Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Cryogenic Coax Attenuators

DC-18GHz/2W/SMA/Non-Magnetic

Model:TAXXA2-S-18-Cryo

TAXXA2-S-18-Cryo is working to customize and optimize fixed attenuators for use in cryogenic cooling systems to support quantum computing. Eliminating thermal noise in a quantum computing installation demands a high degree of innovation and reliability. TAXXA2-S-18-Cryo's experience delivering custom components for use in harsh environments and high reliability requirements,is the foundation supporting our work in cryogenic technology.

Features:

- Frequency: DC to 18 GHz
- Max Power: 2W
- Capable of operation at 10 mK
- Non-Magnetic
- 50 Ohm Matched Input / Output

Applications:

- Dilution refrigerators/Cryogenic devices
- Quantum Computing

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
Frequency range			DC-18		GHz
Standard dB Values			0~10/12/15/20/30		dB
Attenuation Accuracy	0dB			±0.4	dB
	1-6dB			±0.3	
	10-20dB			±0.5	
	30dB			±0.8	
VSWR	DC-4GHz		1.1		:1
	4-12.4GHz		1.15		
	12.4-18GHz		1.25		
Input Power				2	W
Impedance			50		Ohms

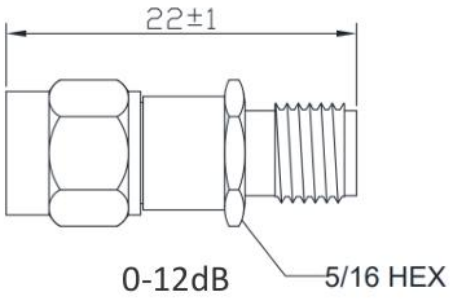
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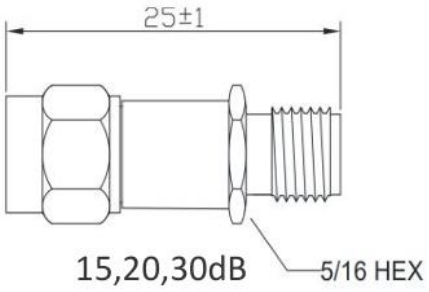
Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	SMA Male/SMA Female	
Case Material	OFHC Copper	
Finish	Gold Plated	
Resistor Material	Proprietary Thin Film	

Outline Drawing:

Unit:mm





Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	10mK		+85	℃
Non-operating Temperature	-55		+125	℃
Relative humidity	100% RH at 35c, 95%RH at 40℃			%
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:

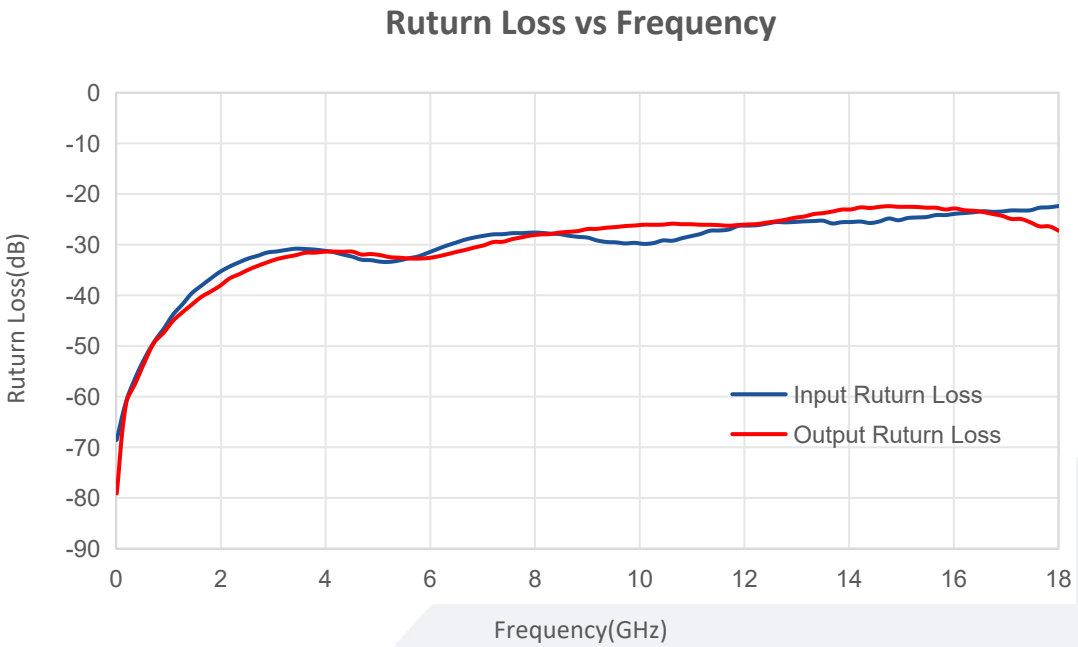
Base Number	Description	Revision
TA00A2-S-18-Cryo	0dB	Rev.1.1
TA01A2-S-18-Cryo	1dB	Rev.1.1
TA02A2-S-18-Cryo	2dB	Rev.1.1
TA03A2-S-18-Cryo	3dB	Rev.1.1
TA04A2-S-18-Cryo	4dB	Rev.1.1
TA05A2-S-18-Cryo	5dB	Rev.1.1
TA06A2-S-18-Cryo	6dB	Rev.1.1
TA07A2-S-18-Cryo	7dB	Rev.1.1
TA08A2-S-18-Cryo	8dB	Rev.1.1
TA09A2-S-18-Cryo	9dB	Rev.1.1
TA10A2-S-18-Cryo	10dB	Rev.1.1
TA12A2-S-18-Cryo	12dB	Rev.1.1
TA15A2-S-18-Cryo	15dB	Rev.1.1
TA20A2-S-18-Cryo	20dB	Rev.1.1
TA30A2-S-18-Cryo	30dB	Rev.1.1

