



# CER1059A - Preliminary

## 470-590 MHz Bandpass Filter

### Features

- Low Loss with High Rejection

### 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.



Part Dimensions: 16.7 × 11.0 × 4.8 mm • 4.1 g  
Materials: Ag plated ceramic block with tin plated brass shield

### 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	470 - 590	1.4 dB	1.8 dB max	2.0 dB max
Passband Ripple	470 - 590	0.8 dB	1.0 dB max	1.1 dB max
Passband Return Loss	470 - 590	12.0 dB	10.0 dB min	10.0 dB min
Attenuation:	390	60 dB	50.0 dB min	50.0 dB min
	420	50 dB	25.0 dB min	25.0 dB min
	650	35 dB	25.0 dB min	25.0 dB min
	710	52 dB	45.0 dB min	45.0 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

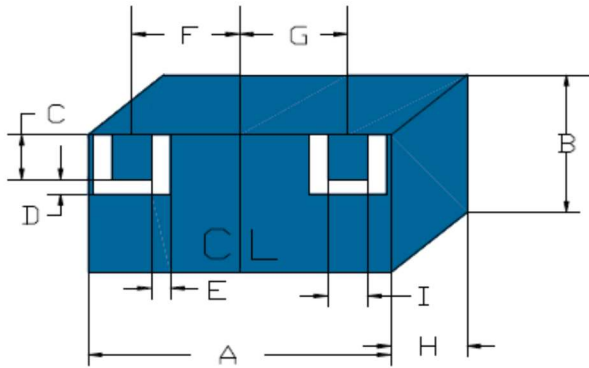
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB



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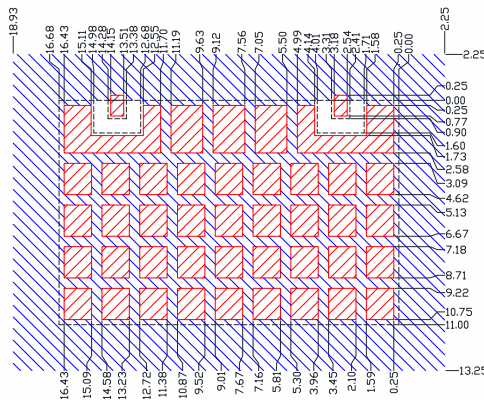
### Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	16.68	max
B	11.00	max
C	0.90	0.13
D	0.70	0.13
E	0.70	0.13
F	5.485	0.13
G	5.485	0.13
H	4.80	max
I	0.90	0.13

### PCB Layout

Mechanicals and PCB layout modified based on actually shipped parts



IMPORTANT: Please assure  $\geq 20$  mils (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.

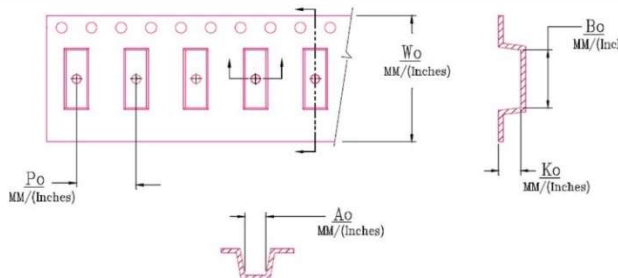
Recommended solder: 4-6 mils of SAC305 with reflow including 120s of soak at 217°C, and up to 30 sec peak at 241°C.



### Packaging and Marking

Dimension	Units	Spec.	Product Marking
Reel Diameter	mm	330	CTS
Reel Weight	kg	3.1	059
Reel Quantity	ea.	500	YWW

Customer Feed Direction → → →



$W_0$	$A_0$	$B_0$	$K_0$	$P_0$
1.260 in 32.0 mm	0.445 in 11.3 mm	0.657 in 16.7 mm	0.203 in 5.15 mm	0.630 in 16.0 mm

### Electrical Response

