Feature

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

Environmental Specifications

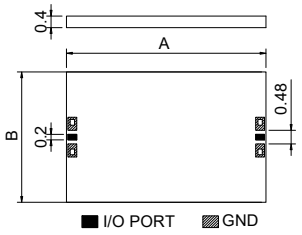
Operating Temperature	-55℃~+85℃
Storage Temperature	-55℃~+125℃
Max. Input Power	35dBm

Electrical Specifications(T_A=+25℃)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f_0)	-	21.8	-	GHz
Pass Band	21.2	-	22.4	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f_0	-	-	3.5	dB
Return Loss	12	-	-	dB
Out of band Attenuation	≥30@20.3GHz&23.2GHz			dB
	≥40@19.8GHz&23.3GHz			dB
	≥55@DC~19GHz			dB
	≥50@24~32GHz			dB
Group Delay Variation	≤0.5@21.2~22.4GHz			ns
Linear Phase	≤±5@21.2~22.4GHz			°

S2P file name: SiMS21R8_1R2-8D3.s2p

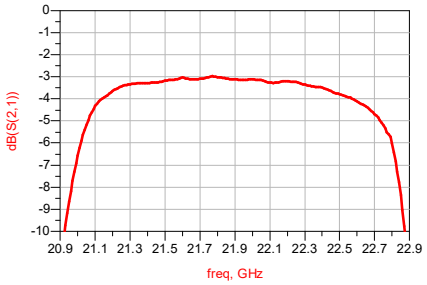
Outline Drawing



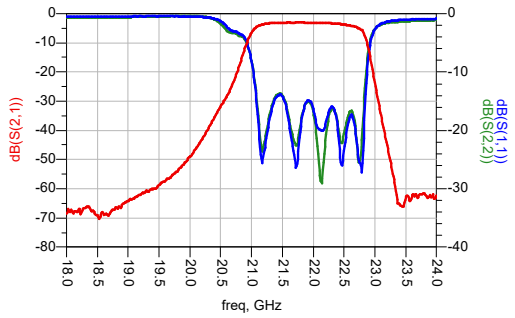
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	9.4	-	9.5
B	3.4	-	3.5

Typical Test Curves

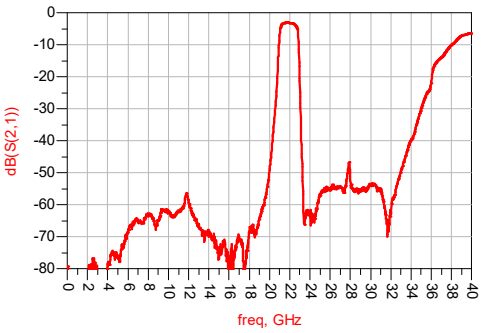
Insertion Loss VS Frequency (T_A=25℃)



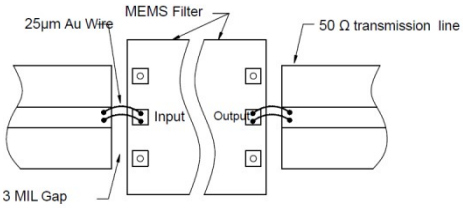
Insertion Loss & Return Loss VS Frequency (T_A=25℃)



Broadband Insertion Loss VS Frequency (T_A=25℃)



Recommended Assembly Diagrams



Application Notes:

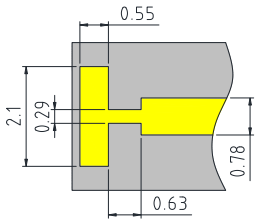
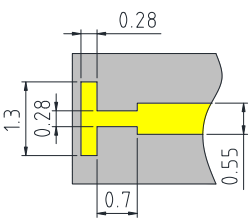
1. The chip is back-metalized and can be die mounted with AuSn eutectic performs or with electrically conductive epoxy (for example ME8456).

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.

Rogers 5880, 10mil	Rogers 4350, 10mil
	

6. If you have any questions, please contact us.