

Feature

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

Environmental Specifications

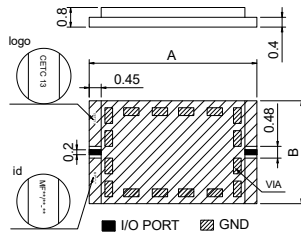
Operating Temperature	-55°C~+85°C
Storage Temperature	-55°C~+125°C
Max. Input Power	35dBm

Electrical Specifications(T_A=+25°C)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f ₀)	-	21	-	GHz
Pass Band	20	-	22	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f ₀	-	-	2.0	dB
Return Loss	15	-	-	dB
Out of band Attenuation	≥30@18.5GHz&23.1GHz			dB
	≥40@18.2GHz&23.3GHz			dB
Attenuation	≥60@DC~14.5GHz			dB
	≥50@23.5~27GHz			dB
Group Delay Variation	≤0.5@20~22GHz			ns
Linear Phase	≤±10@20~22GHz			°

S2P file name: SiMF21_2-7D2.s2p

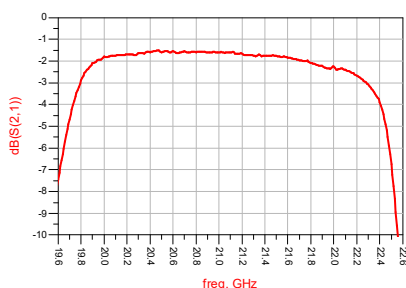
Outline Drawing



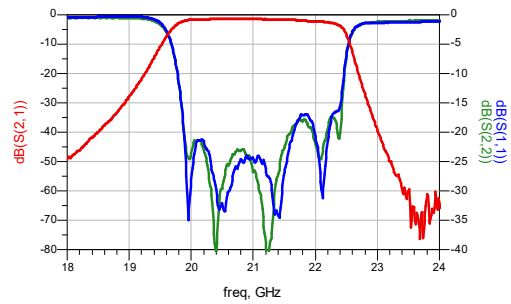
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	6.9	-	7.0
B	2.4	-	2.5

Typical Test Curves

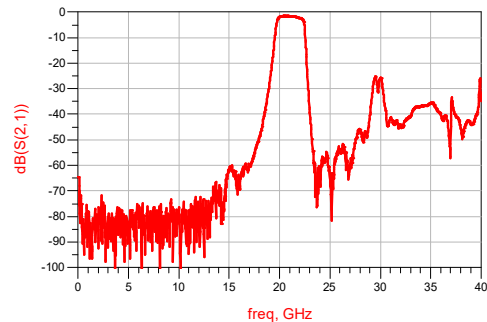
Insertion Loss VS Frequency (T_A=25°C)



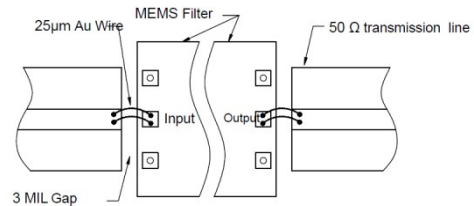
Insertion Loss & Return Loss VS Frequency (T_A=25°C)



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

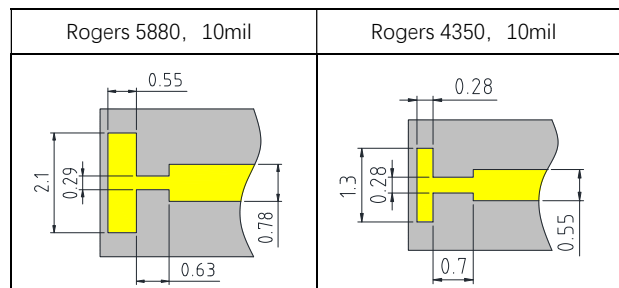


Recommended Assembly Diagrams



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.