

U-band,Active Tx/Rx Converter

WR-19/40-60GHz/-10dB Conversion Loss

Model: TLAMCM-040060-0820-19-L

TLAMCM-040060-0820-19-L is an up and down fundamental mixer integrated with x8 active frequency multiplier chain. The converter has an input LO frequency of 5 to 7.5 GHz with a typical input power of 0 dBm. RF frequency can range from 40 to 60 GHz with WR-19 waveguides and UG-383/U-M antcocking flanges and IF port can range from DC to 20GHz with 2.92mm connector.

Features:

- RF Frequency: 40-60GHz
- LO Frequency: 5-7.5GHz
- IF Frequency: DC-20GHz
- Low Conversion Loss

Applications:

- Test Equipment
- Radar System
- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	40		60	GHz
8XLO Frequency	5		7.5	GHz
LO Frequency	40		60	GHz
IF Frequency	DC		20	GHz
LO-Input power		0		dBm
LO Multiplier factor		8		
IF Input P1dB		2		dBm
RF Input P1dB		4		dBm
Conversion Loss(IF=100MHz)		-10		dB
Conversion Loss(LO=5GHz)		-11		dB
DC Supply Voltage		5		V DC
DC Supply Current		390		mA

Mechanical Specifications:

Parameter	Value	Units
RF Connector	WR-19/UG-383/U	
LO Connector	SMA Female	
IF Connector	2.92mm Female	
Size	70*30*30	mm

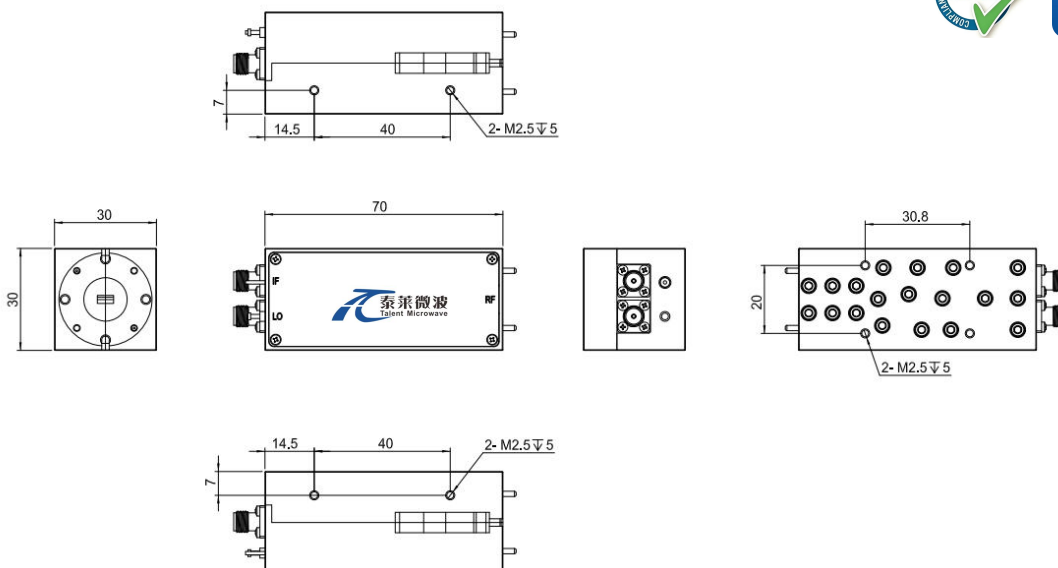
Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+25 dBm
LO Input Power	+7 dBm
IF Input Power	+25 dBm
DC Supply Voltage	+15 V
ESD sensitivity (HBM)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

