

MCB1300A - Preliminary

12.75-13.25GHz mmWave ClearPlex® Bandpass Filter

Features

- High-Q Low-Loss with High Rejection
- Support for wider passbands and stronger rejection

Applications

- mmWave carrier-grade Infrastructure applications



Part Dimensions: 15.5 × 3.0 × 1.3 mm • 0.2 g

Description

Surface mount ceramic waveguide bandpass filter with I/Os that can interface to micro-strip transmission lines on the top-layer of customer PCBs. Superior rejection, insertion loss, reliability, temperature stability as well as both peak and average power handling compared to other mmWave bandpass filter technologies.

Electrical Specifications

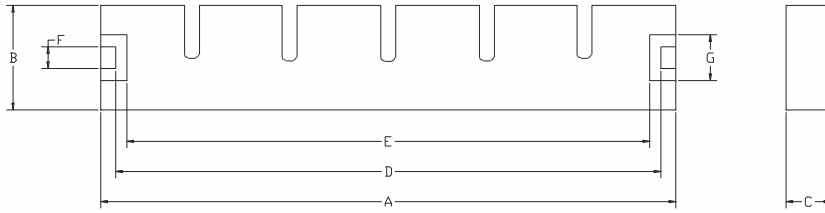
Parameter	Frequency (GHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Nominal Impedance	-	50 ohms	-	-
Average Input Power	-	-	-	5.0 Watt max
Peak Input Power	-	-	-	50 Watt max
Input-Output Response				
Passband Insertion Loss (400MHz avg)	12.75 – 13.25	2.7 dB	2.9 dB Max	3.0 dB Max
Passband Ripple	12.75 – 13.25	0.6 dB	0.9 dB Max	1.0 dB Max
Passband Return Loss	12.75 – 13.25	14 dB	12 dB min	12 dB Min
Attenuation:	< 11.8	53 dB	50 dB min	50 dB min
	13.7 - TBD	32 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

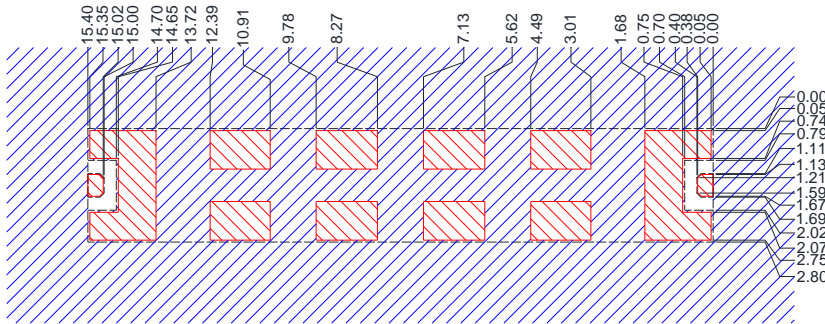
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	15.40	0.10
B	2.80	0.20
C	1.10	0.20
D	14.60	0.13
E	14.00	0.13
F	0.58	0.13
G	1.23	0.13

PCB Layout

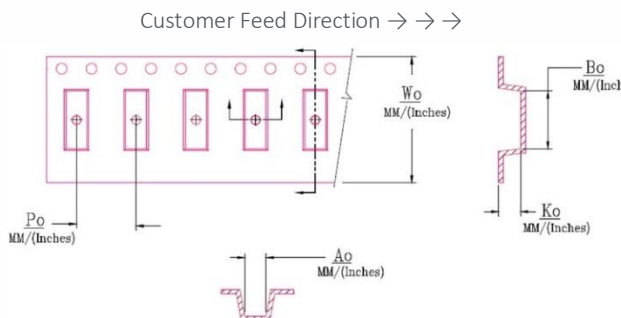


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	Exposed Conductor
	Solder Resist Over Dielectric
	Solder Resist Over Conductor

Packaging and Marking

Dimension	Units	Spec.
Reel Diameter	mm	330
Reel Weight	kg	x.x
Reel Quantity	ea.	Xxx

Product Marking
(TBD on
the filters)



W_0	A_0	B_0	K_0	P_0
0.945 in 24.0 mm	0.118 in 3.0 mm	0.622 in 15.8 mm	0.063 in 1.6 mm	0.315 in 8.0 mm

Electrical Response

