

## D-band Dual Directional Waveguide Coupler

### WR-6.5/20 dB Coupling

**Model: TDC-110170-20-06**

TDC-110170-20-06 is a D-band, four-port waveguide dual directional coupler that delivers a 20 dB nominal coupling level and 50 dB typical isolation across the full waveguide band from 110 to 170 GHz. The interfaces of the coupler are WR-6.5 waveguides with UG-387/U-M anti-cocking flanges.

#### Features:

- Operating Frequency 110 to 170 GHz
- Full Band Operation
- Low Insertion Loss
- Moderate Directivity

#### Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

#### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency Range	110		170	GHz
Insertion Loss		1		dB
Coupling		20		dB
Isolation		50		dB
Directivity		30		dB
Input VSWR		1.1		:1
Output VSWR		1.1		:1

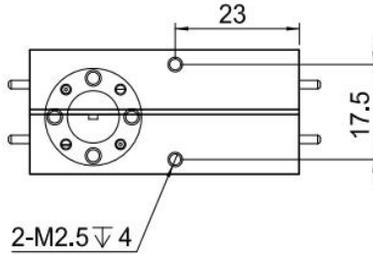
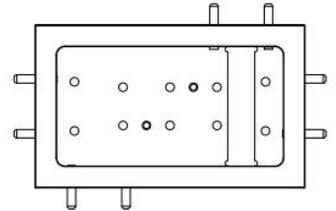
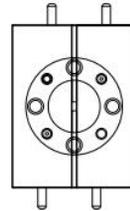
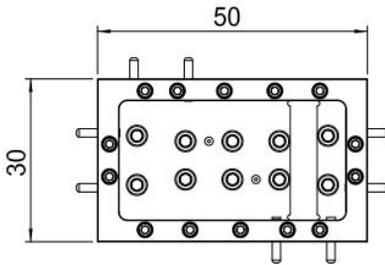
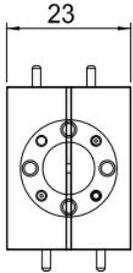
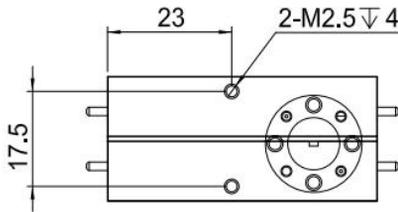
#### Environmental And Physical Characteristics:

Description	Parameter	Units
Operating Temperature	-40 To +85	°C
Storage Temperature	-40 to +85	°C
Input/Output Connectors	WR-6.5/U-387/U	
Isolation/Coupling Port	WR-6.5/U-387/U	
Size	50*30*23	mm

**Outline Drawing:**

Unit:mm

**Regulatory Compliance:**



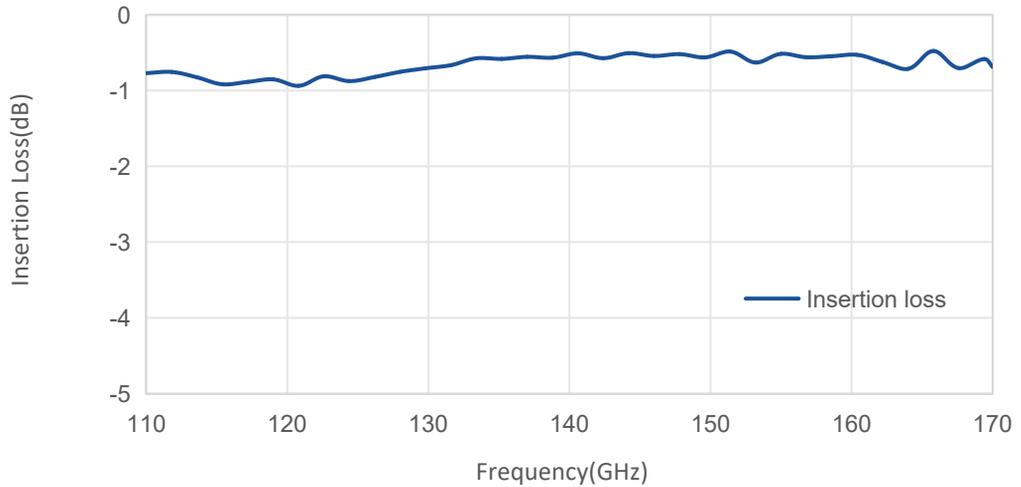

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

**Ordering Information:**

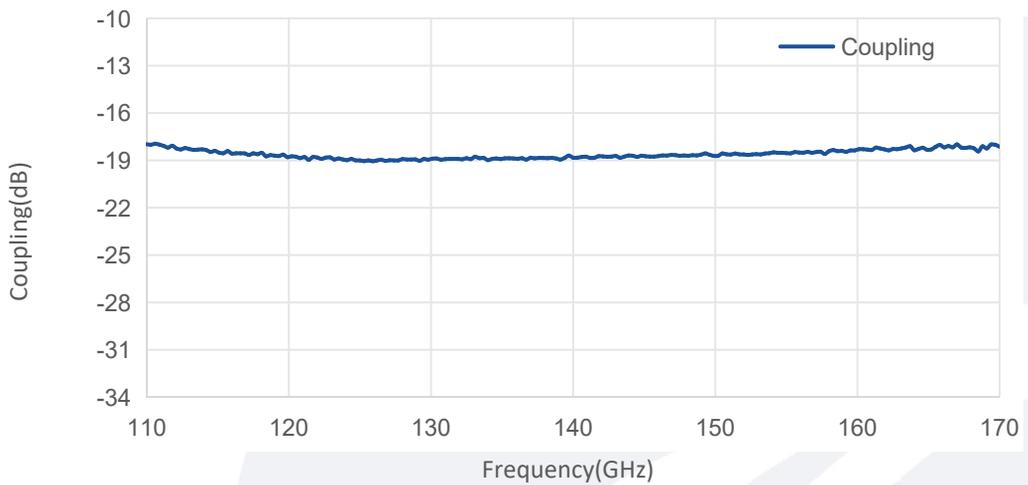
Base Number	Description	Revision
TDC-110170-20-06	D-band Dual Directional Waveguide Coupler, 110-170GHz, Insertion Loss: 1dB Typ, Coupling: 20dB Typ, WR-6.5	Rev.1.0

**Typical Performance Data:**

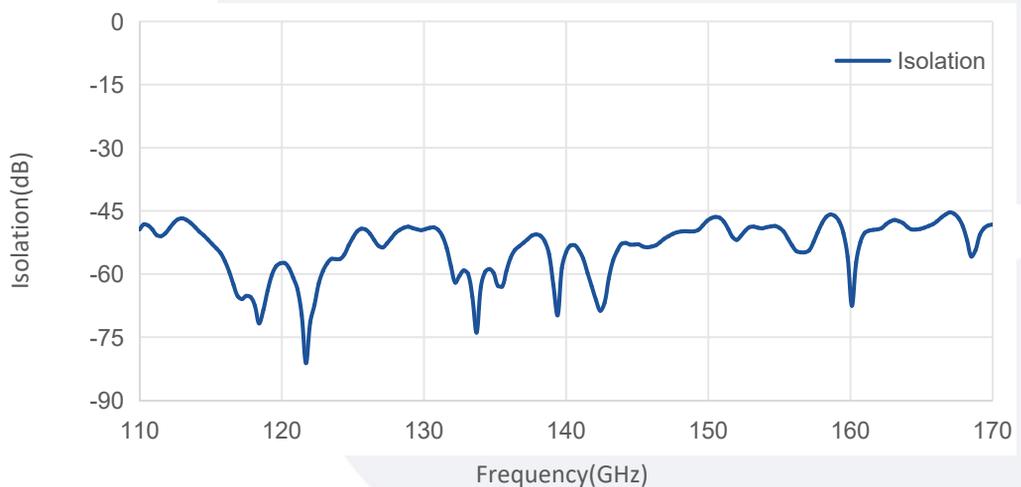
**Insertion Loss vs Frequency**



**Coupling vs Frequency**



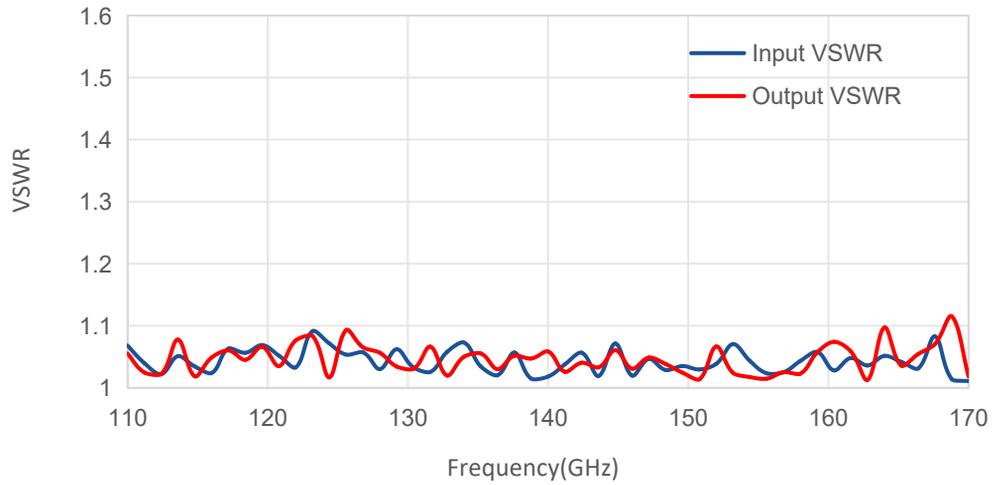
**Isolation vs Frequency**



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:

### VSWR vs Frequency



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