

## Feature

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

## Environmental Specifications

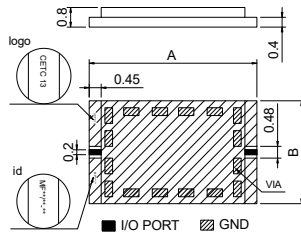
Operating Temperature	-55°C~+85°C
Storage Temperature	-55°C~+125°C
Max. Input Power	35dBm

## Electrical Specifications(T<sub>A</sub>=+25°C)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f <sub>0</sub> )	-	12.5	-	GHz
Pass Band	11.0	-	14.0	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f <sub>0</sub>	-	-	2.0	dB
Return Loss	15	-	-	dB
Out of band	≥ 30@9.9GHz&15.2GHz		-	dB
	≥ 40@9.6GHz&15.5GHz		-	dB
Attenuation	≥ 60@DC~8.8GHz		-	dB
	≥ 55@15.9~19GHz		-	dB
Group Delay Variation	≤ 0.5@11~14GHz		-	ns
Linear Phase	≤ ±10@11~14GHz		-	°

S2P file name: SiMF12R5\_3-8D2.s2p

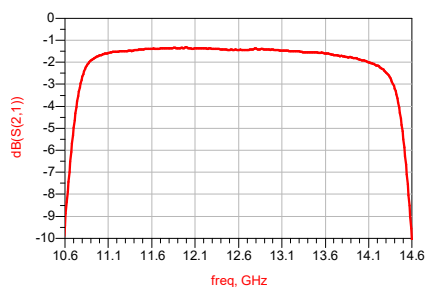
## Outline Drawing



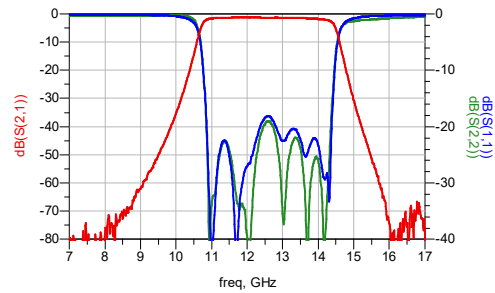
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	6.9	-	7.0
B	3.1	-	3.2

## Typical Test Curves

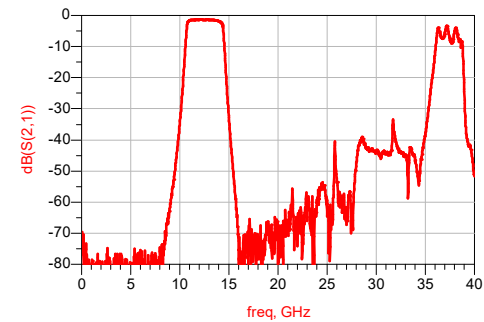
Insertion Loss VS Frequency (T<sub>A</sub>=25°C)



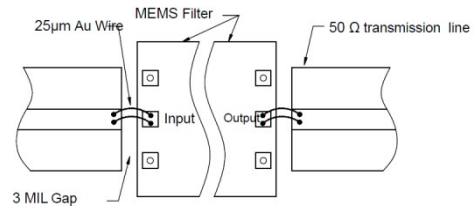
Insertion Loss & Return Loss VS Frequency (T<sub>A</sub>=25°C)



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

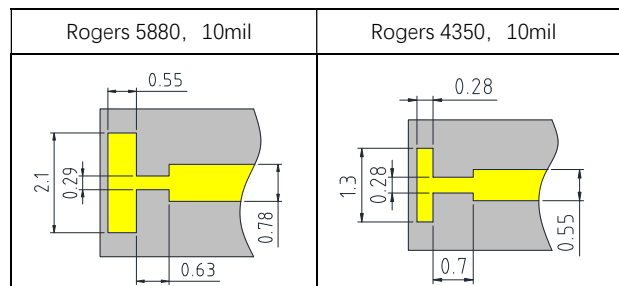


## Recommended Assembly Diagrams



## 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.