

Coax Directional Coupler

40-110GHz/8dB Coupling/1.0mm Female

Model: TC-4001100-6-1.0

TC-4001100-6-1.0 is a coax directional coupler that delivers a 8 dB nominal coupling level and 15 dB typical directivity across the full frequency range from 40 to 110GHz.. It is a four-port passive device that can couple a portion of the power from the main transmission line to the auxiliary line in a directional manner.

Features:

- Output Frequency: 40-110GHz
- Coupling: 8dB Typ
- Stackable mechanical design
- Low Insertion Loss
- Moderate Directivity
- 50 Ohm Matched Input / Output

Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

Electrical Characteristics:

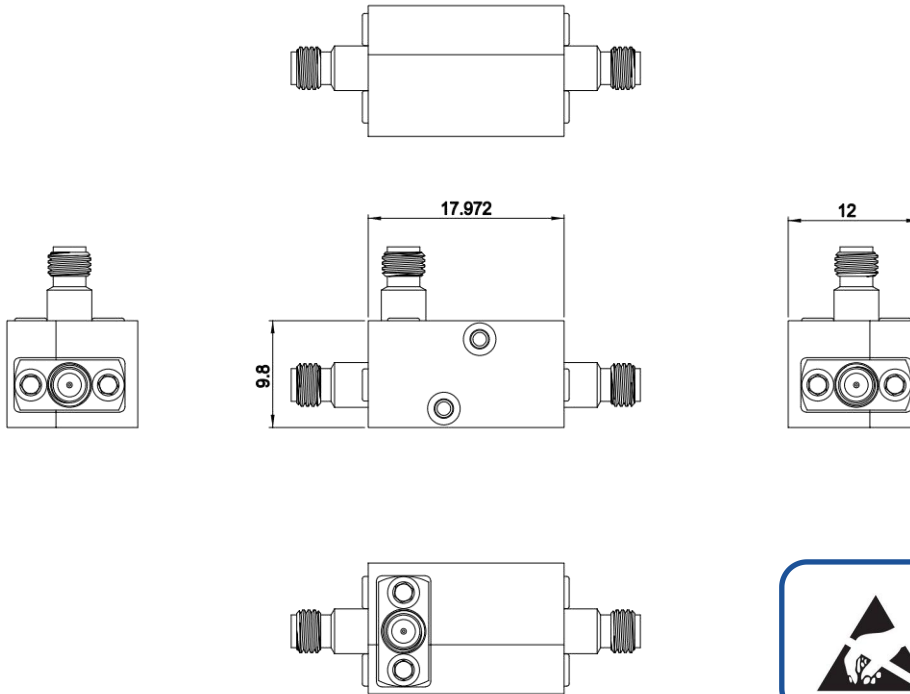
Parameter	Min	Typ	Max	Units
Frequency Range	40		110	GHz
Insertion Loss		3.5		dB
Coupling	7	8	11	dB
Isolation		25		dB
Directivity		15		dB
Return Loss			-10	dB
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input/Output Connector	1.0mm Female/1.0mm Female	
Coupling Connector	1.0mm Female	
Csae Material	Aluminum	
Finish	Conductive Coating, Natural Finish	
Size	9.8*18*12	mm

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

Environmental Conditions:

