

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

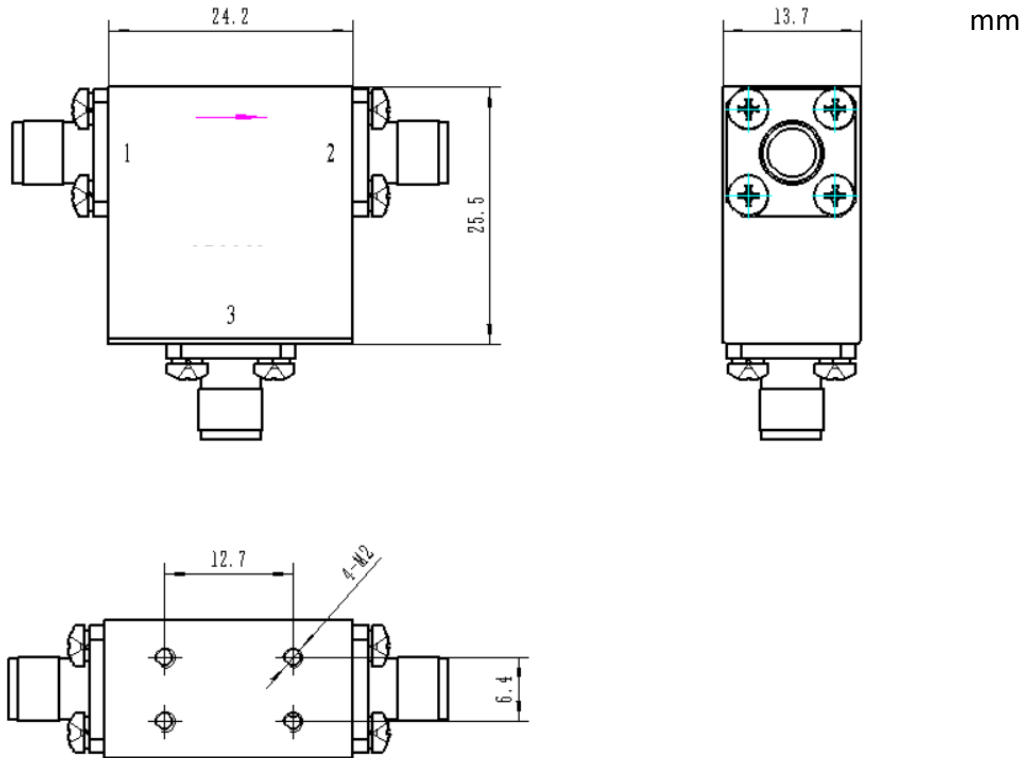
Electrical Specifications :

| 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 | | Ω |

Mechanical Specifications:

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

