Sainty-Tech Communications Limited

SiMS6R4/R4-6D3
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

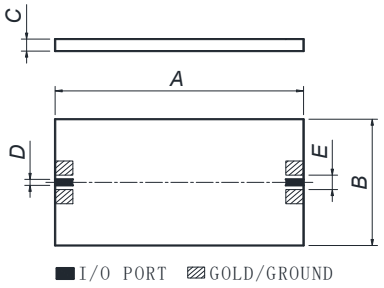
Operating Temperature	-55℃~+85℃
Storage Temperature	-55℃~+125℃
Max. Input Power	35dBm

Electrical Specifications(T_A=+25℃)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f_0)	-	6.45	-	GHz
Pass Band	6.3	-	6.6	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f_0	-	-	2.5	dB
Return Loss	15	-	-	dB
Out of band Attenuation	≥30@5.85GHz&7GHz			dB
	≥40@5.8GHz&7.2GHz			dB
	≥60@DC~4GHz			dB
	≥50@10~15GHz			dB
Group Delay Variation	≤2@6.3~6.6GHz			ns
Linear Phase	≤±10@6.3~6.6GHz			°

S2P file name: SiMS6R4_R4-6D3.s2p

Outline Drawing

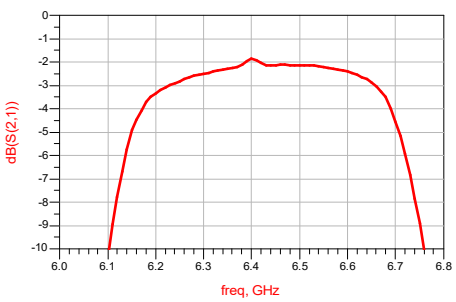


■I/O PORT ▨GOLD/GROUND

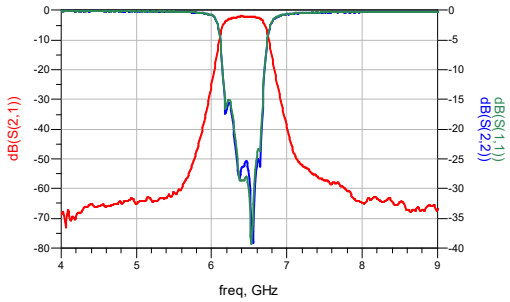
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	7.9	-	8.0
B	5.9	-	6.0

Typical Test Curves

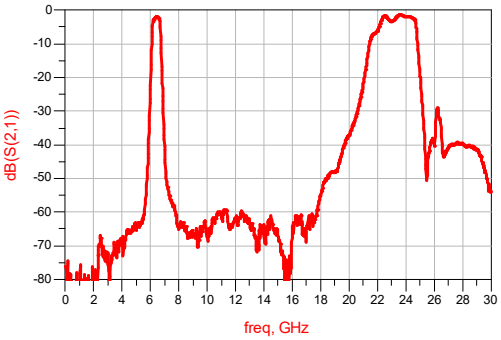
Insertion Loss VS Frequency (T_A=25℃)



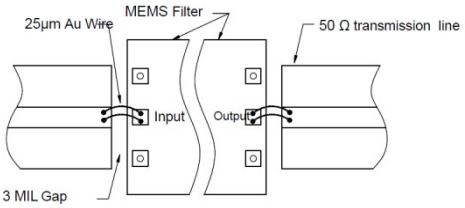
Insertion Loss & Return Loss VS Frequency (T_A=25℃)



Broadband Insertion Loss VS Frequency (T_A=25℃)



Recommended Assembly Diagrams



Application Notes:

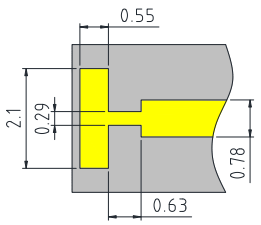
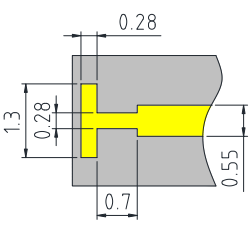
1. The chip is back-metalized and can be die mounted with AuSn eutectic performs or with electrically conductive epoxy (for example ME8456).

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.

Sales contact- Tel: +86 (25) 52635773 Fax: +86 (25) 52632557 Email: sales@sainty-tech.com www.sainty-tech.com