

Feature

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

Environmental Specifications

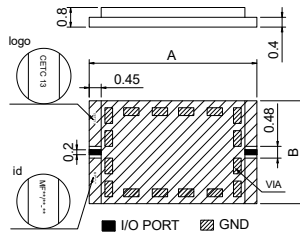
Operating Temperature	-55°C~+85°C
Storage Temperature	-55°C~+125°C
Max. Input Power	35dBm

Electrical Specifications(T_A=+25°C)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f ₀)	-	12.0	-	GHz
Pass Band	10.0	-	14.0	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f ₀	-	-	3.8	dB
Return Loss	13	-	-	dB
Out of band Attenuation	≥ 30@8.5GHz&15.6GHz		-	dB
	≥ 40@8.2GHz&15.8GHz		-	dB
Attenuation	≥ 60@DC~7GHz		-	dB
	≥ 55@16~20GHz		-	dB
Group Delay Variation	≤ 1@10.0~14.0GHz		-	ns
Linear Phase	≤ ±6@10.0~14.0GHz		-	°

S2P file name: SiMF12_4-9D2.s2p

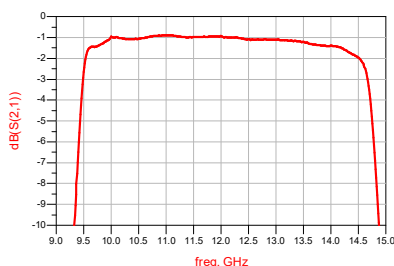
Outline Drawing



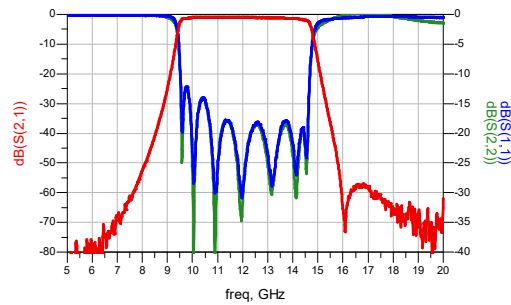
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	6.9	-	7.0
B	3.1	-	3.2

Typical Test Curves

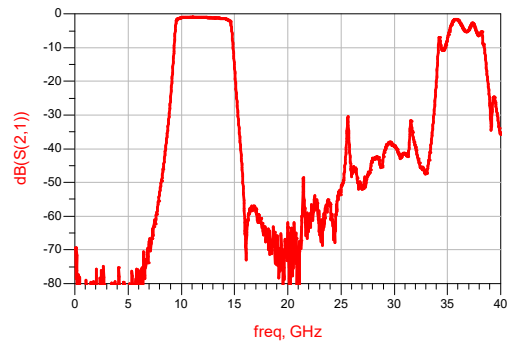
Insertion Loss VS Frequency (T_A=25°C)



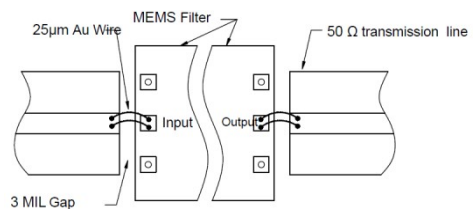
Insertion Loss & Return Loss VS Frequency (T_A=25°C)



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

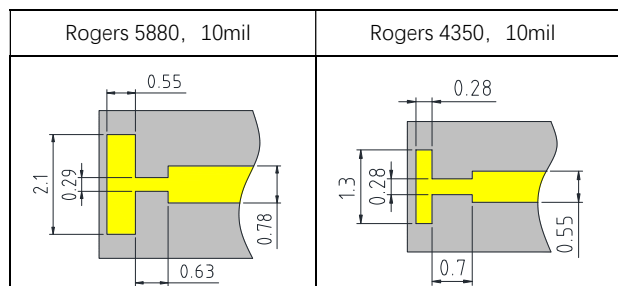


Recommended Assembly Diagrams



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.