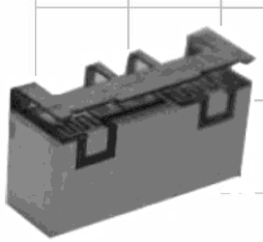
CER1138A

1160-1240MHz Bandpass Filter



Part Dimensions: 10.0 × 5.3 × 4.0 mm • < 1 g
Materials: Ag plated ceramic block

Features

- Low and tightly-controlled GDV
- Low loss which providing consistent rejection

Applications

- Specialty applications

Description

Surface mount ceramic bandpass filter with superior product uniformity, group delay, rejection, insertion loss, reliability, as well as both peak and average power handling compared other bandpass filter technologies.

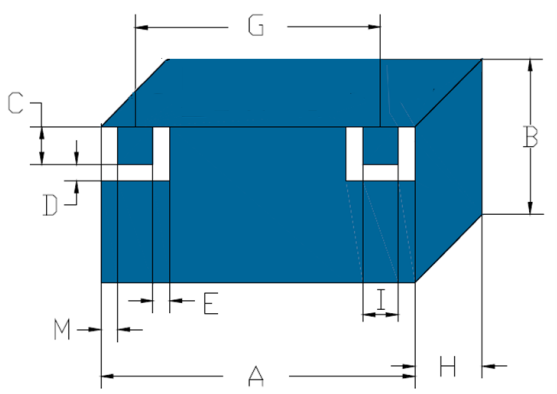
Electrical Specifications

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	-	-	-	2.0 Watt max
Peak Input Power	-	-	-	20 Watt max
Input-Output Response				
Passband Insertion Loss	1160-1240	1.4 dB	1.6 dB max	1.8 dB max
	1190-1210	1.1 dB	1.3 dB max	1.5 dB max
Passband Return Loss	1160-1240	14 dB	12 dB min	12 dB min
Group Delay Variation (max-min)	**1190-1210**	0.4 ns	0.7 ns max	0.7 ns max
Attenuation:	1-**1100**	22 dB	20 dB min	20 dB min
	1300-2000	22 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.

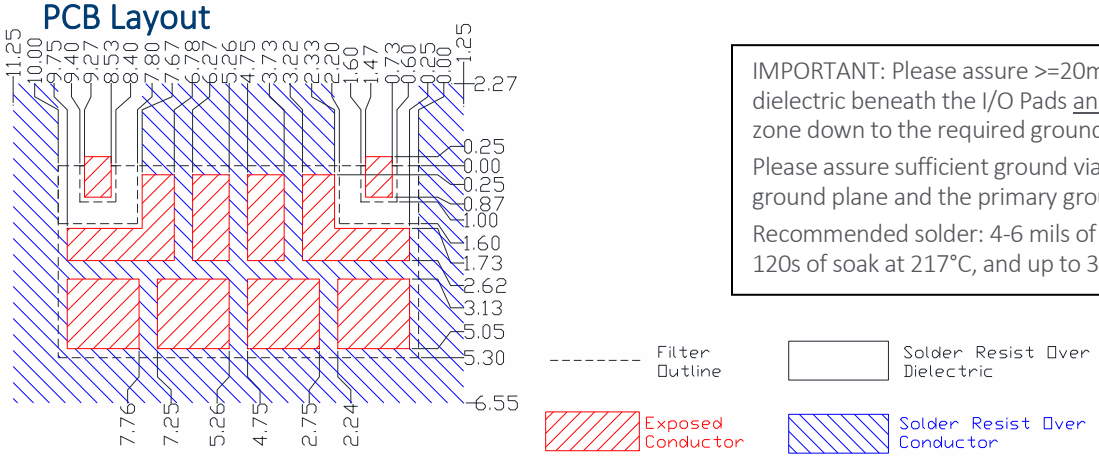
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	10.00	max
B	5.30	max
C	1.00	0.13
D	0.60	0.13
E	0.60	0.13
G	7.80	0.13
H	4.00	max
I	1.00	0.13
M	0.55	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.

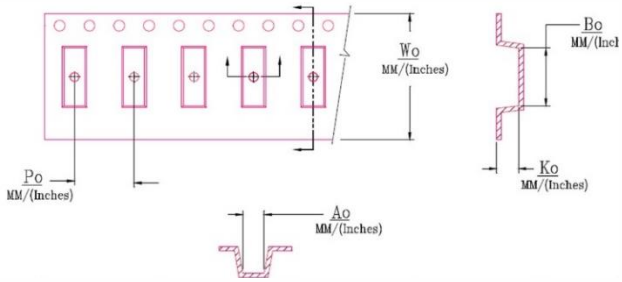
Packaging and Marking

Dimension	Units	Spec.
Reel Diameter	mm	330
Reel Weight	kg	1.6
Reel Quantity	ea.	1000

Product Marking

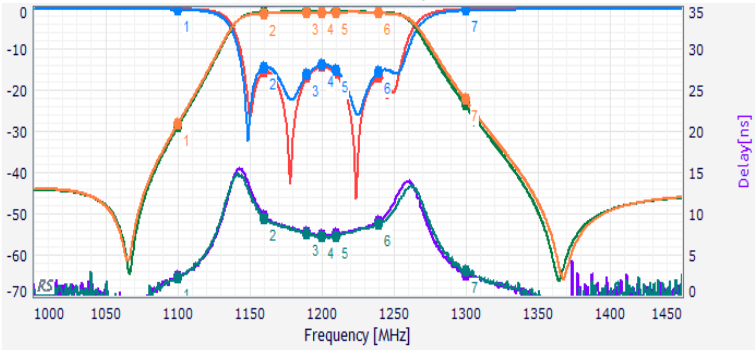
CTS
138
YYWW

Customer Feed Direction → → →



W_o	A_o	B_o	K_o	P_o
0.945 in 24.0 mm	0.217 in 5.50 mm	0.406 in 10.30 mm	0.169 in 4.30 mm	0.472 in 12.0 mm

Electrical Response



Marker	1	2	3	4	5	6	7
Freq[MHz]	1100	1160	1190	1200	1210	1240	1300
S11[dB](1)	-0.238	-15.6	-16.9	-14.3	-16	-17	-0.283
S11[dB](2)	-0.364	-14.3	-16.2	-13.8	-15.1	-15.5	-0.586
S21[dB](1)	-28.9	-1.18	-0.946	-1	-0.977	-1.12	-23.6
S21[dB](2)	-28.2	-1.36	-1.04	-1.09	-1.06	-1.23	-22.3
S21[ns](1)	2.48	9.78	7.74	7.46	7.54	9.1	2.52
S21[ns](2)	2.27	9.42	7.65	7.25	7.28	8.81	3.03