

## 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<sub>A</sub>=+25°C)

| Parameter                       | Min.              | Typ. | Max. | Unit |
|---------------------------------|-------------------|------|------|------|
| Center Freq. (f <sub>0</sub> )  | -                 | 8.8  | -    | GHz  |
| Pass Band                       | 8.78              | -    | 8.82 | GHz  |
| Ripple in Pass band             | -                 | -    | 1    | dB   |
| Insertion Loss @ f <sub>0</sub> | -                 | -    | 3.5  | dB   |
| Return Loss                     | 12                | -    | -    | dB   |
| Out of band Attenuation         | ≥25@8.5GHz&9.2GHz |      |      | dB   |
|                                 | ≥40@8.4GHz&9.3GHz |      |      | dB   |
| Group Delay Variation           | ≥60@DC~7GHz       |      |      | dB   |
|                                 | ≥50@11~13GHz      |      |      | dB   |
| Linear Phase                    | ≤±5@8.78~8.82GHz  |      |      | °    |

S2P file name: SiMF8R8\_R1-4E3.s2p

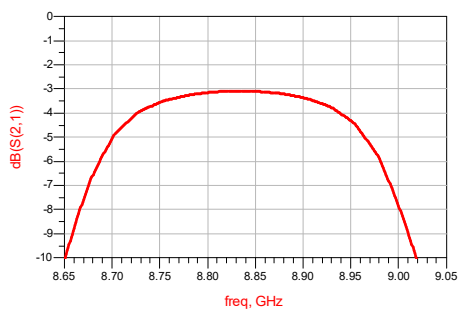
## Outline Drawing



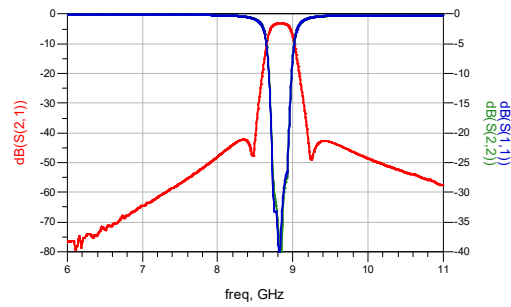
| Symbol | Value (mm) |         |      |
|--------|------------|---------|------|
|        | Min.       | Nominal | Max. |
| A      | 6.9        | -       | 7.0  |
| B      | 3.9        | -       | 4.0  |

## Typical Test Curves

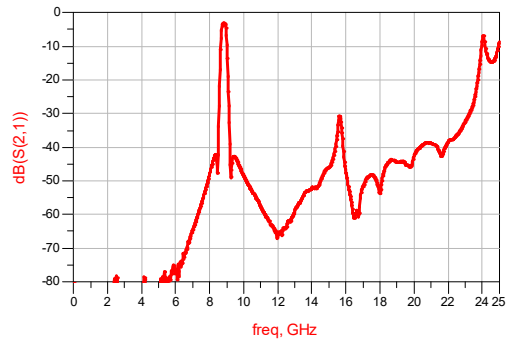
Insertion Loss VS Frequency (T<sub>A</sub>=25°C)



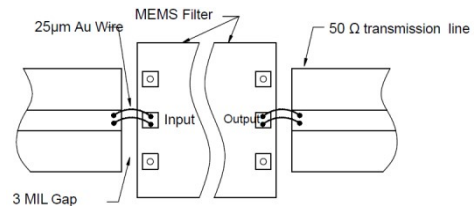
Insertion Loss & Return Loss VS Frequency (T<sub>A</sub>=25°C)



Broadband Insertion Loss VS Frequency (T<sub>A</sub>=25°C)

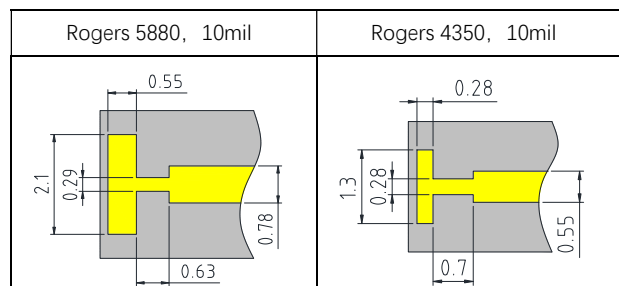


## Recommended Assembly Diagrams



## 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.