

Feature

- Precision MEMS process
- High performance, shielded, Micro-cavity structure
- Silicon substrate, 50Ω CPW output
- Au wire bonding, for MCM applications

Environmental Specifications

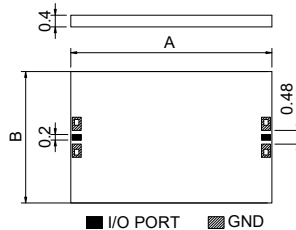
| | |
|-----------------------|--------------|
| Operating Temperature | -55°C~+85°C |
| Storage Temperature | -55°C~+125°C |
| Max. Input Power | 35dBm |

Electrical Specifications(T_A=+25°C)

| Parameter | Min. | Typ. | Max. | Unit |
|---------------------------------|--------------------|------|------|------|
| Center Freq. (f ₀) | - | 15.0 | - | GHz |
| Pass Band | 14.0 | - | 16.0 | GHz |
| Ripple in Pass band | - | - | 1 | dB |
| Insertion Loss @ f ₀ | - | - | 2.0 | dB |
| Return Loss | 12 | - | - | dB |
| Out of band | ≥30@13.1&16.8GHz | | | dB |
| | ≥40@12.8&17GHz | | | dB |
| Attenuation | ≥60@DC~12GHz | | | dB |
| | ≥50@18~28GHz | | | dB |
| Group Delay Variation | ≤0.5@14.0~16.0 GHz | | | ns |
| Linear Phase | ≤±7@14.0~16.0 GHz | | | ° |

S2P file name: SiMS15_2R1-8D2.s2p

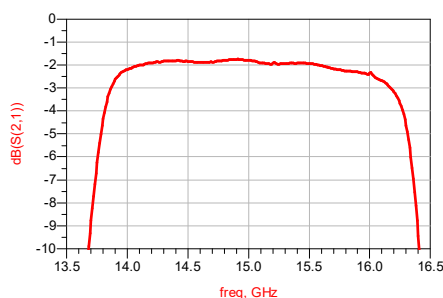
Outline Drawing



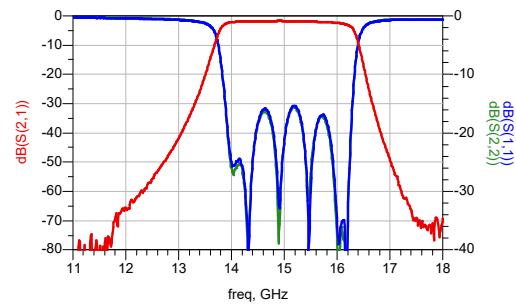
| Symbol | Value (mm) | | |
|--------|------------|---------|------|
| | Min. | Nominal | Max. |
| A | 8.9 | - | 9.0 |
| B | 3.9 | - | 3.2 |

Typical Test Curves

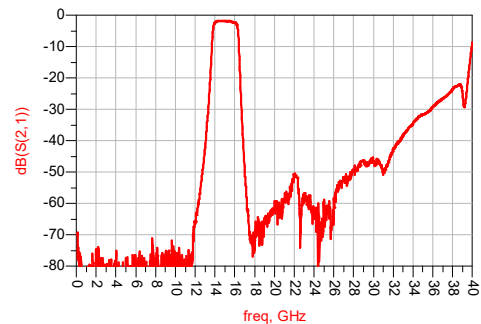
Insertion Loss VS Frequency (T_A=25°C)



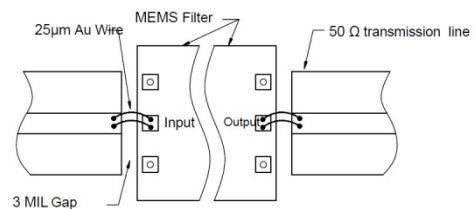
Insertion Loss & Return Loss VS Frequency (T_A=25°C)



Broadband Insertion Loss VS Frequency (T_A=25°C)

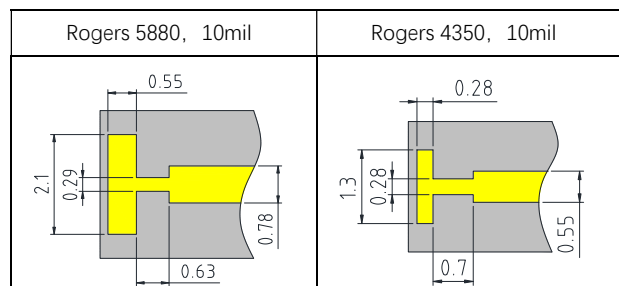


Recommended Assembly Diagrams



Application Notes:

1. The chip is back-metalized and can be die mounted with AuSn eutectic performs or with electrically conductive epoxy (for example ME8456).
2. The die should be assembled on carriers like Kovar or Mu-Cu which have same Coefficient of thermal expansion. (2.9ppm/°C) with Silicon, thickness 0.2mm max.
3. Handle the chips in a clean environment. DO NOT attempt to clean the chip using liquid cleaning systems.
4. Handle the chip along the edges with a vacuum collet or with a sharp pair of bent tweezers.
5. Recommended to use T structure as below for bonding.



6. If you have any questions, please contact us.