



MTB0910A

8.9-9.3 GHz Bandpass Filter

Features

- Low Loss with High Rejection
- Low ripple

Applications

- X-Band Radar
- X-Band Satcom
- Specialty wireless applications

Description

Surface mount ceramic bandpass filter. Superior rejection, insertion loss, reliability, as well as both peak and average power handling compared other bandpass filter technologies.

Electrical Specifications

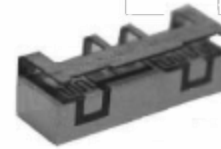
Parameter	Frequency (GHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Nominal Impedance	-	50 ohms	-	-
Average Input Power	-	-	-	2.0 Watt max
Peak Input Power	-	-	-	20 Watt max

Input-Output Response

Passband Insertion Loss (single point)	8.90 – 9.30	2.5 dB	3.0 dB min	3.0 dB min
Passband Return Loss	8.90 – 9.30	14 dB	12 dB min	12 dB min
Group Delay Variation (Max-Min)	8.90 – 9.30	3.0 ns	10 ns max	10 ns max
Attenuation:	1 - 8.42	34 dB	30 dB min	30 dB min
	8.70	33 dB	20 dB min	20 dB min
	8.80	11 dB	10 dB min	10 dB min
	9.40	10.5 dB	10 dB min	10 dB min
	9.50	28 dB	20 dB min	20 dB min
	9.78	34 dB	30 dB min	30 dB min

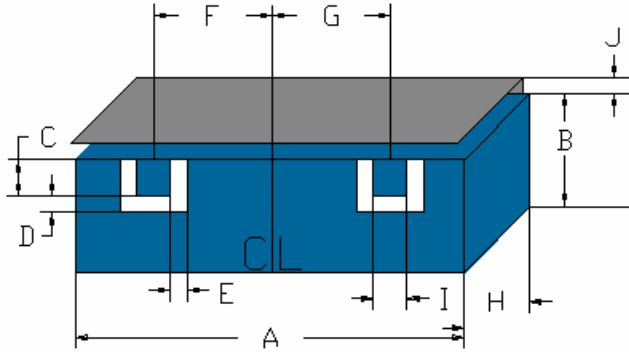
Note: CTS tests each unit to the critical specifications above. Subsequent audits may deviate due to repeatability among different test systems which shall not exceed these allowances.

Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB



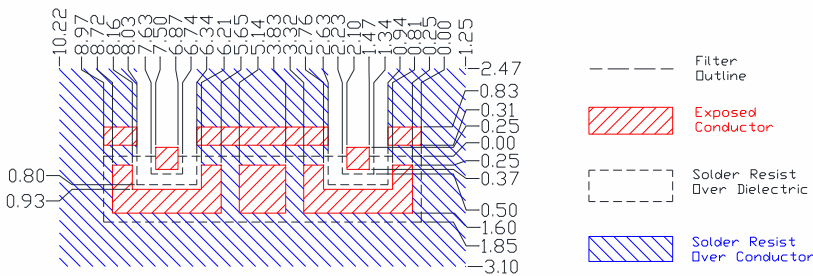
Part Dimensions: 9.0 x 2.7 x 3.1 mm • 0.15 g
Materials: Ag plated ceramic block with tin plated brass shield

Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	8.97	max
B	1.85	max
C	0.50	0.13
D	0.30	0.13
E	0.40	0.13
F	2.70	0.13
G	2.70	0.13
H	3.10	max
I	0.89	0.13
J	0.63	0.20

PCB Layout

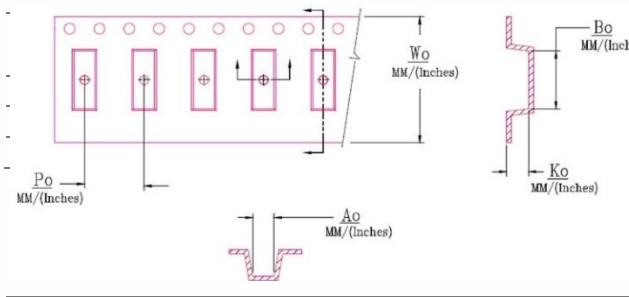


IMPORTANT: Please assure ≥ 30 mils (0.75mm) thickness of dielectric beneath the I/O Pads and the surrounding clearance zone down to the ground plane.

Please assure sufficient ground vias between the top metal ground plane and the primary ground plane.

Recommended solder: 4-6 mils of SAC305 with reflow incl. 120s of soak at 217°C, and up to 30 sec peak at 241°C.

Packaging and Marking



W_o	A_o	B_o	K_o	P_o
0.945 in 24.0 mm	0.098 in 2.50 mm	0.366 in 9.30 mm	0.132 in 3.35 mm	0.315 in 8.0 mm

Electrical Response

