

## General Description:

MM-CICI-040080-Cryo are ultra-low insertion loss cryogenic isolators and circulators operating in the 4-8 GHz frequency range. They have been designed from ground up to meet the strict requirements of ultra-low temperature physics research. The OFHC copper body ensures minimum loss and that this loss reaches the lowest possible temperature to minimize thermal noise.

## Features:

- Broad Bandwidth
- High Isolation
- Low Insertion Loss; Low VSWR
- Magnetic Shielding Available
- Double and Higher Junctions Available

## Applications:

- quantum computing

## Electrical Specifications :

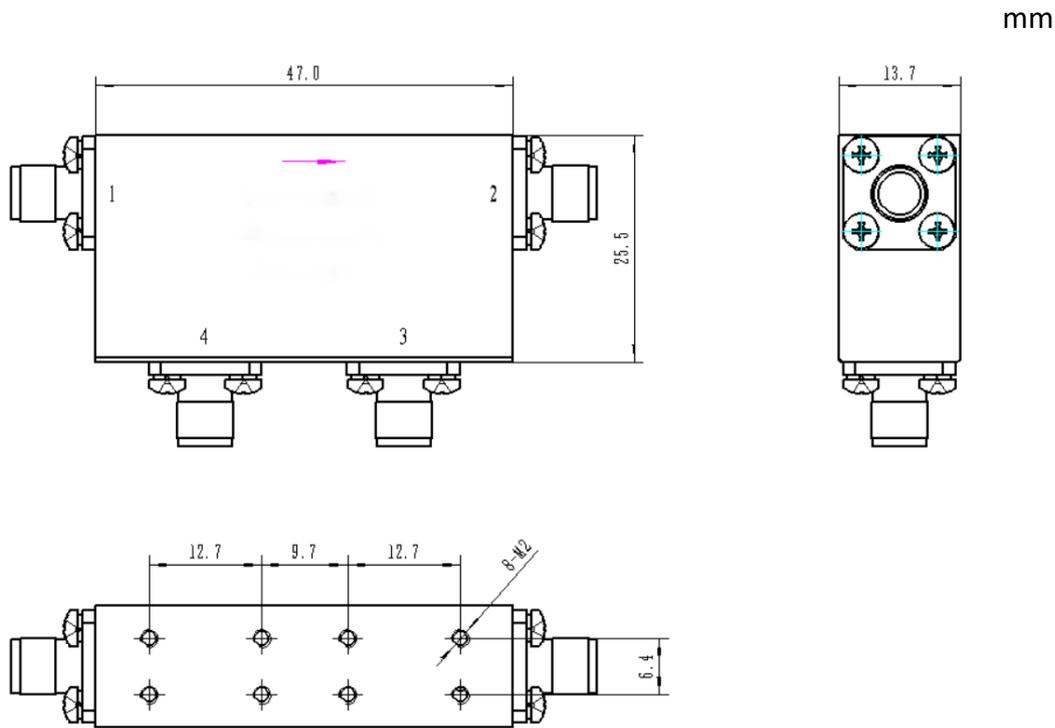
Parameter	Value			Units
	Min	Typ	Max	
Frequency Range	4		8	GHz
Insertion Loss		0.4		dB
Return loss		-18		:1
Isolation		40		dB
Impedance		50		$\Omega$

## Mechanical Specifications:

Parameter	Value
Size	47×25.5×13.7 mm
Weight	150g
Material / Finishing	Nickel plated

