CER1110A

1450-1470 MHz Filter

Part Dimensions: 9.0 × 7.9 × 2.9 mm • 0.9 g
Materials: Ag plated ceramic block

Features

- Low Loss with High Rejection
- Low ripple

Applications

- Wireless Infrastructure 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.

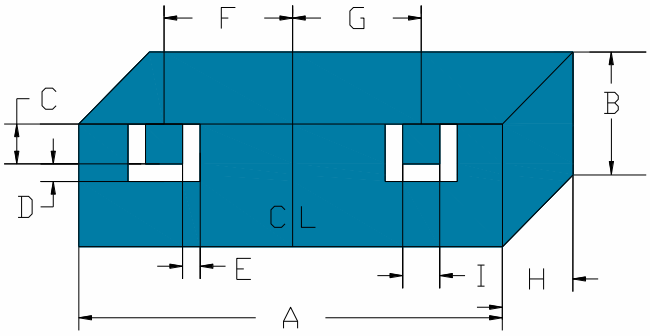
Electrical Specifications

Parameter	Frequency (MHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Nominal Impedance	-	50 ohms	-	-
Average Input Power	-	-	-	1.0 Watt max
Peak Input Power	-	-	-	10 Watt max
Input-Output Response				
Passband Insertion Loss	1450-1470	5.1 dB	<= 5.3 dB min	<= 5.5 dB min
Passband Return Loss	1450-1470	12 dB	>= 10.0 dB min	>= 10.0 dB min
Attenuation:	1437.5	21 dB	>= 20 dB min	>= 20 dB min
	1482.5	21 dB	>= 20 dB min	>= 20 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.

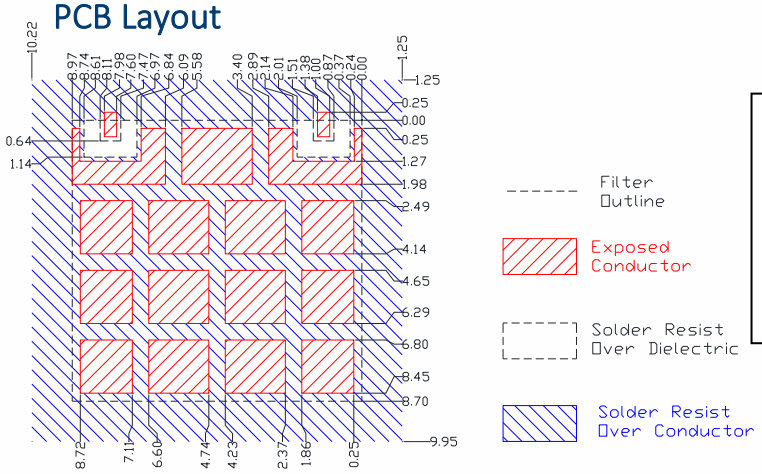
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	8.97	max
B	7.90	max
C	0.89	0.13
D	0.40	0.13
E	0.40	0.13
F	2.70	0.13
G	2.70	0.13
H	2.90	max
I	0.89	0.13

PCB Layout

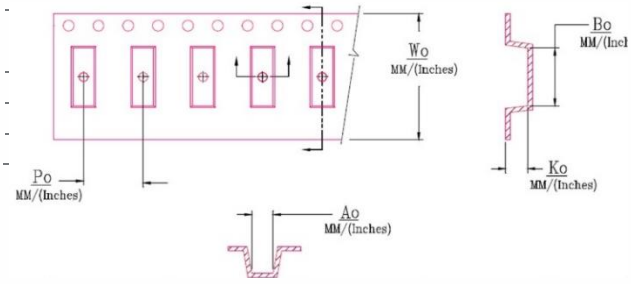


IMPORTANT: Please assure >=30mils (0.75mm) thickness of dielectric beneath the I/O Pads and the surrounding clearance zone down to the ground plane.

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 including 120s of soak at 217°C, and up to 30 sec peak at 241°C.

Packaging and Marking

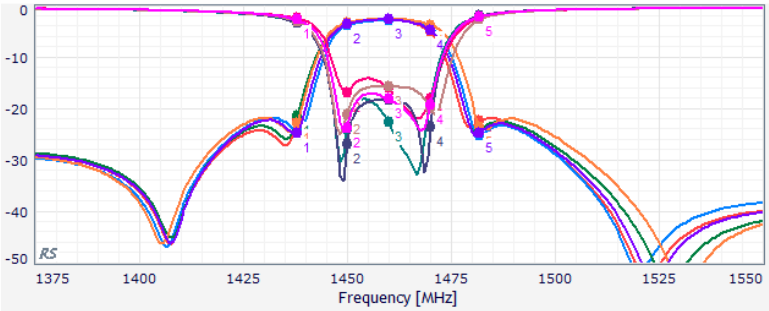


W_o	A_o	B_o	K_o	P_o
0.945 in 24.0 mm	0.319 in 8.10 mm	0.364 in 9.25 mm	0.134 in 3.40 mm	0.472 in 12.0 mm

Product Marking

CTS
110
YWW

Electrical Response



Marker	1	2	3	4	5
Freq[MHz]	1438	1450	1460	1470	1482
S21[dB](1)	-21.8	-3.29	-2.6	-4.95	-22.4
S21[dB](2)	-24.4	-3.72	-2.7	-4.2	-25.1
S21[dB](3)	-21.4	-3.27	-2.58	-4.51	-24.2
S21[dB](4)	-22.7	-3.16	-2.44	-3.57	-23.4
S21[dB](5)	-24.6	-3.47	-2.6	-4.55	-24.6
S22[dB](1)	-3.11	-23.9	-22.5	-18.4	-1.9