USB395B

3.8-4.1GHz of B77 USB Series TDD Bandpass Filter

Features

- Low Loss with High Rejection and Low Ripple
- Support for 3GPP Receive Blocker specification
- Universal footprint across family for all TDD bands

Part Dimensions: 25.9 × 5.5? × 6.7 mm • 2.8 g
Materials: Ag plated ceramic block with tin plated brass shield

Applications

- Subset of N77 for Japan
- Wireless Infrastructure applications
- High-performance carrier-grade single-band TDD Pico-cell basestations for up to 5.0W at the antenna port.

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	-	-	-	8.0 Watt max
Peak Input Power	-	-	-	80 Watt max
Input-Output Response				
Passband Insertion Loss (100 MHz avg)	3800-4100	1.3 dB	1.4 dB max	1.5 dB max
Passband Insertion Loss (20 MHz avg)	3800-4100	1.7 dB	1.8 dB max	2.0 dB max
Passband Ripple (20MHz)	3800-4100	1.0 dB	1.2 dB max	1.4 dB max
Passband Return Loss	3800-4100	14 dB	12 dB min	12 dB min
Attenuation:	1-2700	47 dB	45 dB min	45 dB min
	2701-3600	40 dB	38 dB min	38 dB min
	3601-3700	35 dB	30 dB min	30 dB min
	3701-3760	16 dB	14 dB min	14 dB min
	3761-3780	6 dB	5 dB min	5 dB min
	4120-4139	6 dB	5 dB min	5 dB min
	4140-4299	16 dB	14 dB min	14 dB min
	4300-4399	35 dB	30 dB min	30 dB min
	4400-5950	40 dB	38 dB min	38 dB min
	5951-8200	30 dB	25 dB min	25 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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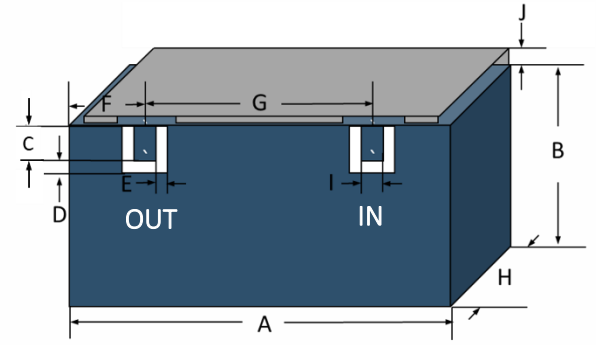
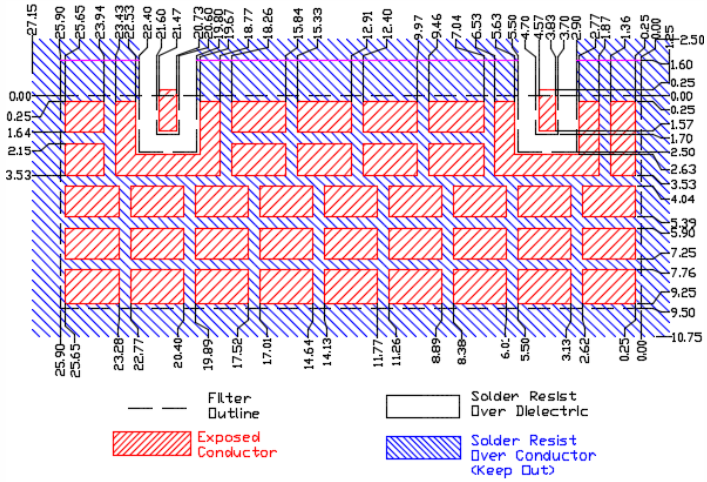
Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	25.90	max
B	4.80?	max
C	1.70	0.13
D	0.80	0.13
E	0.80	0.13
F	4.20	0.13
G	16.90	0.13
H	6.70	max
I	1.00	0.13
J	0.70	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 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.

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.

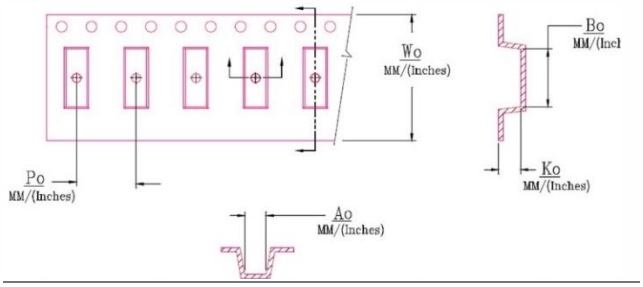
Packaging and Marking

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

Product Marking

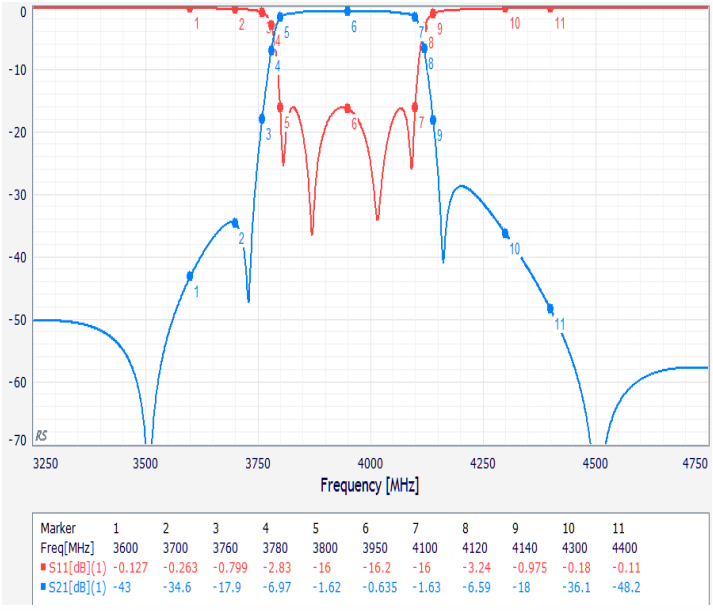
CTS
95B
YWW

Customer Feed Direction → → →



Wo	Ao	Bo	Ko	Po
1.732 in	0.236 in	1.028 in	0.283 in	0.472 in
44.0 mm	6.00 mm	26.10 mm	7.20 mm	12.0 mm

Electrical Response



Marker	1	2	3	4	5	6	7	8	9	10	11
Freq[MHz]	3600	3700	3760	3780	3800	3950	4100	4120	4140	4300	4400
S11[dB](1)	-0.127	-0.263	-0.799	-2.83	-16	-16.2	-16	-3.24	-0.975	-0.18	-0.11
S21[dB](1)	-43	-34.6	-17.9	-6.97	-1.62	-0.635	-1.63	-6.59	-18	-36.1	-48.2