

W-band Waveguide Directional Coupler

WR-10/10 dB Coupling

Model: TC-075110-10-10

TC-075110-10-10 is a W-band, three-port waveguide directional coupler that delivers a 10 dB nominal coupling level and 30 dB typical directivity across the full waveguide band from 75 to 110 GHz. The interfaces of the coupler are WR-10 waveguides with UG-387/U-M anti-cocking flanges.

Features:

- Operating Frequency: 75 to 110 GHz
- Full Band Operation
- Low Insertion Loss
- Moderate Directivity

Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency Range	75		110	GHz
Main road Return Loss		-30		dB
Branch road Return Loss		-30		dB
Insertion Loss		1		dB
Coupling		10		dB
Directivity		30		dB

Environmental And Physical Characteristics:

Description	Parameter	Units
RF Input/Output Connectors	WR-10/UG-387/U	
Coupled Port	WR-10/UG-387/U	
Size	56*22*22	mm

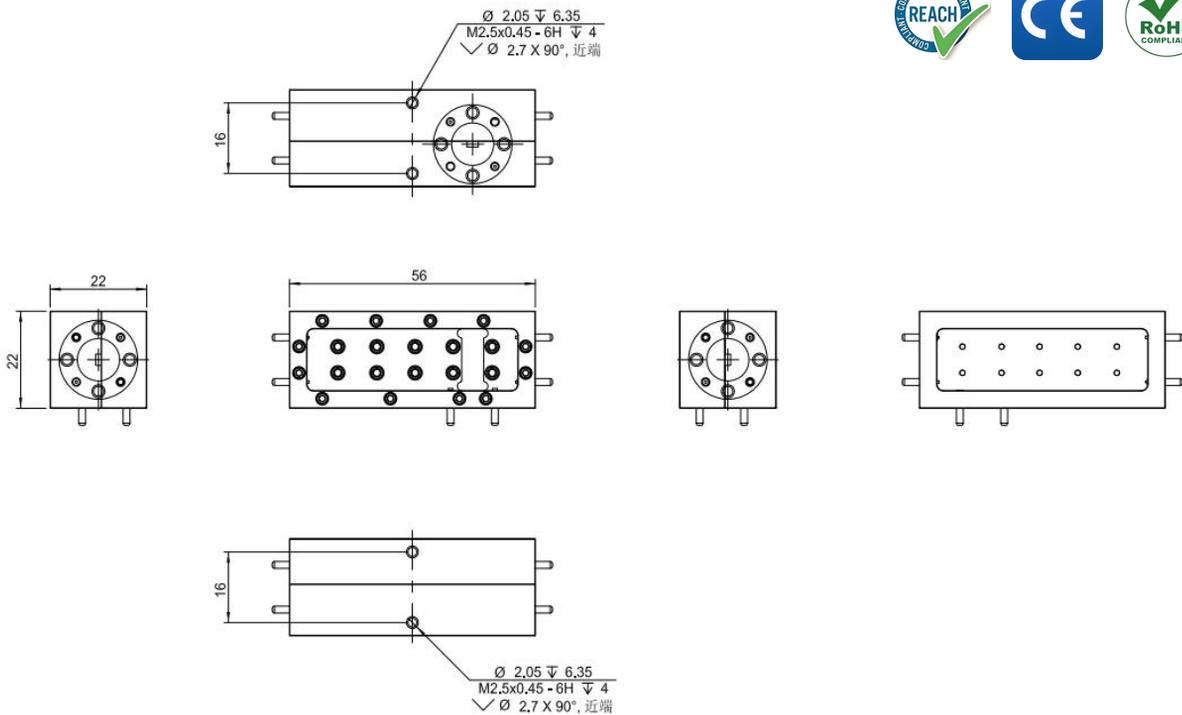
Absolute Maximum Ratings:

Parameter	Value
RF Input Power	TBD
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