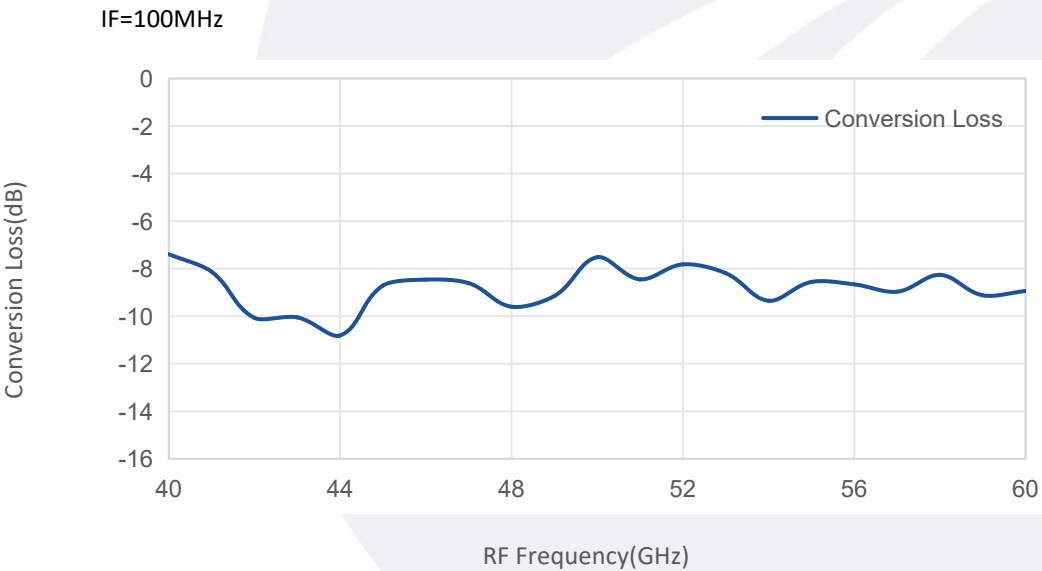
Parameter	Min	Typ	Max	Units
Operating Temperature	0		+50	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLAMCM-040060-0820-19-L	U-band Active Tx/Rx Converter, Conversion Loss:-10dB,WR-19/UG-383/U	Rev.1.1

Typical Performance Data:

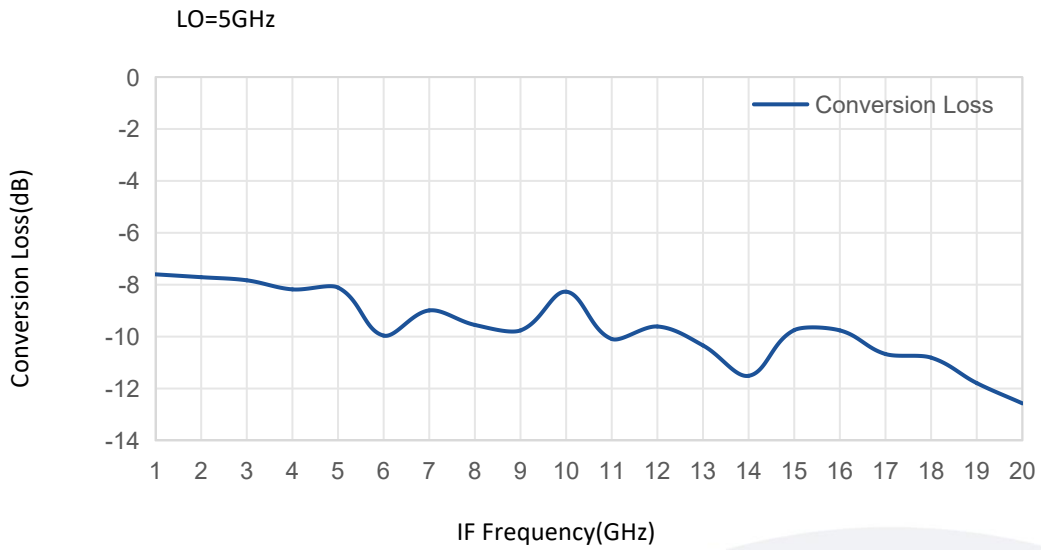
Conversion Loss vs RF Frequency



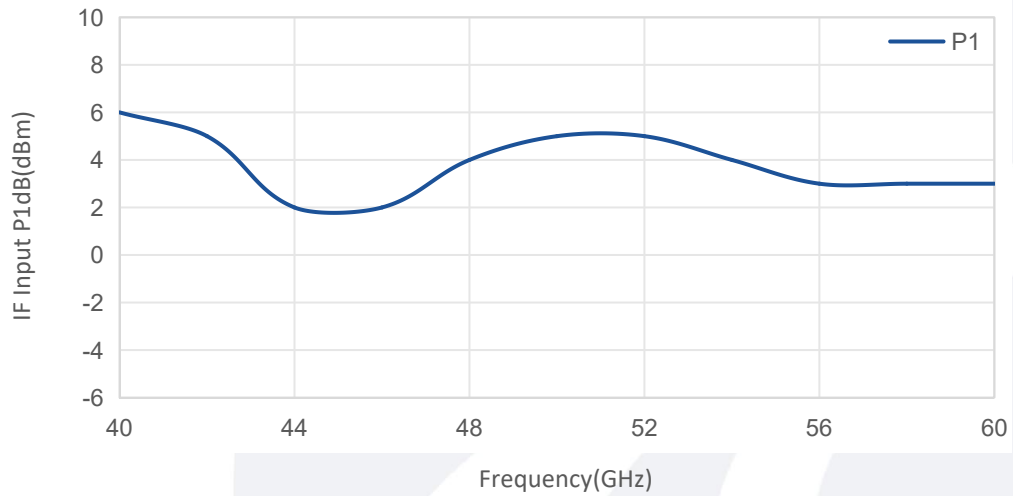
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Conversion Loss vs IF Frequency

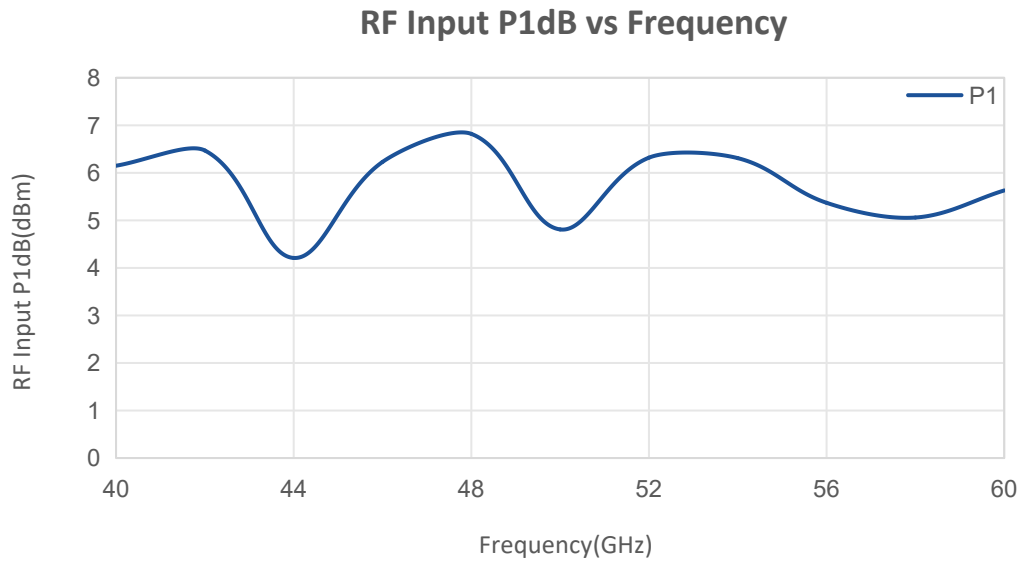


IF Input P1dB vs Frequency



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