

U-Band Dual Balance Mixer

RF:40-60 GHz/LO:40-60 GHz/IF:DC-20 GHz

Model: TLBM-040060-20-19

TLBM-040060-20-19 is a dual balance mixer. The mixer covers the LO and RF frequency from 40 to 60 GHz with an extremely broad IF output from DC to 20 GHz. The mixer offers a conversion loss of 9 dB typical @IF=1GHz and LO input power of 15 dBm typical.

Features:

- RF/LO coverage : 40-60 GHz
- IF operation : DC-20 GHz
- Conversion loss: 9 dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	40		60	GHz
LO Frequency	40		60	GHz
LO-Input power	12	15	18	dBm
IF Frequency	DC		20	GHz
RF Input P1dB		9		dBm
Conversion Loss@IF=1GHz		9		dB
Conversion Loss@LO=40GHz		10		dB

Mechanical Specifications:

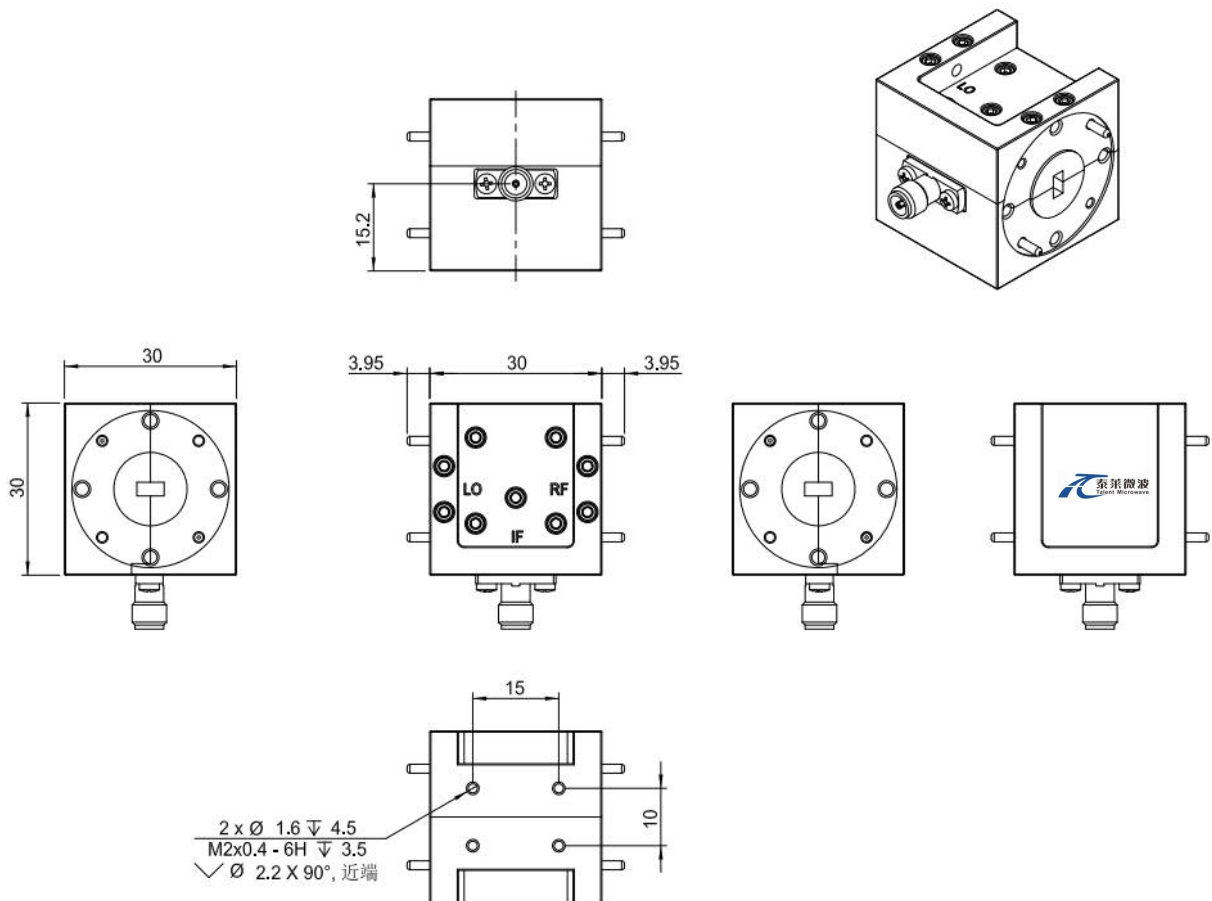
Parameter	Value	Units
RF Connector	WR-19/UG-383/U	
LO Connector	WR-19/UG-383/U	
IF Connector	2.92mm Female	
Size	30*30*30	mm

