CER1102B

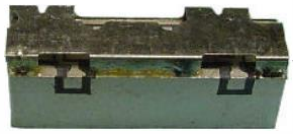
1160-1300 MHz Bandpass Filter

Features

- Low Loss and low Ripple with High Rejection

Applications

- Specialized L2 + L5 + E6 GPS filter



Part Dimensions: 21.6 × 9.8 × 4.0 mm • TBD g
Materials: Ag plated ceramic block with tin plated brass shield

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 -55°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	1160-1300	4.2 dB	4.5 dB max	4.7 dB max
Passband Return Loss	1160-1300	14 dB	12~~13~~ dB min	12~~13~~ dB min
Group Delay over Passband	1160-1300	46~~45~~ ns	55~~47~~ ns max	60~~49~~ ns max
Group Delay Ripple (Max-Min over passband)	1160-1300	37~~35~~ ns	45~~37~~ ns max	50~~39~~ ns max
Attenuation:	790	80 dB	65~~70~~ dB min	65~~70~~ dB min
	960	75 dB	62~~65~~ dB min	62~~65~~ dB min
	1057	70 dB	60 dB min	60 dB min
	1148	26 dB	25 dB min	24 dB min
	1317	26 dB	23 dB min	22 dB min
	1427	65 dB	55 dB min	55 dB min
	1710	70 dB	55~~65~~ dB min	55~~65~~ dB min
	1937	65 dB	55 dB min	55 dB min
	2200	58 dB	50 dB min	50 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

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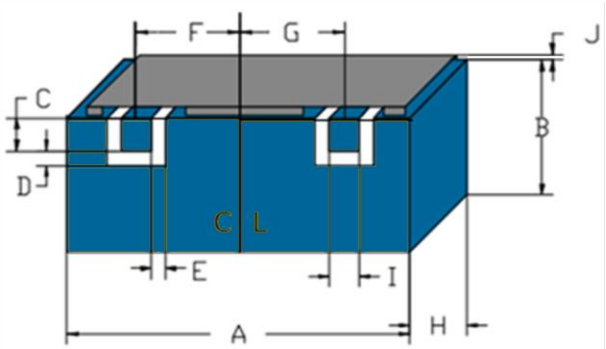
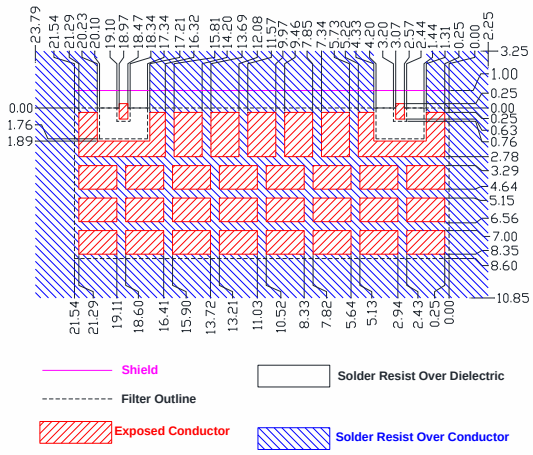
Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	21.54	max
B	8.60	max
C	0.76	0.13
D	1.00	0.13
E	1.00	0.13
F	7.95	0.13
G	7.95	0.13
H	4.00	max
I	0.76	0.13
J	1.00	0.20

PCB Layout



IMPORTANT: Please assure >=20mils (0.5mm) thickness of dielectric beneath the I/O Pads and the surrounding clearance zone down to the required 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.

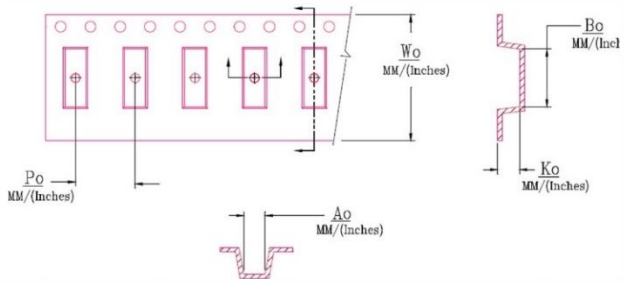
Packaging and Marking

Dimension	Units	Spec.
Reel Diameter	mm	330
Reel Weight	kg	???
Reel Quantity	ea.	500

Product Marking

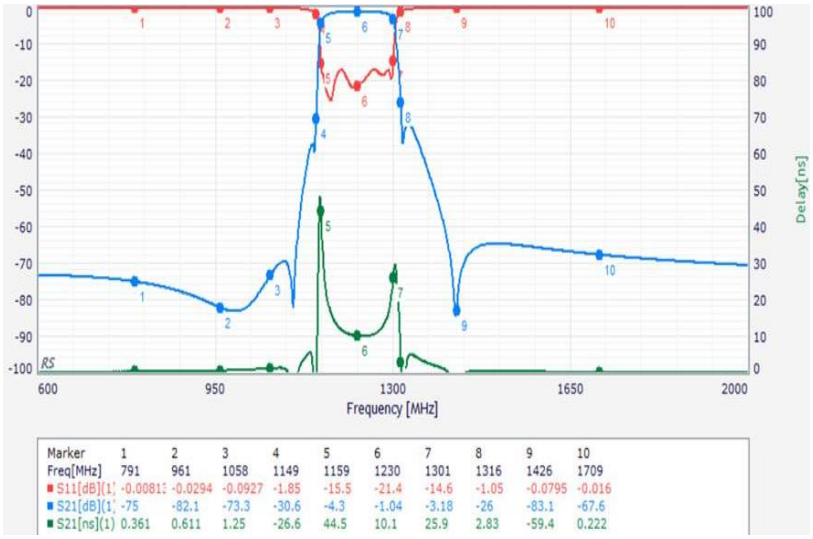
CTS
102B
YWW

Customer Feed Direction → → →



W_o	A_o	B_o	K_o	P_o
1.732 in	0.398 in	0.865 in	0.165 in	0.630 in
44.0 mm	10.1 mm	21.97 mm	4.20 mm	16.0 mm

Electrical Response



Marker	1	2	3	4	5	6	7	8	9	10
Freq[MHz]	791	961	1058	1149	1159	1230	1301	1316	1426	1709
S11[dB](1'	-0.0081	-0.0294	-0.0927	-1.85	-15.5	-21.4	-14.6	-1.05	-0.0795	-0.016
S21[dB](1'	-75	-82.1	-73.3	-30.6	-4.3	-1.04	-3.18	-26	-83.1	-67.6
S21[ns](1)	0.361	0.611	1.25	-26.6	44.5	10.1	25.9	2.83	-59.4	0.222

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