

# MMB475A - Preliminary

## 4.6-4.9Hz MMB Series TDD BPF

### Features

- Low Loss with High Rejection
- Universal footprint across family for all TDD bands

### Applications

- Wireless Infrastructure applications
- High-performance carrier-grade TDD Pico-cells.



Part Dimensions: 40.0 × 5.0 × 9.3 mm • 4.8 g  
Materials: Ag plated ceramic block with tin plated brass shield

### Description

Surface mount ceramic bandpass filter supports a universal footprint across all TDD frequency bands enabling the use of a common system PCB. Superior rejection, insertion loss, reliability, as well as both peak and average power handling compared to 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	-	-	-	20.0 Watt max <b>TBC</b>
Peak Input Power	-	-	-	200 Watt max <b>TBC</b>

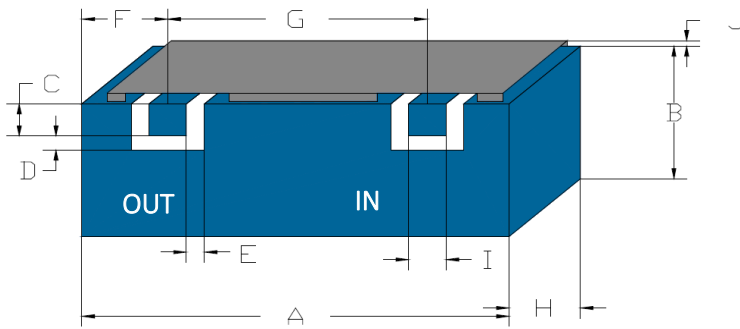
#### Input-Output Response

Parameter	Frequency (MHz)	Typical	Spec. at 25°C	Spec. over -40°C to +85°C
Passband Insertion Loss (100 MHz avg)	4600-4900	1.0 dB	1.2 dB max	1.3 dB max
	(20 MHz avg)	1.7 dB	1.9 dB max	2.0 dB max
Passband Ripple	4600-4900	1.6 dB	1.8 dB max	1.9 dB max
Passband Return Loss	4600-4900	14 dB	13 dB min	12 dB min
Attenuation:	1-4200			50 dB min
	4201-4540			30 dB min
	4541-4560			20 dB min
	4561-4580			5 dB min
	4920-4939			5 dB min
	4940-4959			20 dB min
	4960-5149			30 dB min
	5150-5950			50 dB min
	5151-7125			TBD ?30dB min?
	7126-9800			No spec assured

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.

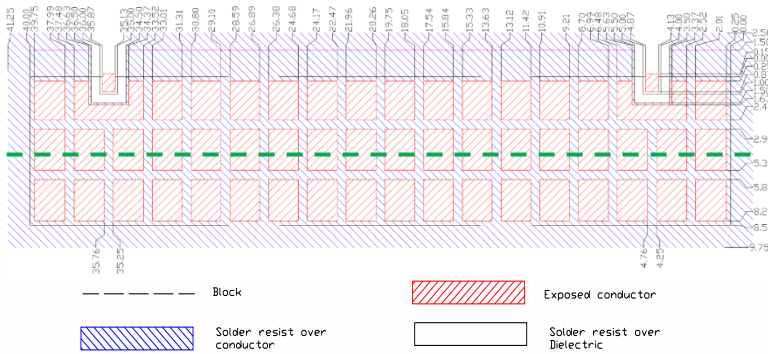
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

### Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	39.7	0.30
B	3.1	0.30
C	1.0	0.13
D	0.5	0.13
E	0.5	0.13
F	4.5	0.25
G	31.0	0.13
H	9.3	max
I	1.0	0.13
J	1.4	0.2

### PCB Layout



Combined 40mm & 50mm universal footprint PCB layout is also available.

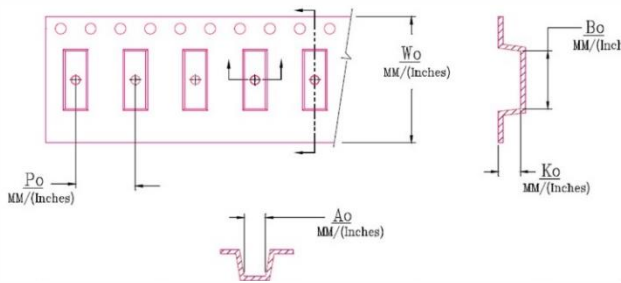
**IMPORTANT:** Please assure  $\geq 30$  mils (0.75mm) thickness of dielectric beneath the I/O Pads and the surrounding clearance zone down to the ground plane.  
Please assure sufficient ground vias between the top metal ground plane and the primary ground plane.  
Recommended solder: 6 mils of SAC305 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.	250

### Product Marking

CTS  
475  
YWW



$W_0$	$A_0$	$B_0$	$K_0$	$P_0$
2.205 in 56.0 mm	0.213 in 5.4 mm	1.587 in 40.3 mm	0.378 in 9.6 mm	0.630 in 16.0 mm

### Electrical Response

