Turpanic Co, Ltd
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Infrared Filters protect sensitive quantum devices that operate below 1 K from high-energy photons that can cause unwanted heating or decoherence. In addition, they improve the thermalization of the center conductor in a coaxial line. A common application of IR Filters is in superconducting qubit devices where infrared radiation is suspected to generate quasi-particle excitations that reduce the coherence time of the qubit.

Features:

- Based on magnetically loaded dielectric absorber
- Capable of operation at 10 mK
- Housing Gold Plated OFHC Copper
- Impedance: 50 Ω

Applications:

- Dilution refrigerators/Cryogenic devices
- Quantum Computing

Electrical Characteristics:

Model	Parameter			
	Frequency	Insertion Loss (Typ)	Return Loss (Typ)	Impedance
TUR-CRYOIRHF011005	DC-10GHz	0.6dB@6GHz 1dB@10GHz 6dB@30GHz	-20dB	50Ω
TUR-CRYOIRHF011005	DC-10GHz	1.6dB@6GHz 3dB@10GHz 10dB@30GHz	-20dB	50Ω
TUR-CRYOIRHF011005	DC-10GHz	4.5dB@10GHz 15dB@30GHz	-20dB	50Ω

Envrionmental And Physical Characteristics:

Description	Parameter	Units
Operating Temerature	10mK To +200	℃
Storage Temerature	-55 to +200	℃
Packaging case	Gold Plated OFHC Copper	

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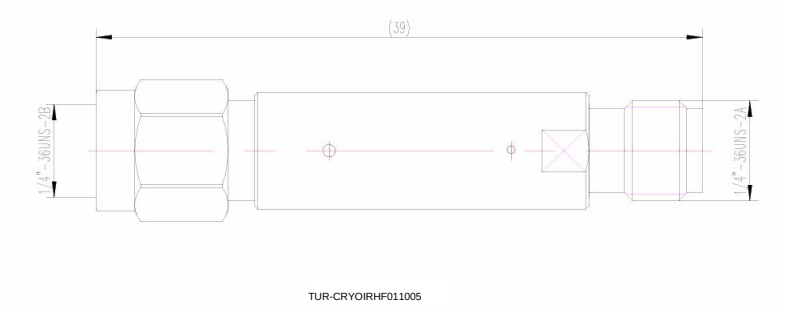
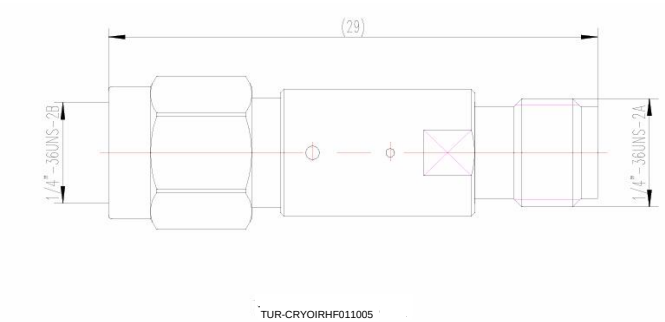
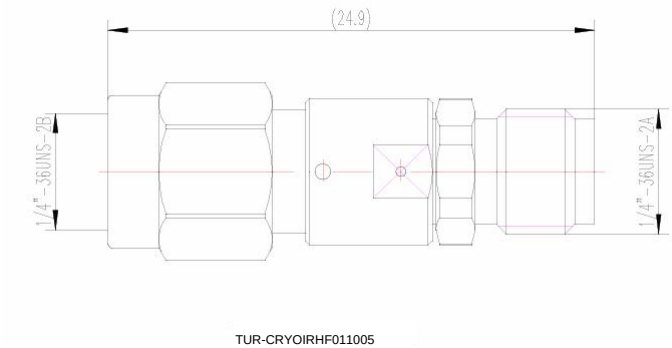
Outline Drawing: Unit:mm



TUR-CRYOIRHF011005



TUR-CRYOIRHF011005



TUR-CRYOIRHF011005

Ordering Information:

Base Number	Desciption	Revision
TUR-CRYOIRHF011005	SMA Cryogenic Infrared Filter 1dB@10GHz	Rev.1.1
TUR-CRYOIRHF011005	SMA Cryogenic Infrared Filter 3dB@10GHz	Rev.1.1
TUR-CRYOIRHF011005	SMA Cryogenic Infrared Filter 4.5dB@10GHz	Rev.1.1

