

## 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<sub>A</sub>=+25°C)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f <sub>0</sub> )	-	27.45	-	GHz
Pass Band	25.9	-	29	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f <sub>0</sub>	-	-	0.9	dB
Return Loss	15	-	-	dB
Out of band Attenuation	≥30@23.6GHz&30.84GHz			dB
	≥40@20.85GHz&31.3GHz			dB
Attenuation	≥60@DC~7.04GHz			dB
	≥60@36.6~39.2GHz			dB
Group Delay Variation	≤0.3@25.9~29GHz			ns
Linear Phase	≤±8@25.9~29GHz			°

S2P file name: SiMF27R45\_3R1-5W1.s2p

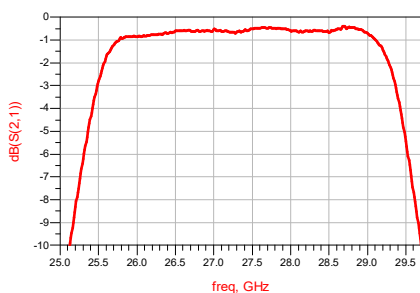
## Outline Drawing



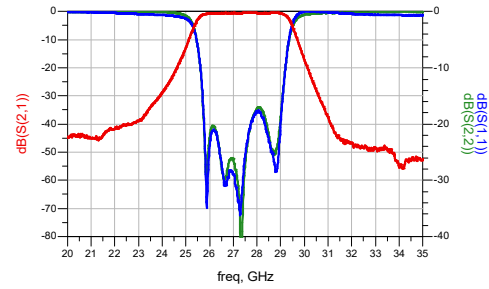
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	5.9	-	6.0
B	3.9	-	4.0

## Typical Test Curves

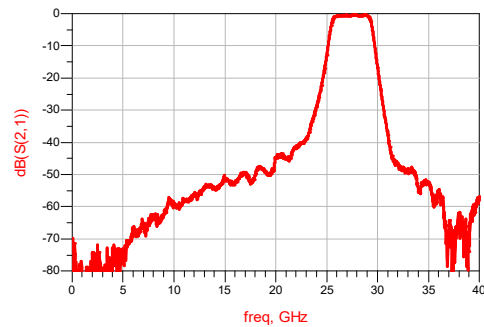
Insertion Loss VS Frequency (T<sub>A</sub>=25°C)



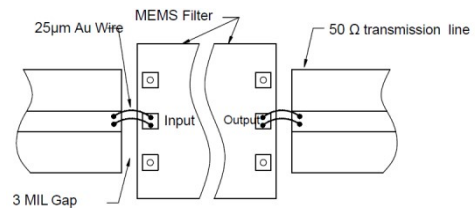
Insertion Loss & Return Loss VS Frequency (T<sub>A</sub>=25°C)



Broadband Insertion Loss VS Frequency (T<sub>A</sub>=25°C)

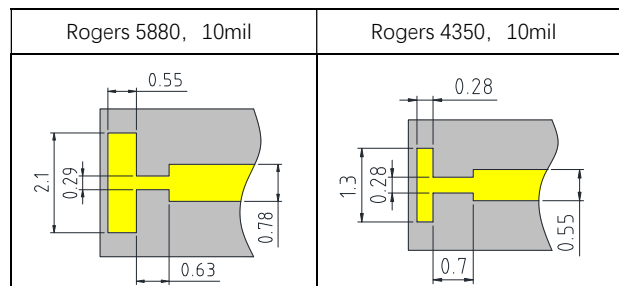


## Recommended Assembly Diagrams



## 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.