

Passive Frequency Multiplier

1.0mm/X2/40-120GHz/0dBm Output Power

Model: TLPM-040120-0200-1.0

TLPM-040120-0200-1.0 is a X2 passive multiplier that generates second order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 20 to 60 GHz at +13 dBm RF power to yield typical 0 dBm output power at 40 to 120 GHz. The input port configuration is 1.85mm connector and the output port is 1.0mm connector.

Features:

- Output Frequency: 40-120GHz
- Output Power: 0dBm Typ
- Low power consumption
- 50 Ohm Matched Input / Output

Applications:

- Frequency Extenders
- Source Modules

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Output Frequency	40		120	GHz
Input Frequency	20		60	GHz
Input Power	11	13	16	dBm
Conversion Loss		12	15	dB
Multiply Factor		2		
1st Harmonic Suppression		-30		dBc
3rd Harmonic Suppression		-40		dBc
4th Harmonic Suppression		-15		dBc
1st Harmonic Isolation		-40		dBc
3rd Harmonic Isolation		-50		dBc
4th Harmonic Isolation		-20		dBc

The value of harmonic isolation is compared to input power and harmonic suppression is compared to output power.

Mechanical Specifications:

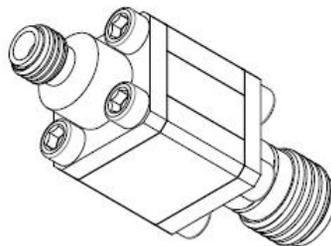
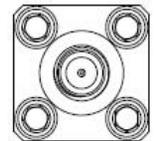
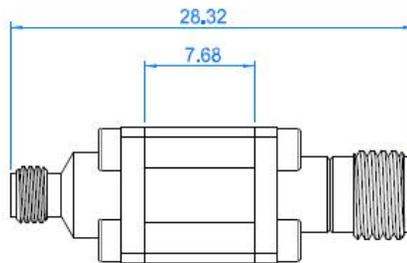
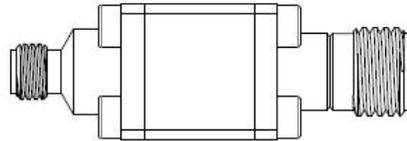
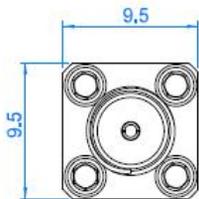
Parameter	Value	Units
Output Connector	1.0mm Female	
Input Connector	1.85mm Female	
Size	28.32*9.5*9.5	mm

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+25 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	-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
TLPM-040120-0200-1.0	Passive Frequency Doubler X2,40-120GHz, 0dBm Output Power,1.0mm Female	Rev.1.1