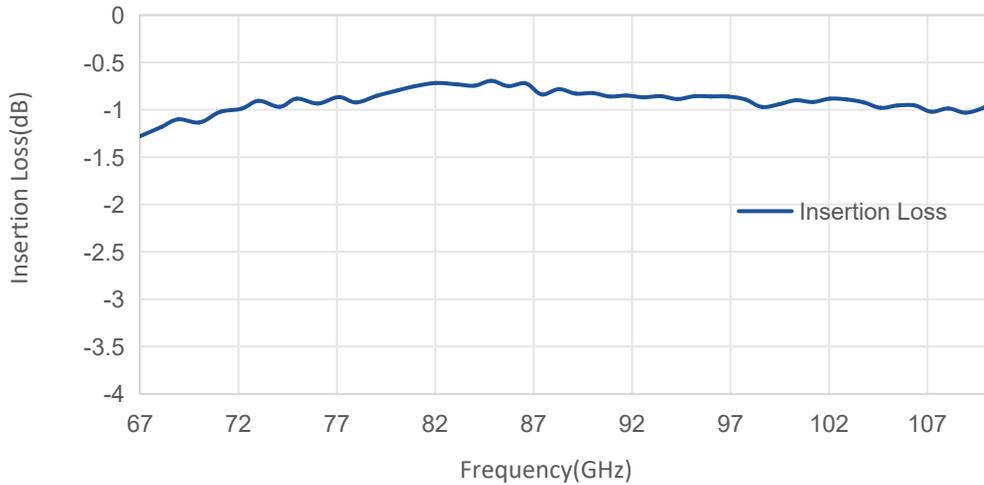
ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Ordering Information:

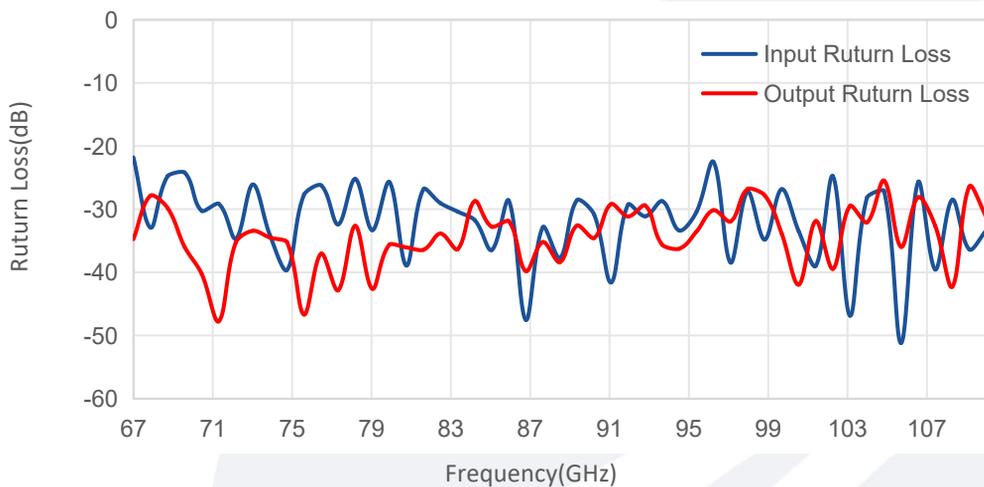
Base Number	Description	Revision
TC-075110-10-10	W-band Waveguide Directional Coupler, 75-110GHz, Insertion Loss:1.0dB Typ, Coupling:10dB Typ, WR-10	Rev.1.0

Typical Performance Data:

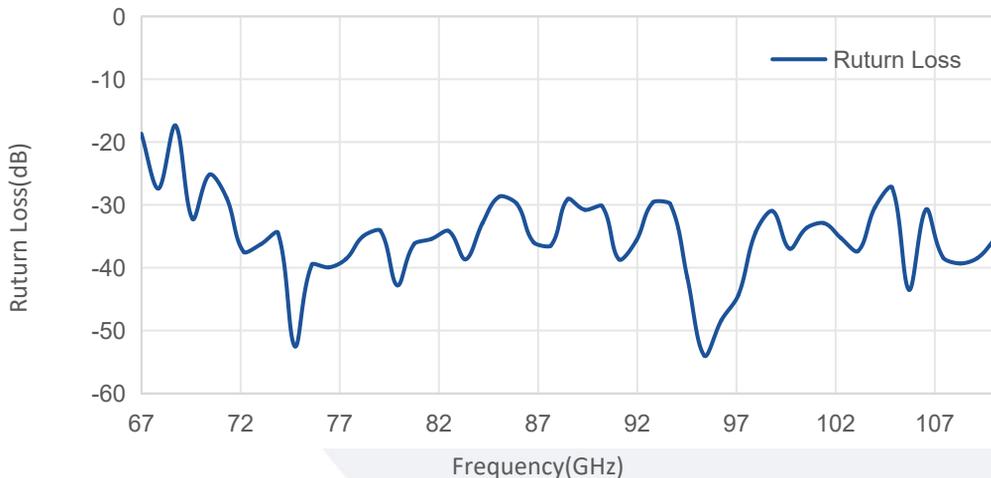
Insertion Loss vs Frequency



Main road Return Loss vs Frequency



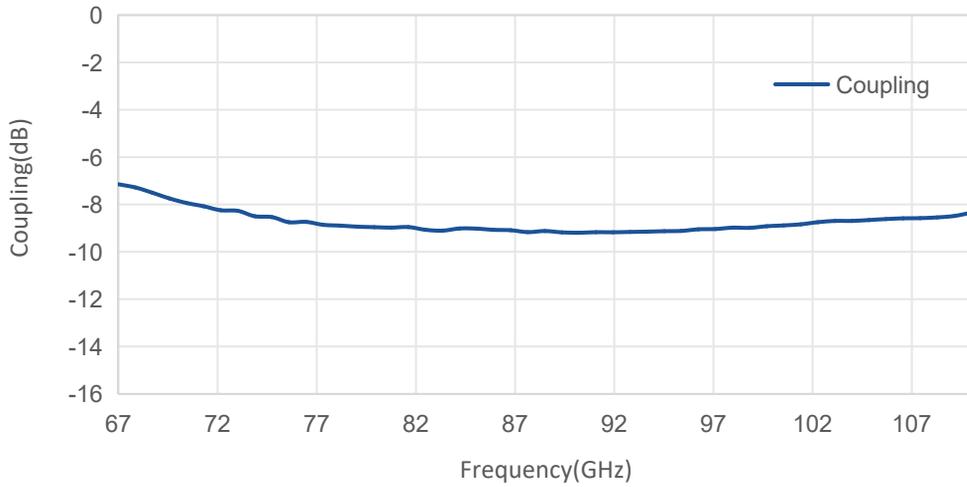
Branch road Return Loss vs Frequency



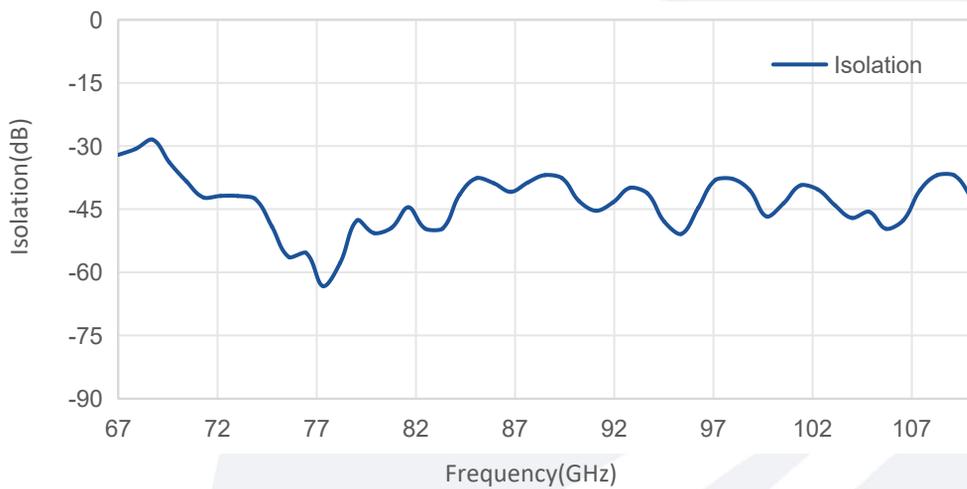
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Coupling vs Frequency



Isolation vs Frequency



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