泰莱微波 Talent Microwave

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IQ Mixer

RF:60-90GHz/LO:60-90GHz/IF:DC-20GHz Model: TMIQ-060090-20-12

TMIQ-060090-20-12 is an ultra-broadband IQ mixer spanning 60 to 90 GHz on the RF and LO ports with an IF from DC to 18 GHz. Up to 30 dBc of image rejection is available due to the excellent phase and amplitude balance of its on-chip LO quadrature hybrid. The IQ mixer offers a conversion loss of 12 dB typical and LO input power of 16 dBm minimum. The IF port configuration is a female 2.92mm connector and the RF and LO port are WR-12 waveguide with a UG-387/U-M anti-cocking flange.The X6 multiplier of Talent model TMAM-057095-0616-12-E or TMAM-060090-0616-12 can be used as the LO driver for this mixer.

Features:

- RF/LO coverage： 60-90 GHz
- IF operation： DC-20 GHz
- Conversion loss: 12dB Typ
- LO input power : 16dBm Min
- Image Rejection : 30dBc Typ
- Suggested LO drive model: TMAM-057095-0616-12-E or TMAM-060090-0616-12

Applications:

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

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	60		90	GHz
LO频率 LO Frequency	60		90	GHz
LO驱动功率 LO-Input power	16			dBm
IF频率 IF Frequency	DC		20	GHz
变频损耗 Conversion Loss		12		dB
镜频抑制 Image Rejection		30		dBc

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
RF接口 RF Connector	WR-12/UG-387/U	
LO接口 LO Connector	WR-12/UG-387/U	
IF接口 IF Connector	2.92mm Female	
尺寸 Size	TBD	mm

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绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
所有接口输入功率 Power Handling,at any Port	+30 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	℃
存储温度 Non-operating Temperature	-55		+100	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TMIQ-060090-20-12	Image Rejection or I/Q Mixer RF:60-90GHz,LO:60-90GHz,IF:DC-20GHz	Rev.1.0