MMB352A - Preliminary

3410-3640MHz MMB Series TDD BPF

Features

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

Applications

- Wireless Infrastructure applications

Part Dimensions: 40.0 × <8.0 × 9.3 mm • <10 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

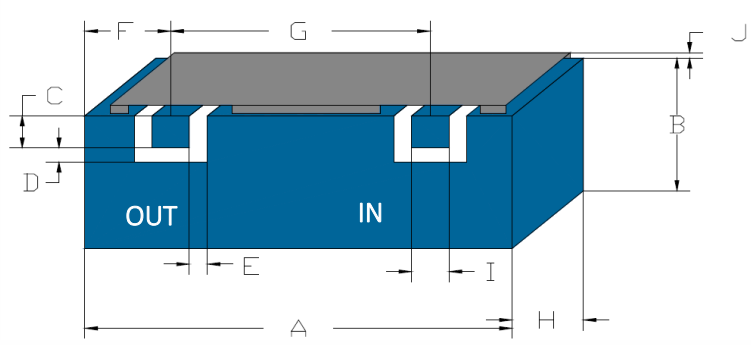
Parameter	Frequency (MHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Nominal Impedance	-	50 ohms	-	-
Average Input Power	-	-	-	5.0 Watt max
Peak Input Power	-	-	-	50 Watt max
Input-Output Response				
Passband Insertion Loss (single point)	3410-3430	3.7 dB	4.2 dB max	4.9 dB max
Passband Insertion Loss (20 MHz avg)	3410-3430	2.6 dB	2.9 dB max	3.0 dB max
Passband Insertion Loss (single point)	3430-3640	2.0 dB	2.5 dB max	2.5 dB max
Passband Insertion Loss (20 MHz avg)	3430-3640	1.6 dB	1.9 dB max	2.0 dB max
Passband Ripple	3410-3640	3.0 dB	3.4 dB max	4.2 dB max
Passband Ripple	3430-3640	1.3 dB	1.7 dB max	1.9 dB max
Passband Return Loss	3410-3640	13 dB	12 dB min	9.5 dB min
Attenuation:	1-3300	50 dB	45 dB min	45 dB min
	3301-3360	34 dB	30 dB min	30 dB min
	3361-3390	26 dB	24 dB min	24 dB min
	3391-3399.5	20 dB	19 dB min	17 dB min
	3660-3679	8 dB	6 dB min	6 dB min
	3680-3734	21 dB	15 dB min	15 dB min
	3735-3800	41 dB	25 dB min	25 dB min
	3801-5950	41 dB	38 dB min	38 dB min
	5951-7280	13 dB	10 dB min	10 dB min

IMPORTANT: Product will be rate for operation to +105°C in terms of reliability and operating life, but electrical specification limits are assured for up to +85°C, so there may be minor degradation from +86°C to +105°C.

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.

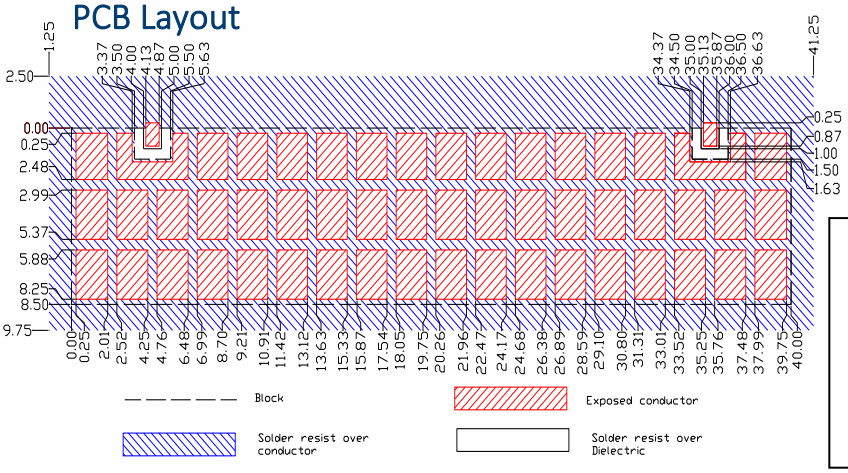
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	40.0	max
B	???	max
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 >=30mils (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.

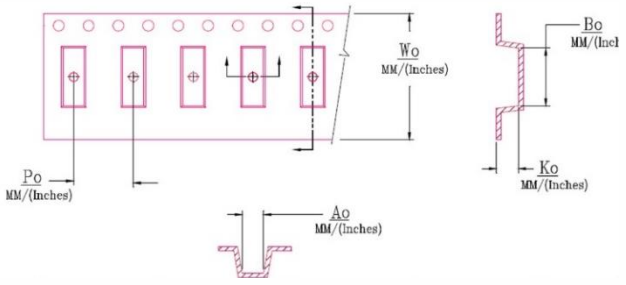
Recommended solder: 6 mils of SAC305 with reflow including 120s of soak at 217°C, and up to 30 sec peak at 241°C.

Packaging and Marking

Dimension	Units	Spec.
Reel Diameter	mm	330
Reel Weight	kg	
Reel Quantity	ea.	250

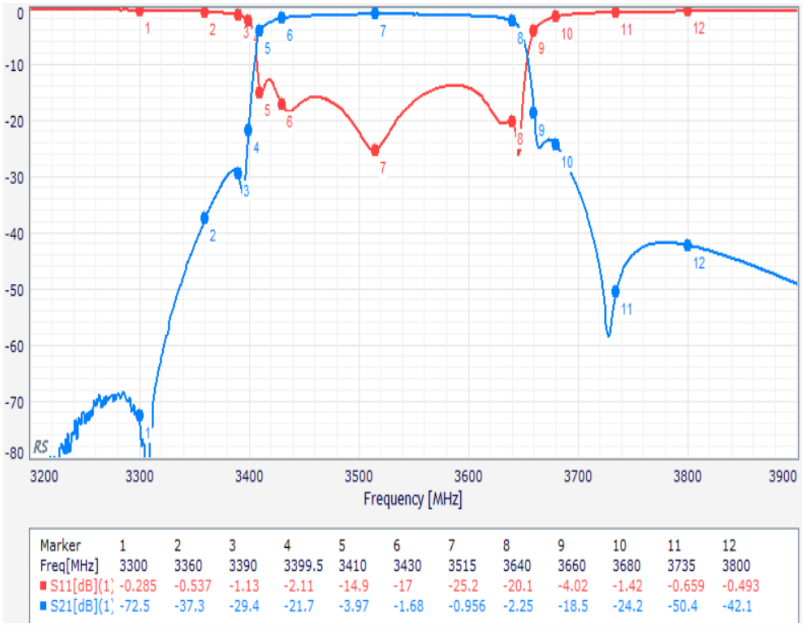
Product Marking

CTS
352
YWW



W_o	A_o	B_o	K_o	P_o
2.205 in 56.0 mm	0.??? in mm	1.587 in 40.3 mm	0.378 in 9.6 mm	0.630 in 16.0 mm

Electrical Response



Marker	1	2	3	4	5	6	7	8	9	10	11	12
Freq[MHz]	3300	3360	3390	3399.5	3410	3430	3515	3640	3660	3680	3735	3800
S11[dB](1)	-0.285	-0.537	-1.13	-2.11	-14.9	-17	-25.2	-20.1	-4.02	-1.42	-0.659	-0.493
S21[dB](1)	-72.5	-37.3	-29.4	-21.7	-3.97	-1.68	-0.956	-2.25	-18.5	-24.2	-50.4	-42.1