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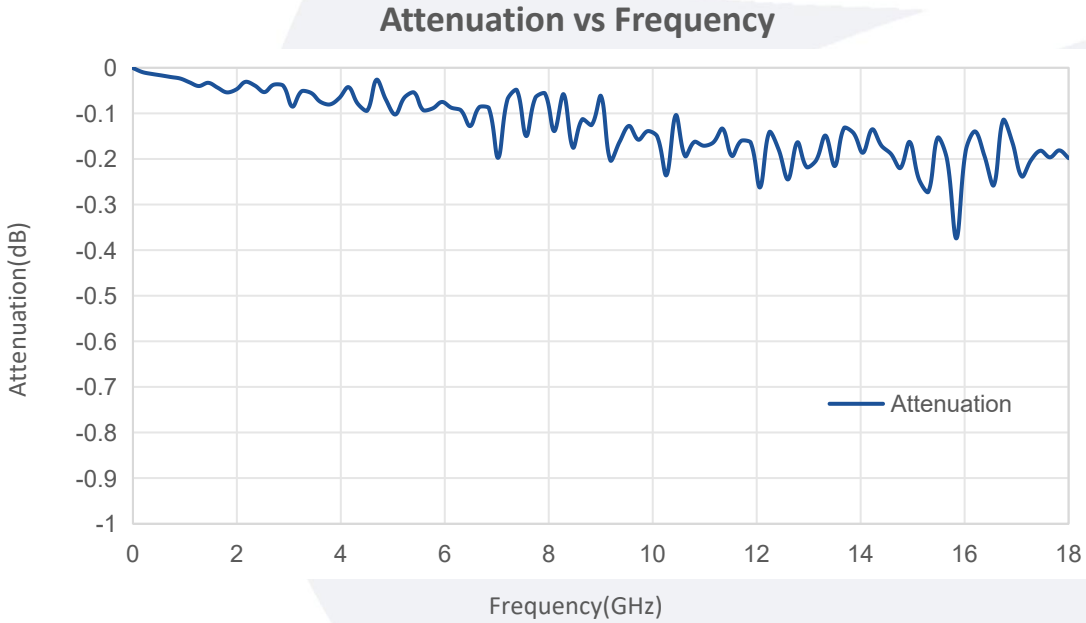
Typical Performance Data:

TA00A2-S-18-Cryo:

298K:



298K:



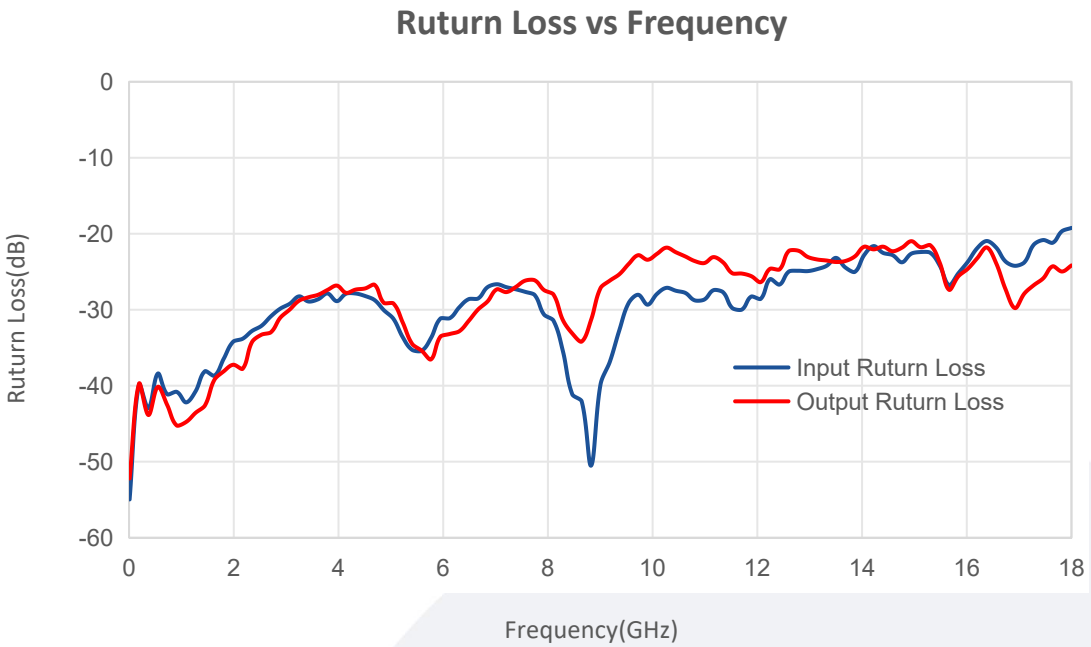
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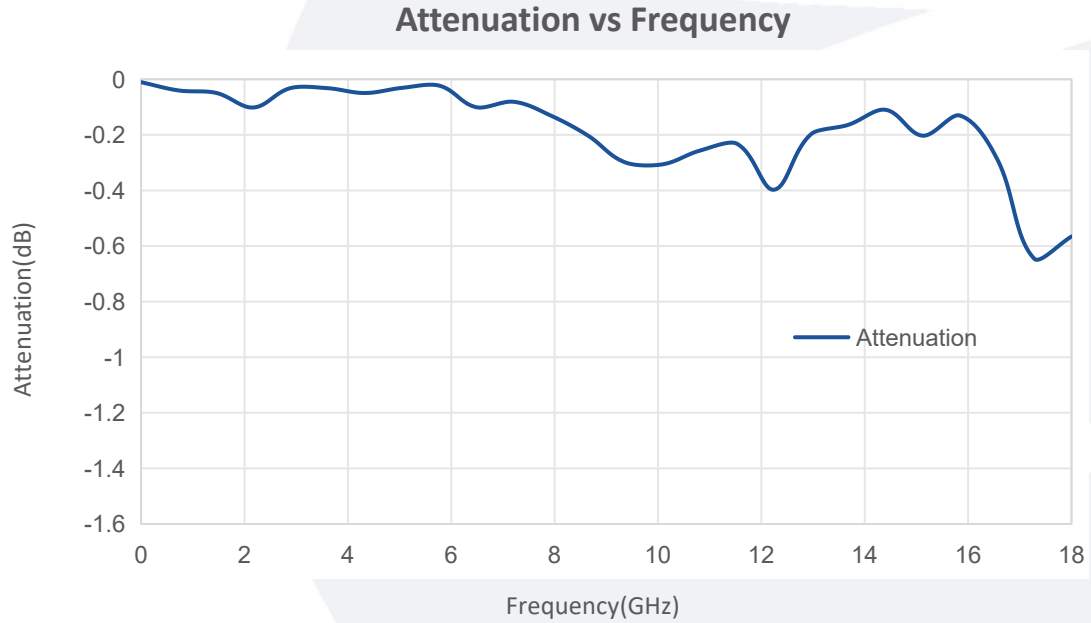
Typical Performance Data:

TA00A2-S-18-Cryo:

77K:



77K:



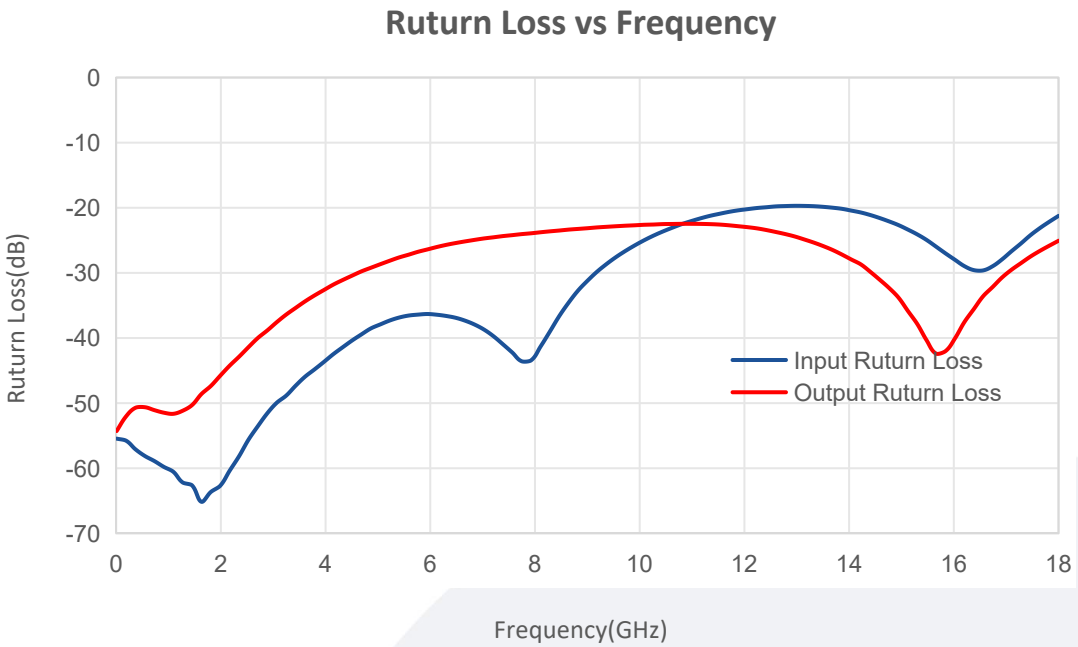
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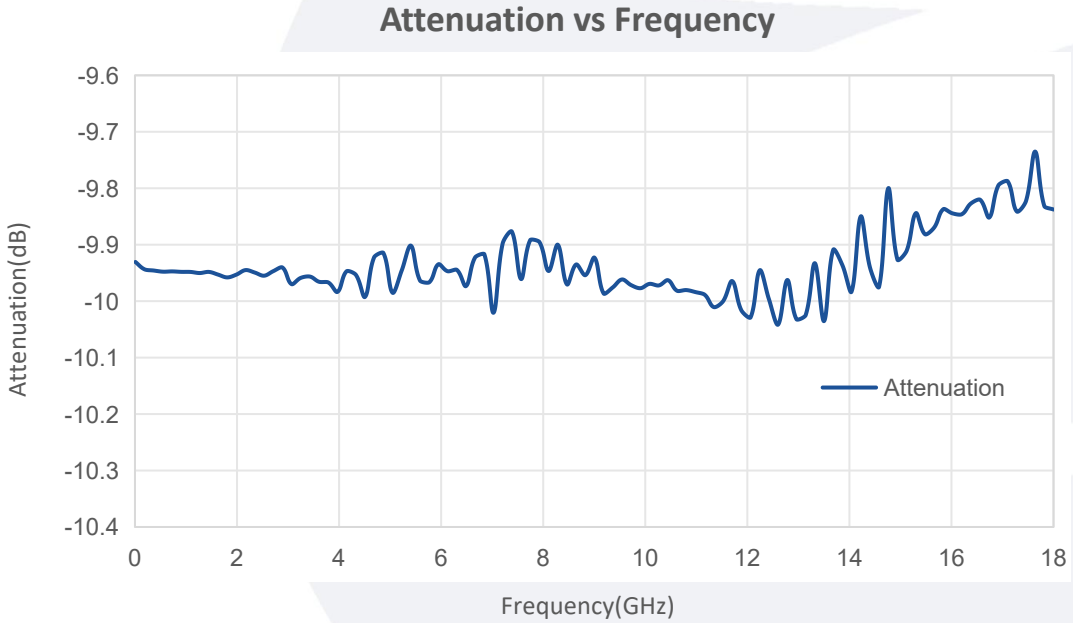
Typical Performance Data:

TA10A2-S-18-Cryo:

298K:



298K:



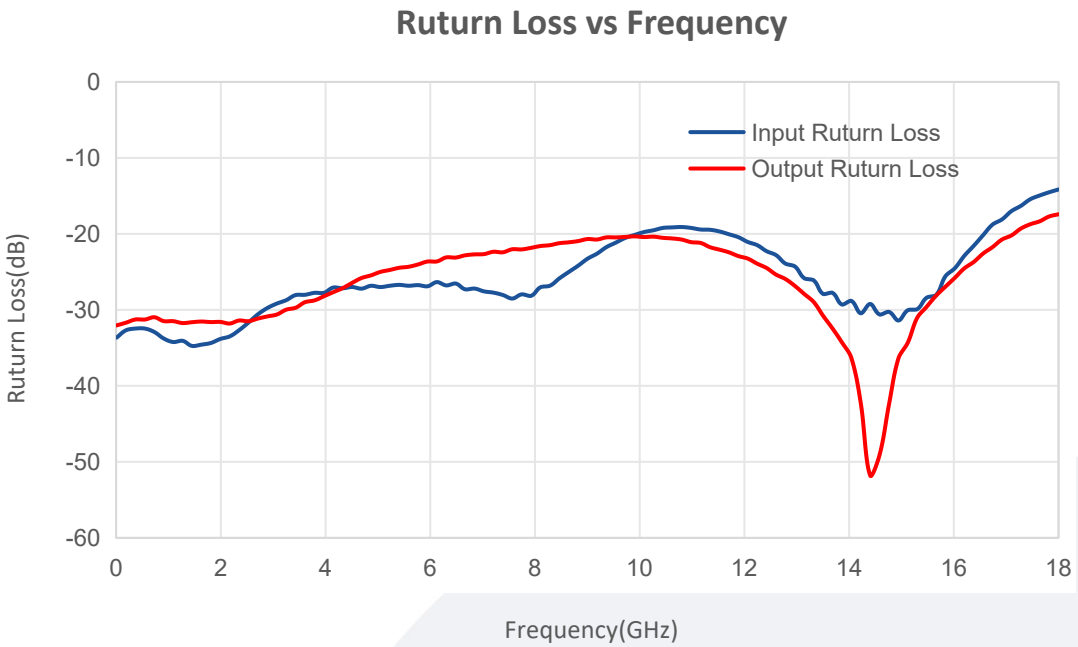
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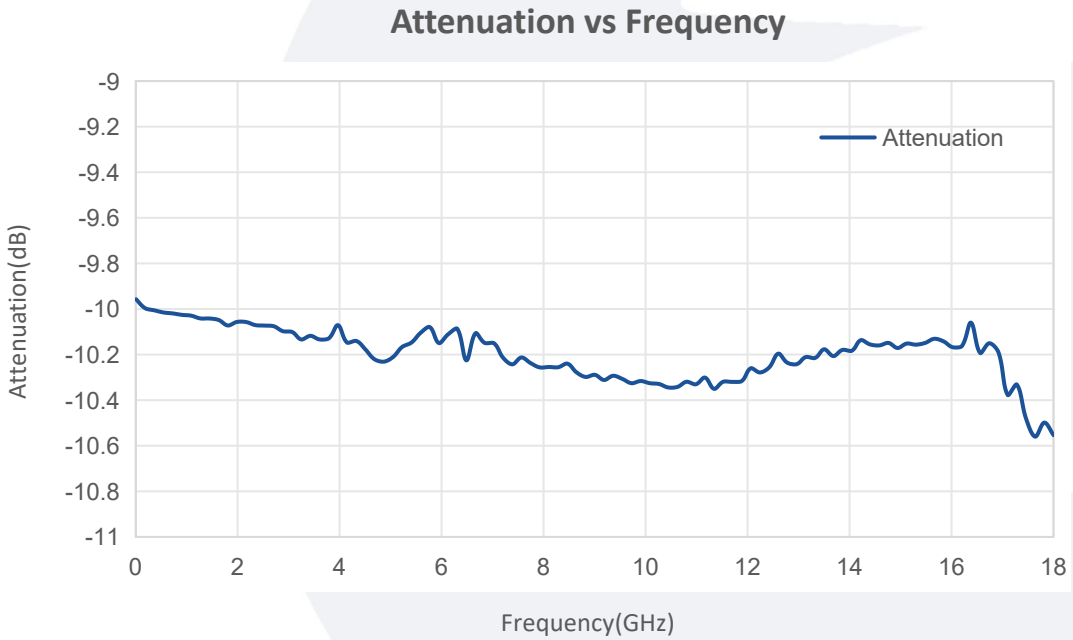
Typical Performance Data:

TA10A2-S-18-Cryo:

77K:



77K:



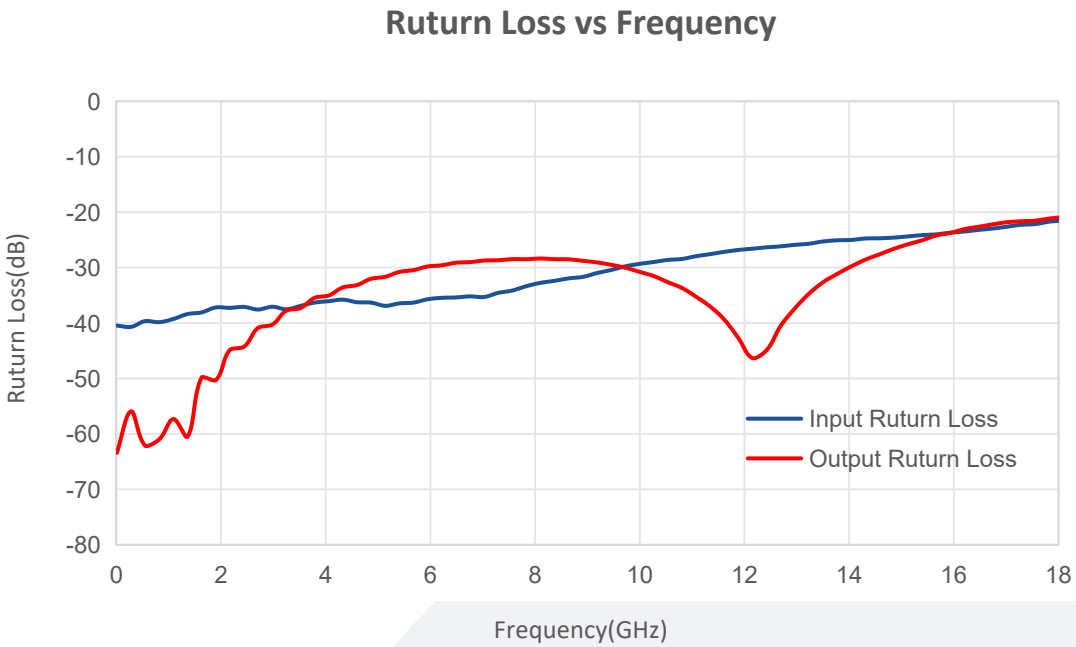
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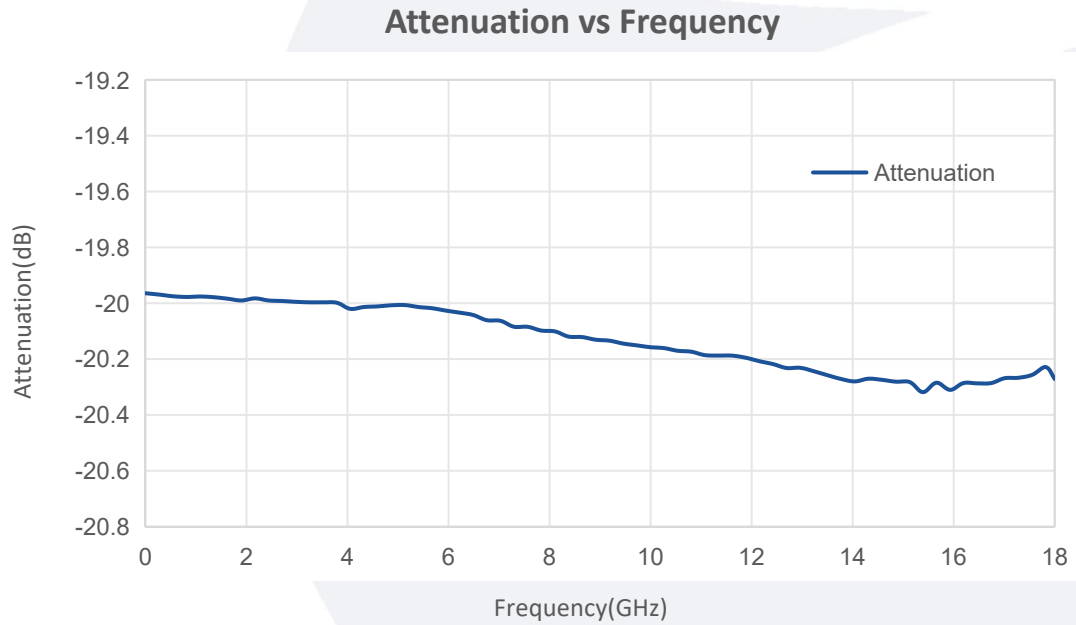
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TA20A2-S-18-Cryo:

298K:



298K:



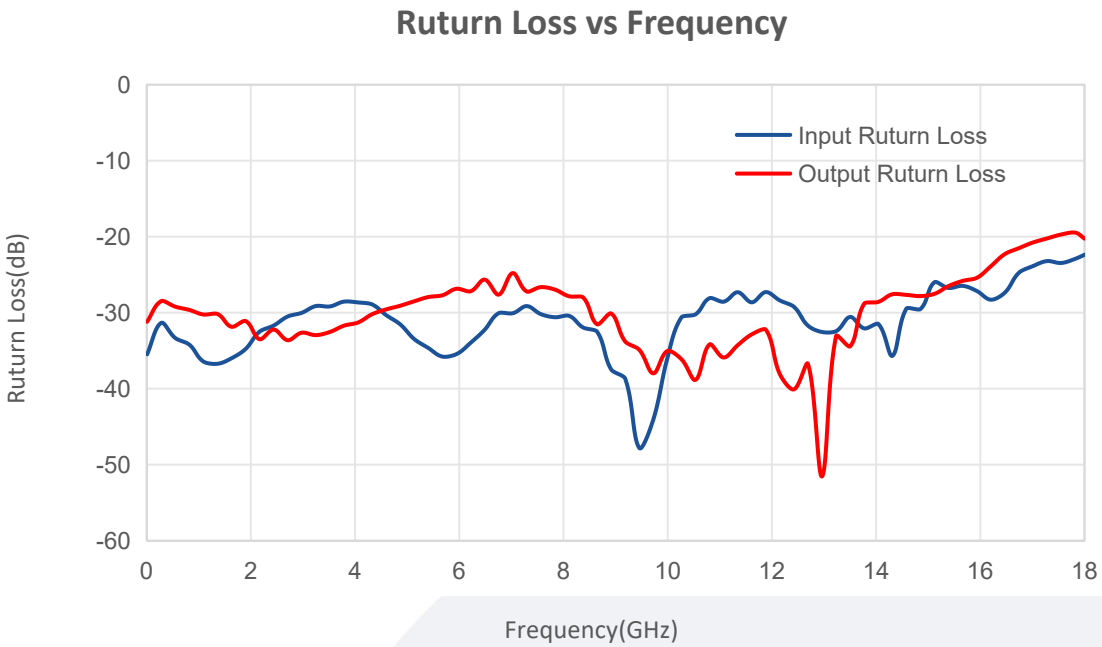
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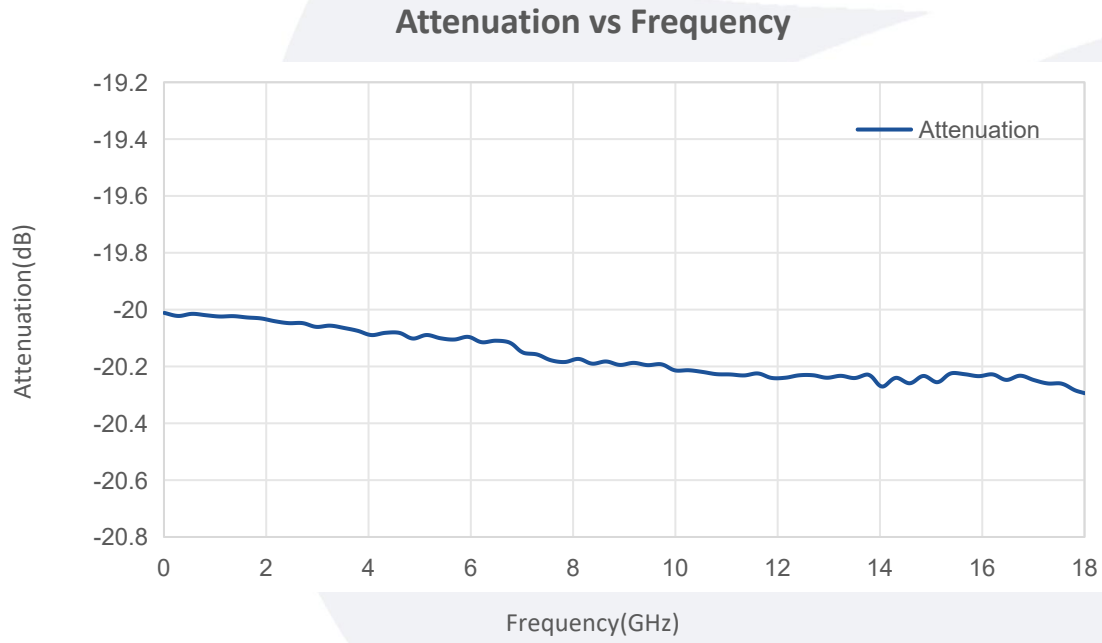
Typical Performance Data:

TA20A2-S-18-Cryo:

77K:



77K:



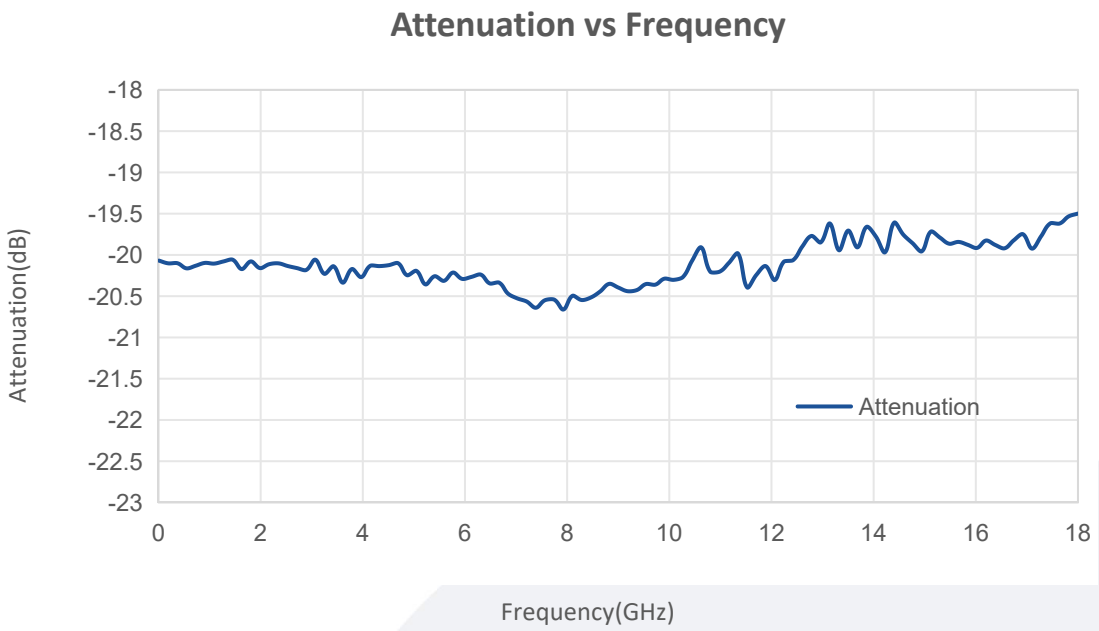
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Typical Performance Data:

TA20A2-S-18-Cryo:

4K:



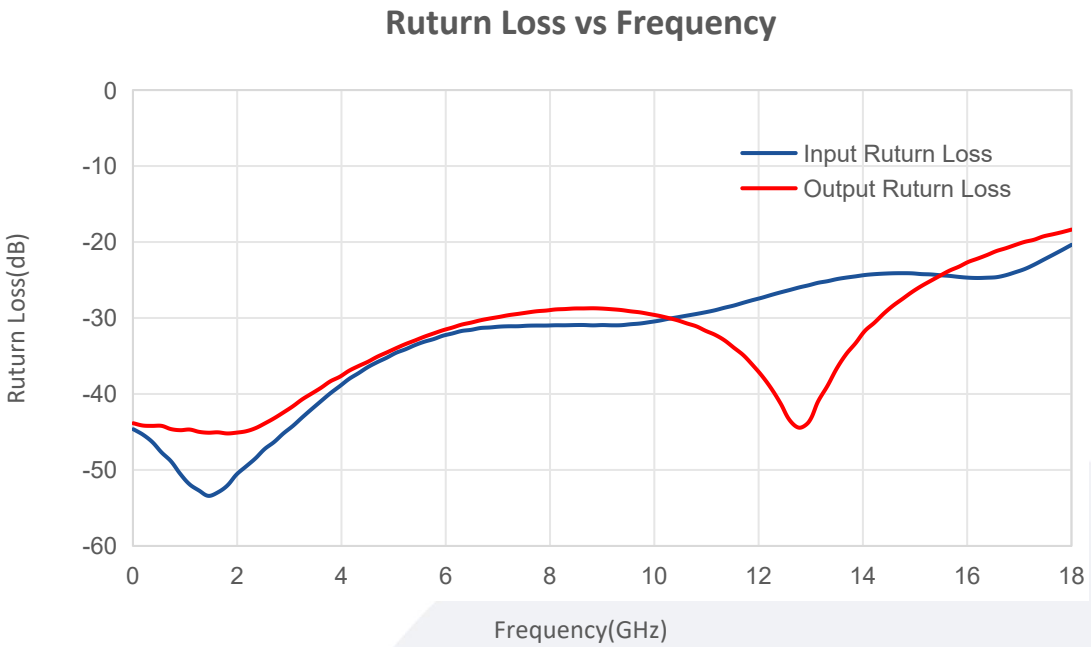
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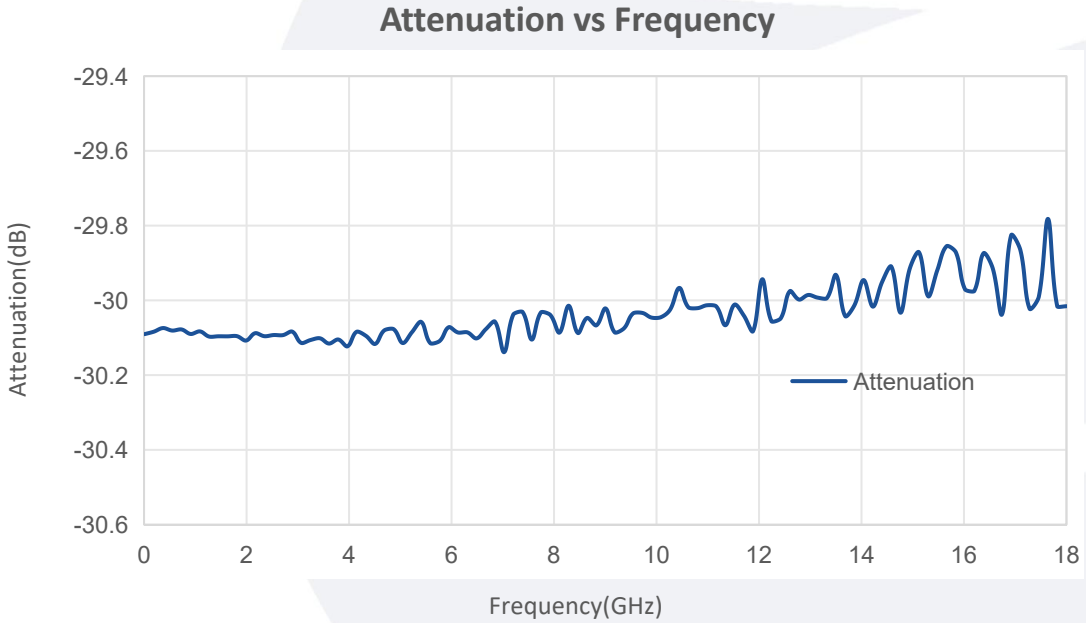
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TA30A2-S-18-Cryo:

298K:



298K:



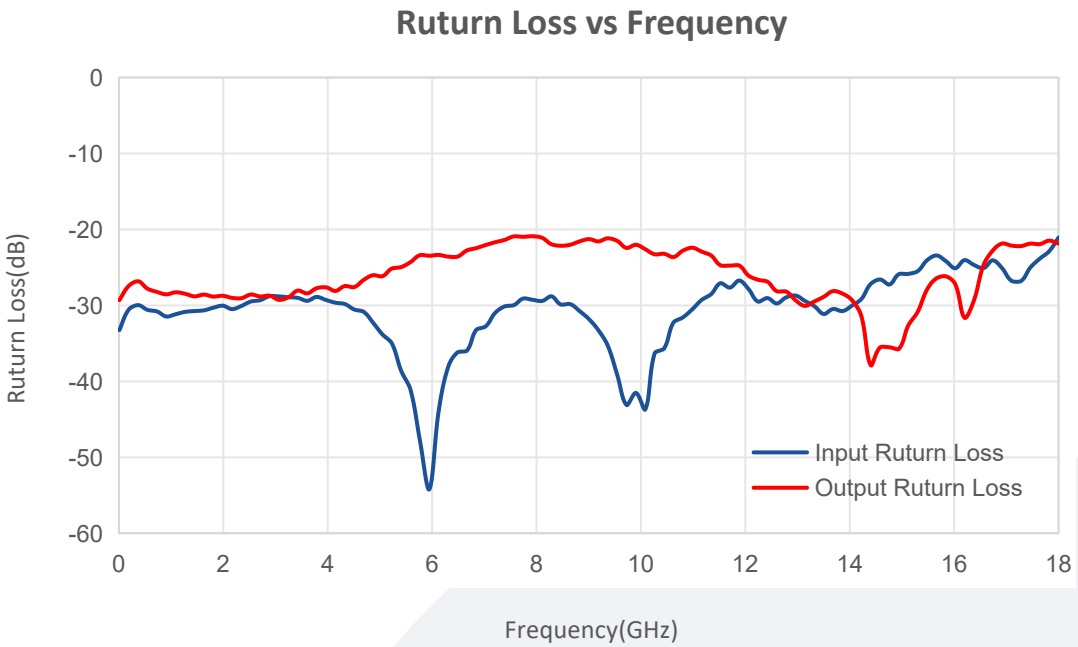
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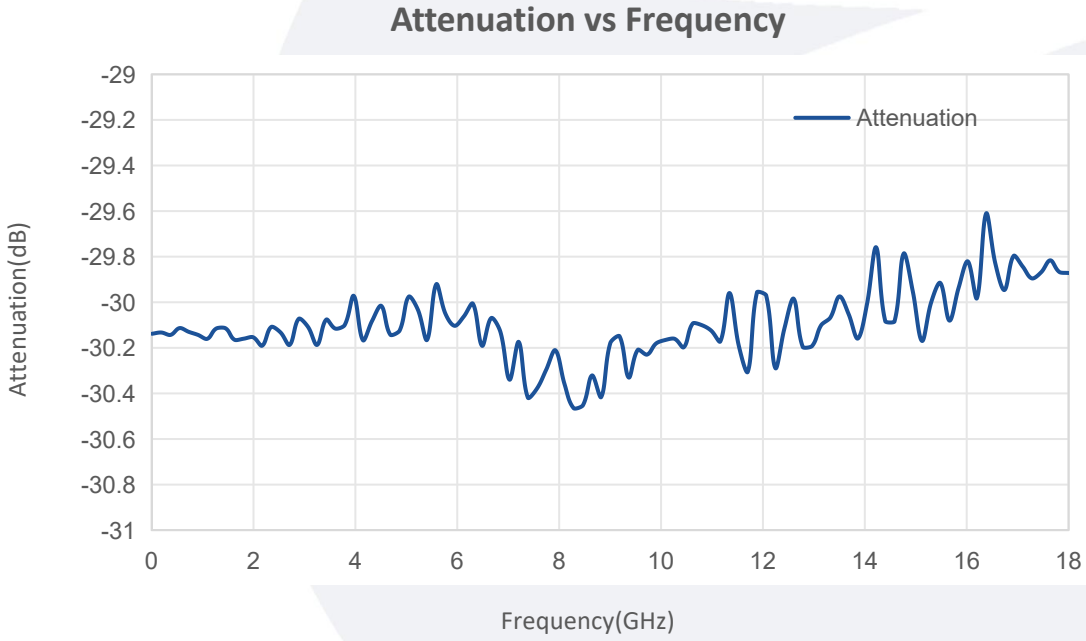
Typical Performance Data:

TA30A2-S-18-Cryo:

77K:



77K:



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