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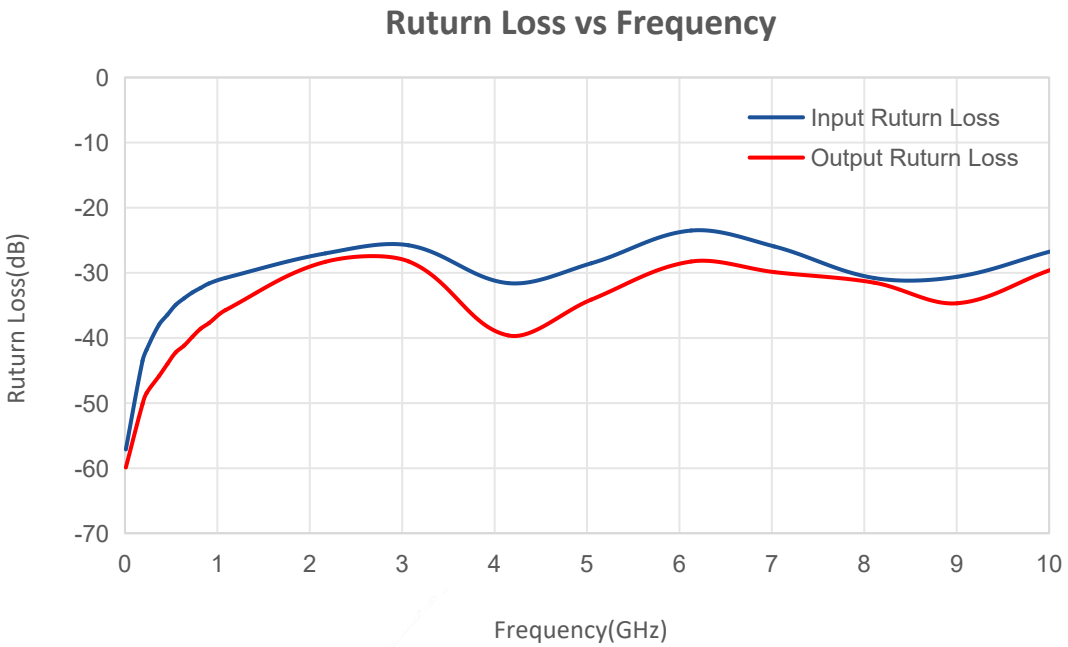
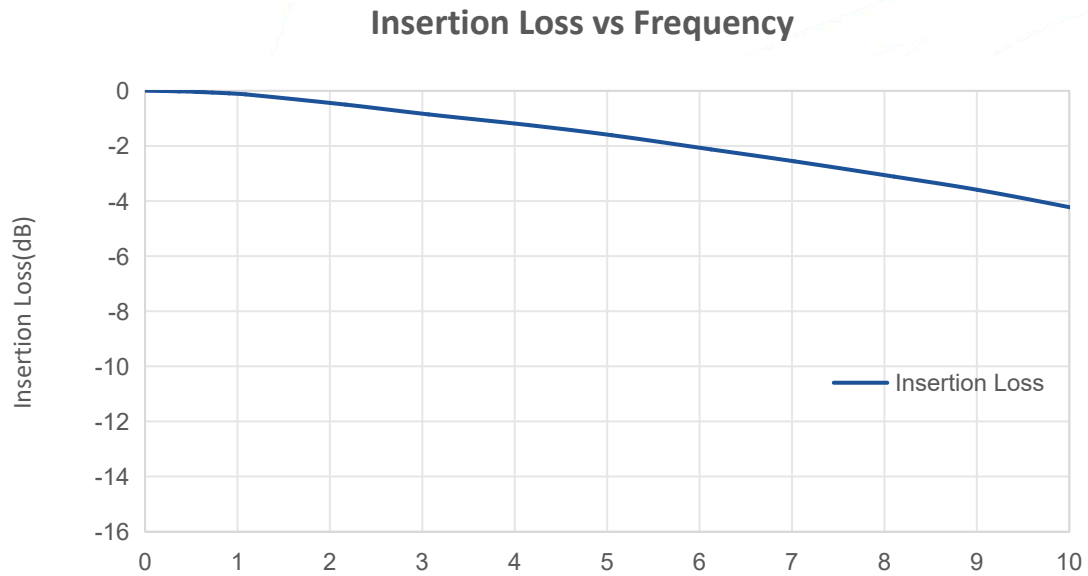
Typical Performance Data:

TUR-CRYOIRHF011005

298K:



298K:



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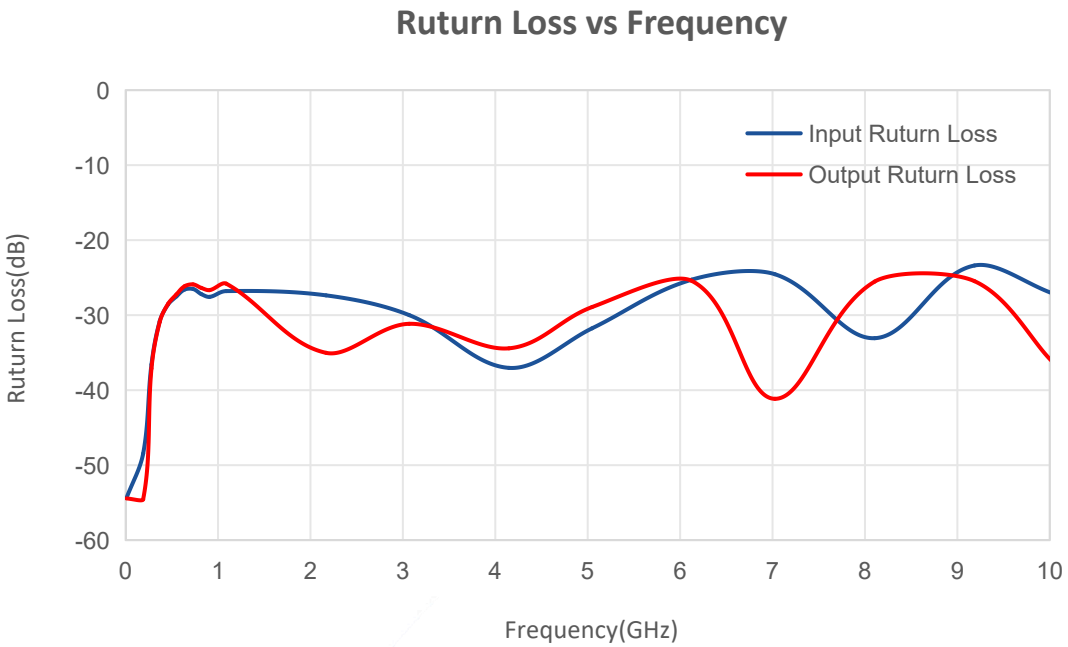
Typical Performance Data:

TUR-CRYOIRHF011005

77K:



77K: