

Feature

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

Environmental Specifications

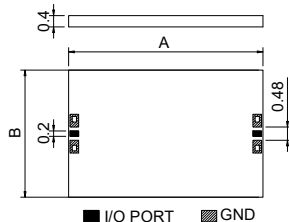
Operating Temperature	-55°C~+85°C
Storage Temperature	-55°C~+125°C
Max. Input Power	35dBm

Electrical Specifications($T_A = +25^\circ\text{C}$)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f_0)	-	22.4	-	GHz
Pass Band	21.8	-	23	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f_0	-	-	2.5	dB
Return Loss	12	-	-	dB
Out of band Attenuation	≥ 30 @20.7GHz&24.4GHz			dB
	≥ 40 @20.2GHz&25GHz			dB
	≥ 45 @DC~17GHz			dB
	≥ 45 @25.2~31GHz			dB
Group Delay Variation	≤ 0.5 @21.8~23GHz			ns
Linear Phase	$\leq \pm 5$ @21.8~23GHz			°

S2P file name: SiMS22R4_1R2-5P2.s2p

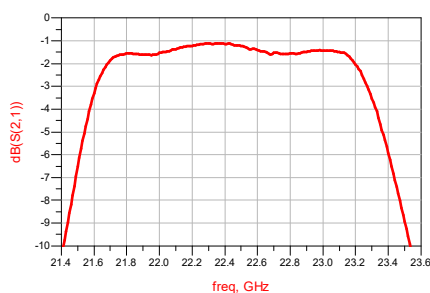
Outline Drawing



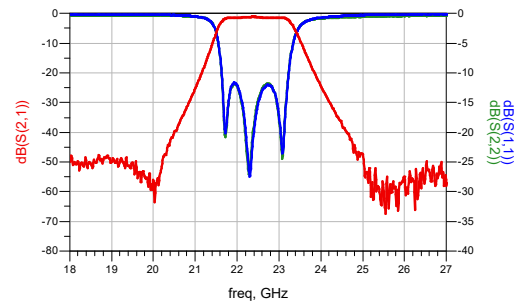
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	8.4	-	8.5
B	3.3	-	3.4

Typical Test Curves

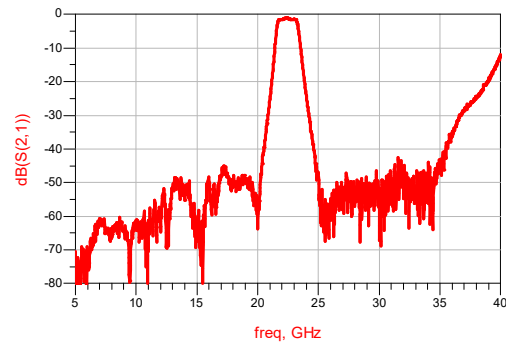
Insertion Loss VS Frequency ($T_A = 25^\circ\text{C}$)



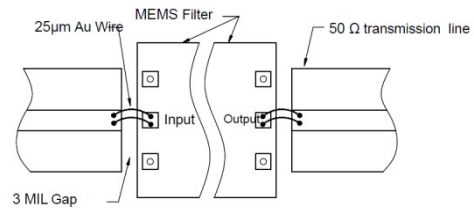
Insertion Loss & Return Loss VS Frequency ($T_A = 25^\circ\text{C}$)



Broadband Insertion Loss VS Frequency ($T_A = 25^\circ\text{C}$)

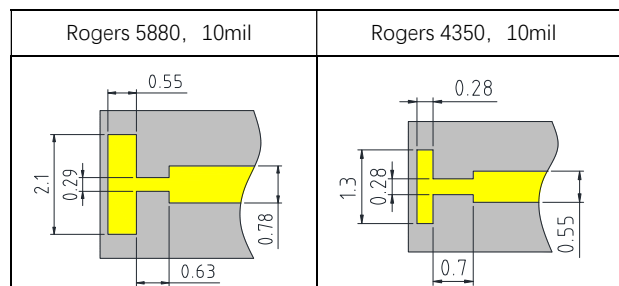


Recommended Assembly Diagrams



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.