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+27 dBm
IF Input Power	+27 dBm
LO Input Power	+27 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

Environmental Conditions:

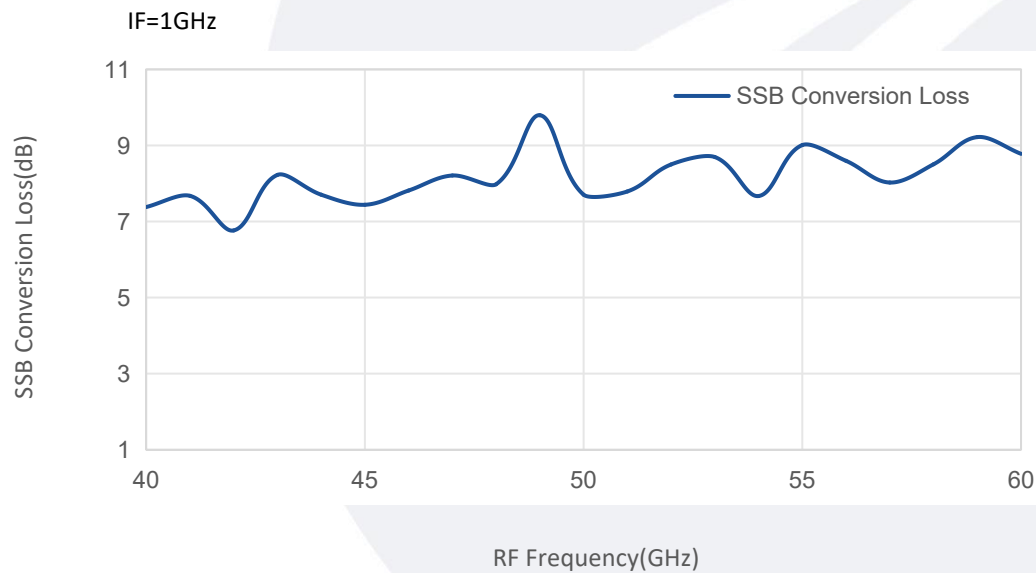
Parameter	Min	Typ	Max	Units
Operating Temperature	-25		+50	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-040060-20-19	U-Band Dual Balanced Mixer RF:40-60GHz,LO:40-60GHz,IF:DC-20GHz	Rev.1.1

Typical Performance Data:

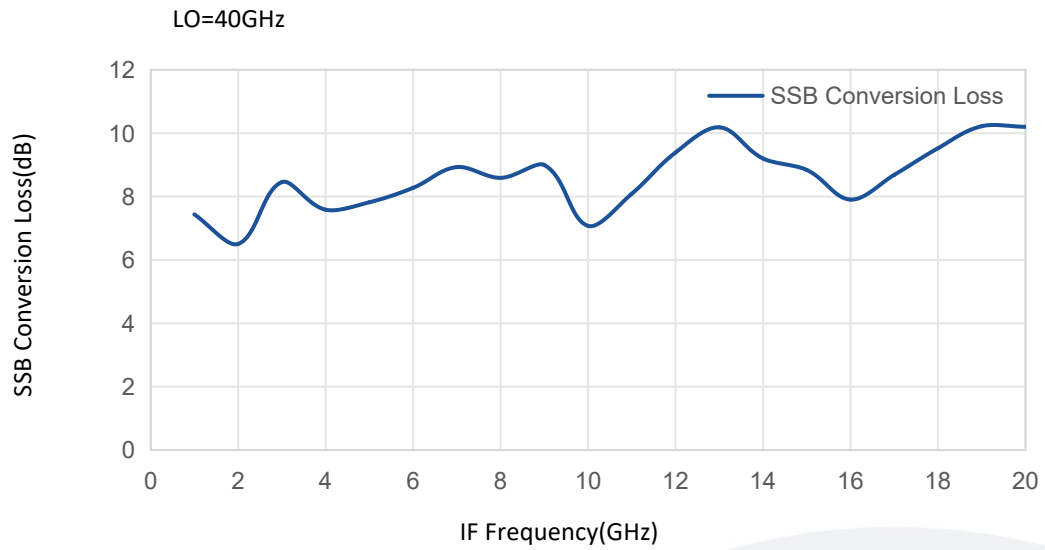
SSB Conversion Loss vs RF Frequency



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:

SSB Conversion Loss vs IF Frequency



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