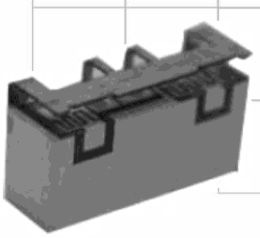
UPB046A - PRELIMINARY

5.15-5.925 GHz UPB Series Bandpass Filter

Features

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



Part Dimensions: 9.0 × 4.5 × 3.1 mm • 0.4 g
Materials: Ag plated ceramic block with tin plated brass shield

Applications

- Wireless Infrastructure applications

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 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 (20 MHz avg)	5150-5925			1.2 dB max
Passband Ripple	5150-5925			0.5 dB max
Passband Return Loss	5150-5925			12 dB min
Attenuation:	1-2690			50 dB min
	2691-4500			40 dB min
	6500-8000			35 dB min
	8001-11000			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

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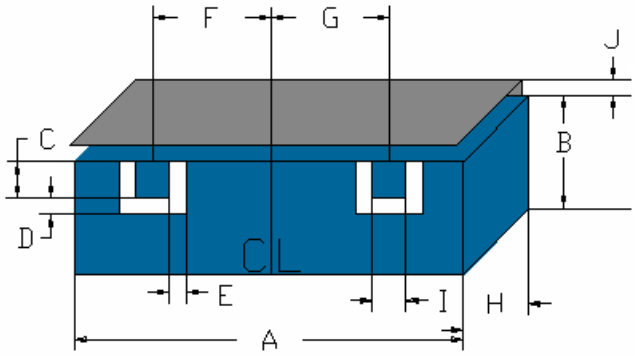
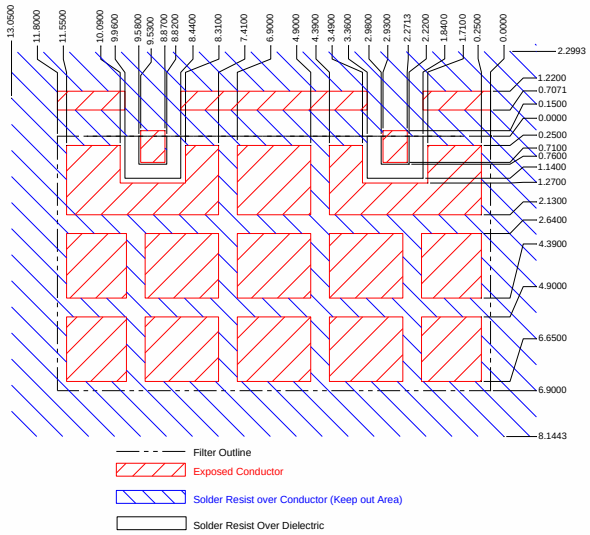
Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	8.97	max
B	3.50	max
C	0.76	0.13
D	0.38	0.13
E	0.38	0.13
F	3.30	0.13
G	3.30	0.13
H	3.10	max
I	0.76	0.13
J	1.00	max

PCB Layout



IMPORTANT: Please assure >=30mils (0.75mm) 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: 6 mils of SAC305 with reflow including 120s of soak at 217°C, and up to 30 sec peak at 241°C.

NOTE: The width of 9.50mm is necessary to support frequencies as low as 1885MHz for Band 39. If only higher frequency TDD bands are supported, then a smaller space can be allocated on the layout.

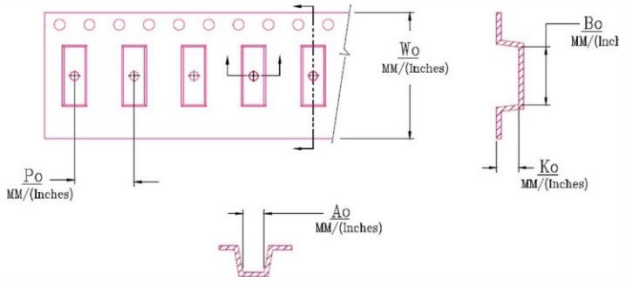
Packaging and Marking

Dimension	Units	Spec.
Reel Diameter	mm	330
Reel Weight	kg	5.5
Reel Quantity	ea.	500

Product Marking

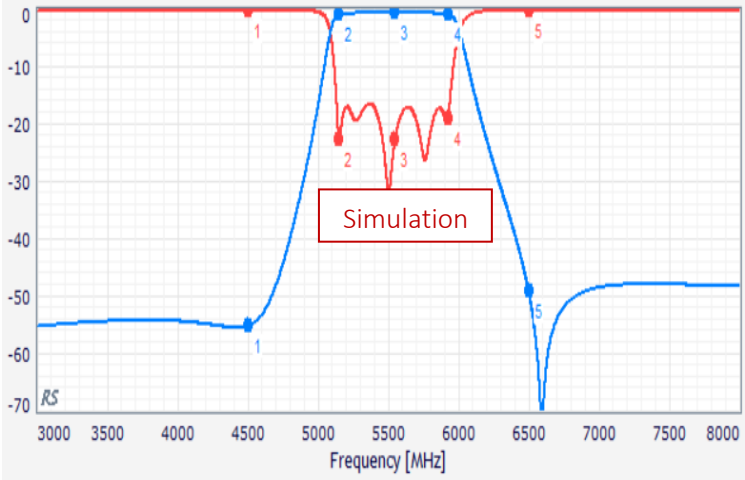
CTS
046
YWW

Customer Feed Direction → → →



W_o	A_o	B_o	K_o	P_o
0.945 in	0.177 in	0.366 in	0.132 in	0.315 in
24.0 mm	4.50 mm	9.30 mm	3.35 mm	8.0 mm

Electrical Response



Marker	1	2	3	4	5
Freq[MHz]	4500	5150	5550	5925	6500
S11[dB](1)	-0.0299	-22.6	-22.6	-18.9	-0.076
S21[dB](1)	-55.1	-0.866	-0.465	-0.79	-48.8