

E-Band IQ-Fundamental mixer

RF:60-90 GHz/LO:60-90 GHz/IF:DC-20 GHz

Model: TMIQ-060090-20-12

TMIQ-060090-20-12 is a fundamental IQ mixer in the 60-90 GHz frequency band suitable for E-band point-to-point communication, instrumentation, sensing, security and high resolution imaging applications. The mixer has high image rejection, low input/output return loss and flat conversion response

Features:

- RF/LO coverage : 60-90 GHz
- IF operation : DC-20 GHz
- LO power: 16dBm Min.
- Conversion loss: 12dB

Applications:

- Single Sideband and Image Rejection Mixing
- IQ Modulation / Demodulation
- Vector Amplitude Modulation
- Band Shifting

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	60		90	GHz
LO Frequency	60		90	GHz
IF Frequency	DC		20	GHz
LO-Input power	16			dBm
Conversion Loss		12		dB
Image Rejection		30		dBc

Mechanical Specifications:

Parameter	Value	Units
RF Connector	WR-12/UG-387/U	
LO Connector	WR-12/UG-387/U	
IF Connector	2.92mm Female	
Size	TBD	mm
Weight	TBD	g
Material	Cu	

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	30 dBm
IF Input Powe	30 dBm
LO Input Powe	30 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TMIQ-060090-20-12	E-Band IQ-Subharmonic Mixer RF:60-90GHz,LO:60-90GHz,IF:DC-20GHz	Rev.1.1