

## General Description:

MM-CI-040120-Cryo are ultra-low insertion loss cryogenic isolators and circulators operating in the 4-12 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 :

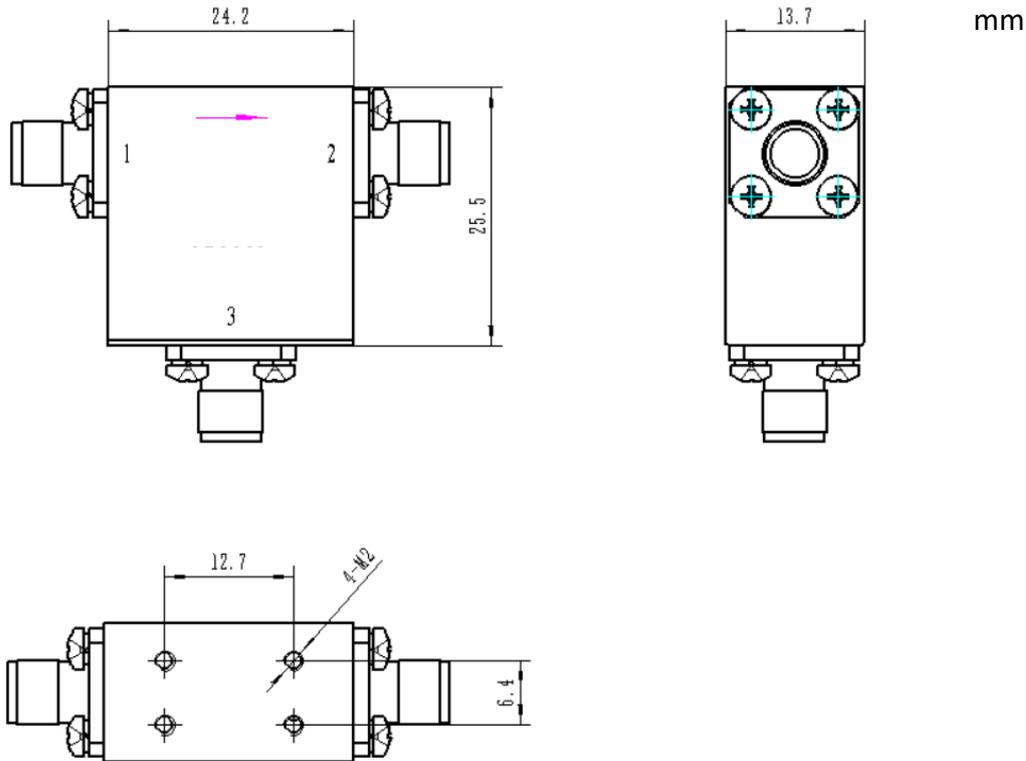
Parameter	Value			Units
	Min	Typ	Max	
Frequency Range	4		12	GHz
Insertion Loss		0.2		dB
Return loss		-17		:1
Isolation		18		dB
Impedance		50		$\Omega$

## Mechanical Specifications:

Parameter	Value
Size	24.2×25.5×13.7 mm
Weight	75g
Material / Finishing	OFHC Copper/Nickel plated

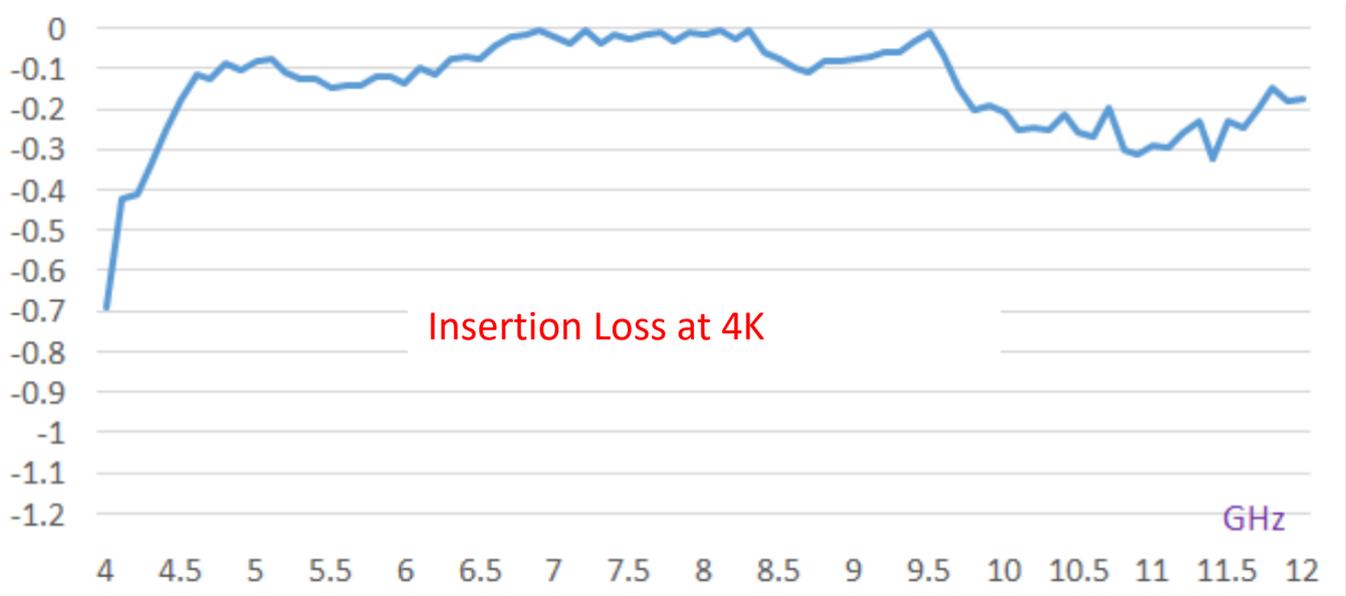
SMA-K

## 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



Isolation at 4K



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Return Loss at 4K