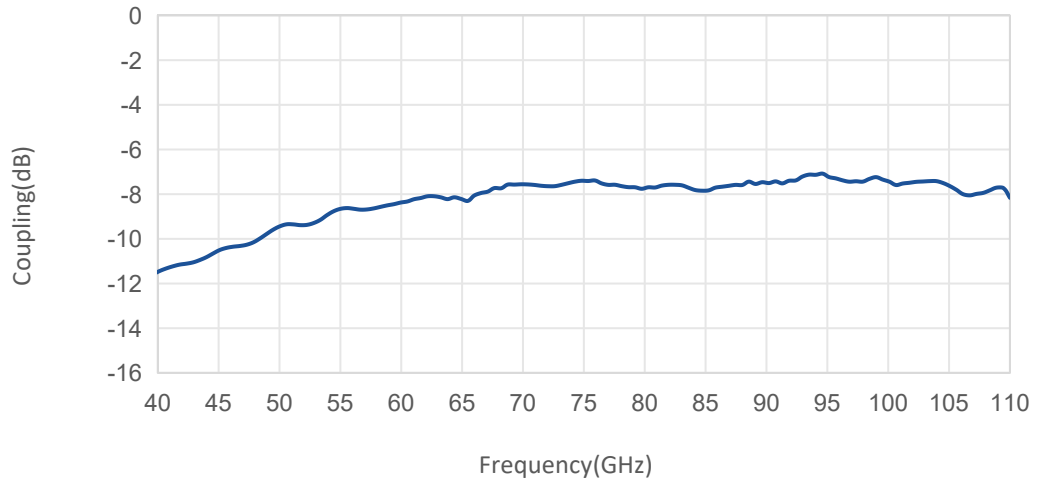
Parameter	Min	Typ	Max	Units
Operating Temperature	-20		+55	°C
Non-operating Temperature	-20		+55	°C
Relative humidity	100% RH at 35c, 95%RH at 40°C			%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

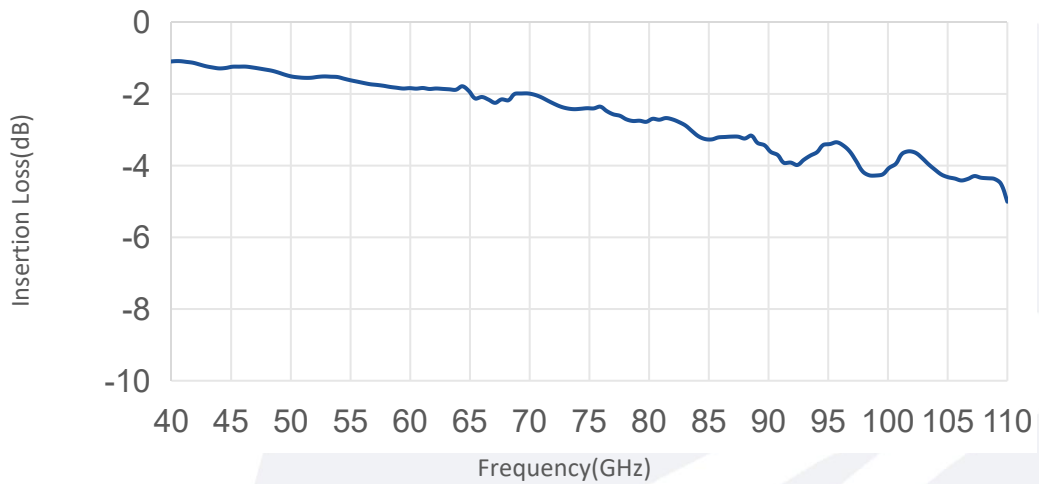
Base Number	Description	Revision
TC-4001100-6-1.0	Coax Directional Coupler 40-110GHz, Coupling:8dB, 1.0mm Female	Rev.1.0

Typical Performance Data:

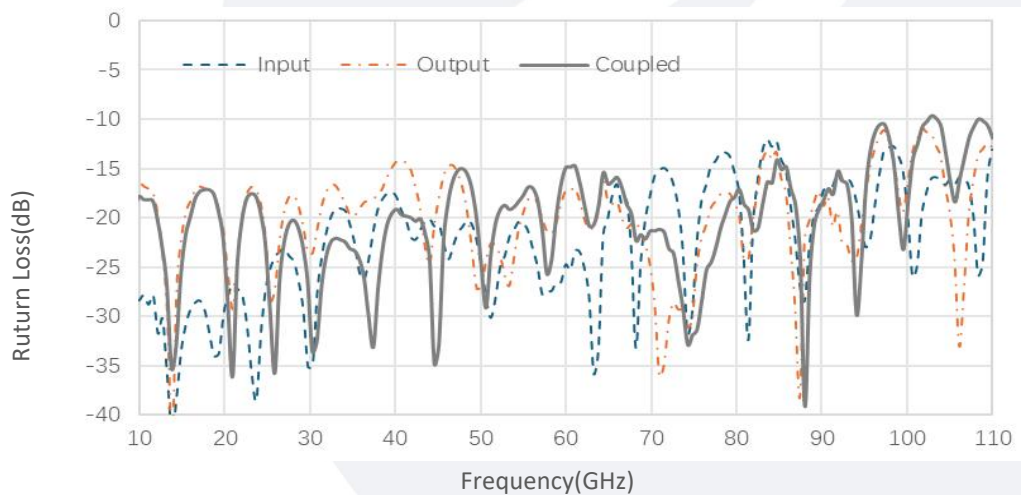
Coupling vs Frequency



Insertion Loss vs Frequency



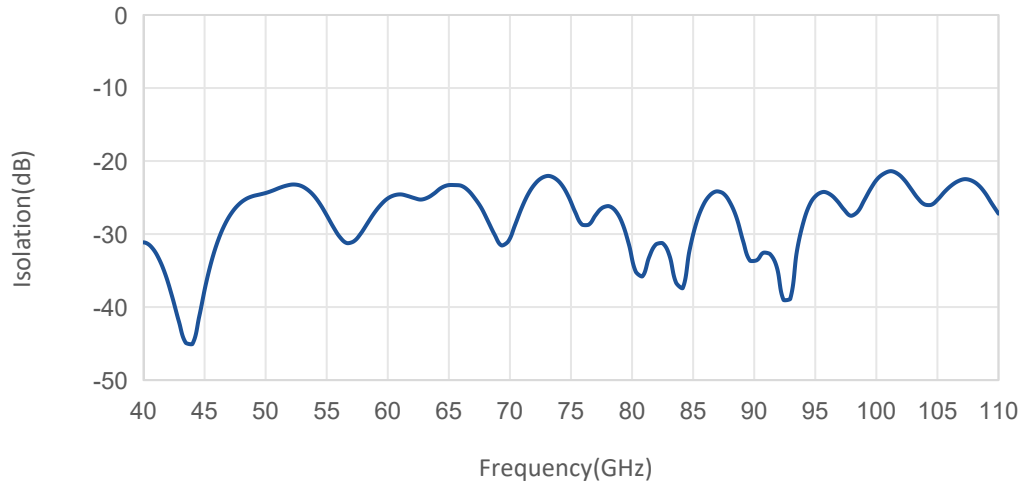
Return Loss vs Frequency



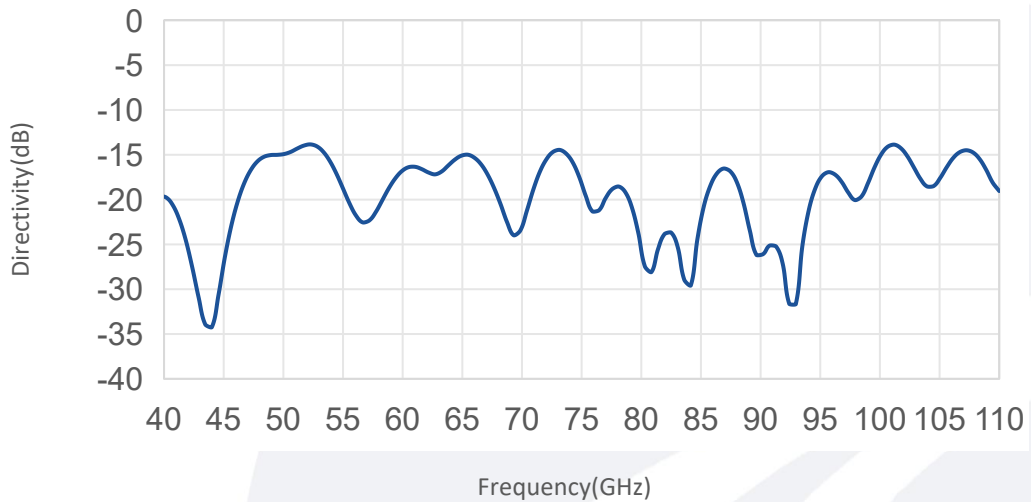
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



Directivity vs Frequency



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