Sainty-Tech Communications Limited

SiMF16/4-8D2
MEMS Bandpass Filter

Feature

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

Environmental Specifications

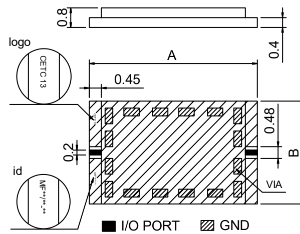
Operating Temperature	-55℃~+85℃
Storage Temperature	-55℃~+125℃
Max. Input Power	35dBm

Electrical Specifications(T_A=+25℃)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f_0)	-	16	-	GHz
Pass Band	14	-	18	GHz
Ripple in Pass band	-	-	1.0	dB
Insertion Loss @ f_0	-	-	1.5	dB
Return Loss	15	-	-	dB
Out of band Attenuation	⩾30@12.7GHz&19.4GHz			dB
	⩾40@12GHz&19.7GHz			dB
	⩾60@DC~11GHz			dB
	⩾50@19.9~27GHz			dB
Group Delay Variation	⩽0.8@14~18GHz			ns
Linear Phase	⩽±23@14~18GHz			°

S2P file name: SiMF16_4-8D2.s2p

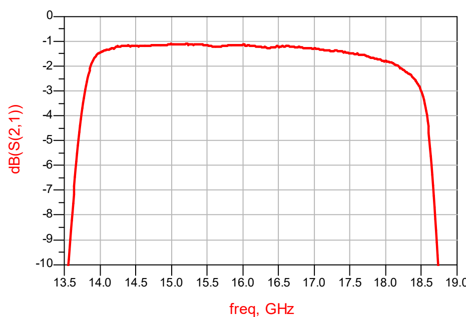
Outline Drawing



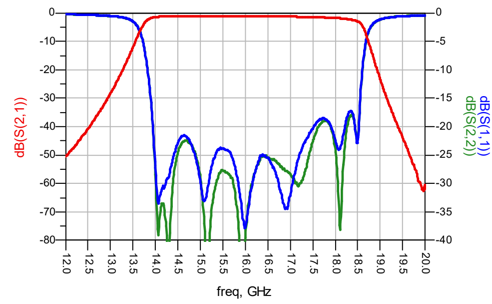
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	6.9	-	7.0
B	2.6	-	2.7

Typical Test Curves

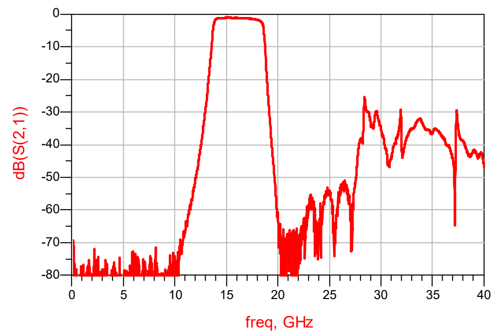
Insertion Loss VS Frequency (T_A=25℃)



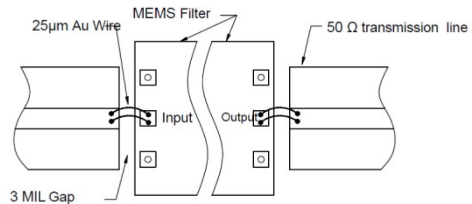
Insertion Loss & Return Loss VS Frequency (T_A=25℃)



Broadband Insertion Loss VS Frequency (T_A=25℃)



Recommended Assembly Diagrams



Application Notes:

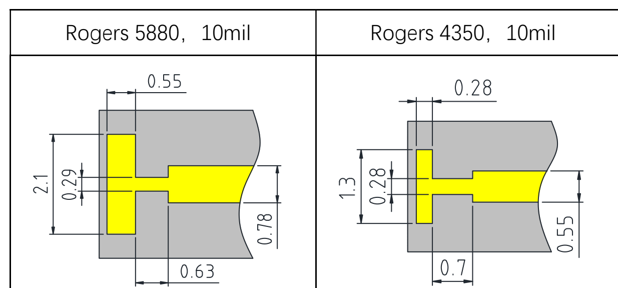
1. The chip is back-metalized and can be die mounted with AuSn eutectic performs or with electrically conductive epoxy (for example ME8456).

2. The die should be assembled on carriers like Kovar or Mu-Cu which have same Coefficient of thermal expansion. (2.9ppm/℃) 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.