)		-5		dBm
In-Band Spurious rejection		-50		dBc
Harmonic Number		7		
Voltage		+5		V
Current		180		mA
RF / LO/IF Connectors	WR-05/2.4mm-Female/3.5mm-Female			
Frequency Relationship (N is dividing ratio)	$(\text{RF} \pm \text{IF})/\text{N} = \text{LO}$			

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C~+70°C (Case Temperature)
Storage Temperature	-55°C~+85°C
Thermal Shock	-20°C → +70°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High 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 (For Hermetically Sealed Units)

Outline Drawing:

All Dimensions in mm [inches]



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