SMA-K

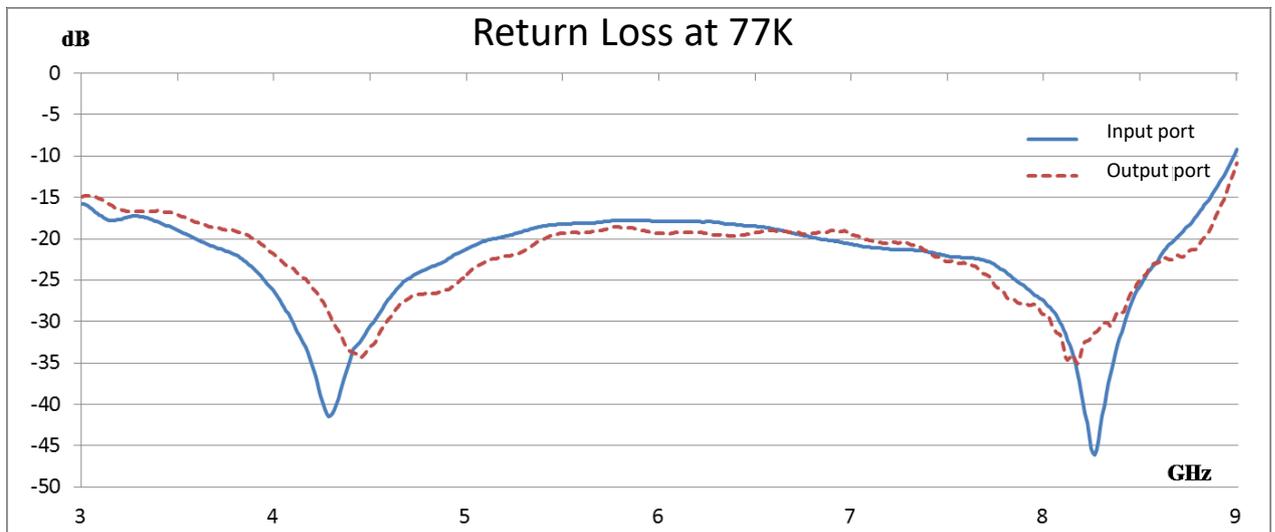
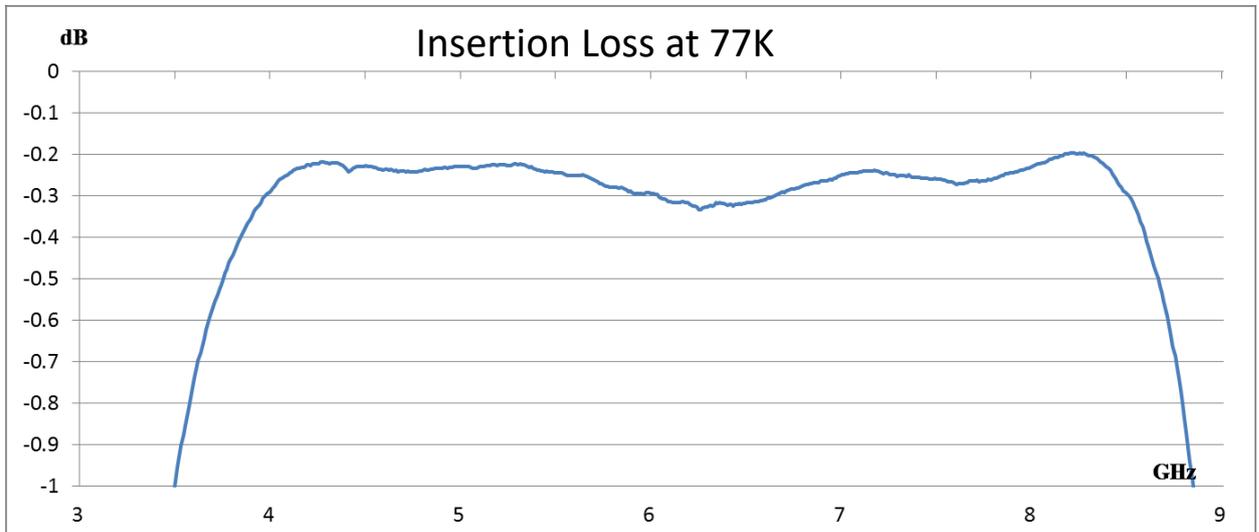
### Outline Drawing:



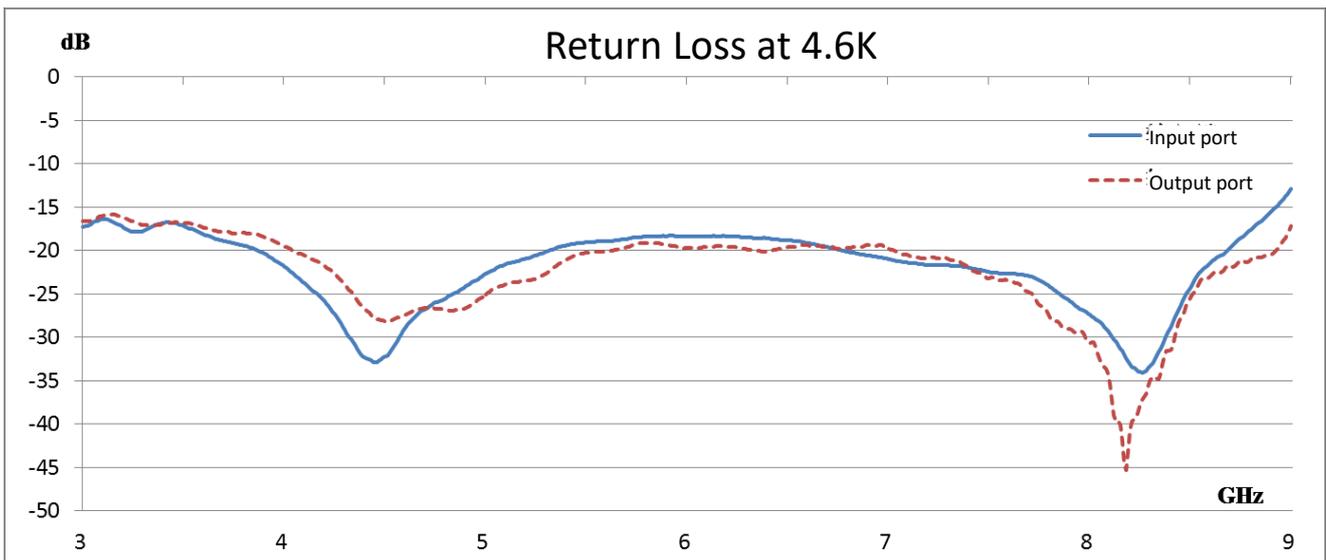
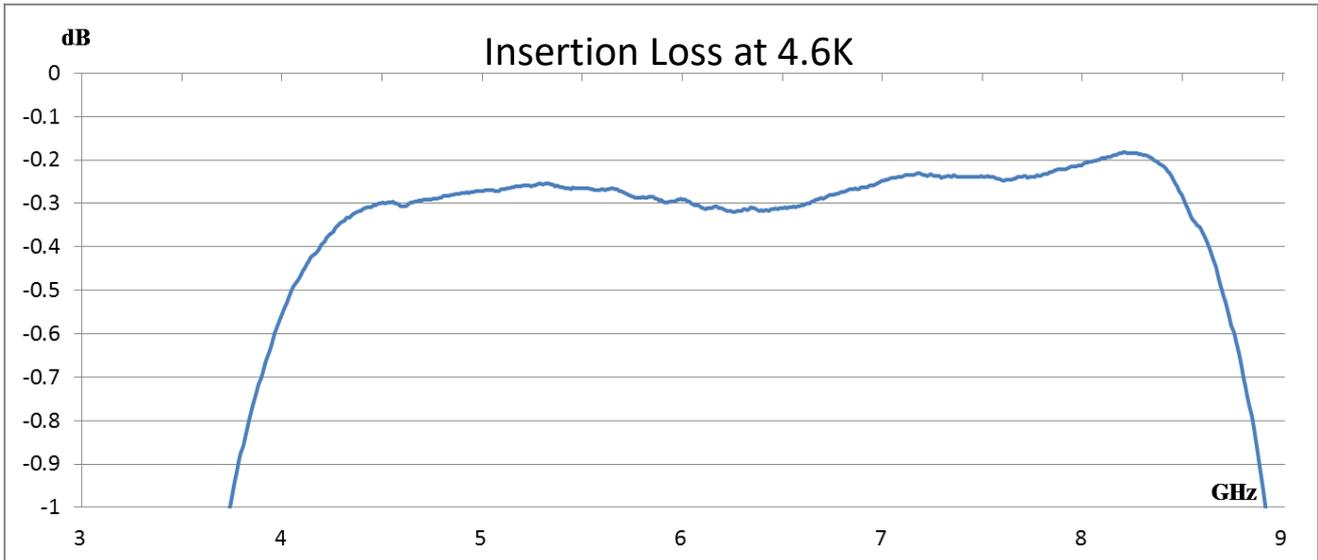
### Environmental Conditions:

Parameter	Standard	Description
Operational Temperature		4 K ( -269 °C )
Storage Temperature		-55°C~+85°C
Random Vibration	MIL-STD-883K, Method 2026, Cond. IB	50 - 2000 Hz, 7.3 Grms
Humidity	MIL-STD-202, Method 103B, Cond. B	100% RH at 35c, 95%RH at 40°C
Altitude	MIL-STD-883K, Method 1001, Cond. C	50,000 feet

## Measured data, Tamb:



## Isolation at 77K



Isolation at 4.6K