USB040C - PRELIMINARY

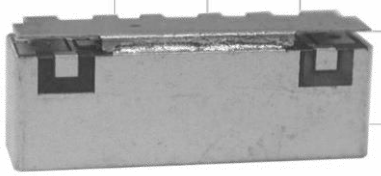
Band 40 USB Series TDD Bandpass Filter

Features

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

Applications

- Support for close-in WiFi rejection
- Wireless Infrastructure applications
- High-performance carrier-grade single-band TDD Pico-cell basestations for up to 1.0W at the antenna port.



Part Dimensions: 25.9 × 8.9 × 6.7 mm • 4.7 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. Provides 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	-	-	-	2.0 Watt max
Peak Input Power	-	-	-	20 Watt max
Input-Output Response				
Passband Insertion Loss (5 MHz avg)	2300-2380	1.4 dB	1.5 dB max	1.6 dB max
Passband Return Loss	2300-2380	15 dB	14 dB min	14 dB min
Attenuation:	1-2000	46 dB	45 dB min	45 dB min
	2000-2170	38 dB	34 dB min	34 dB min
	2420-2430	46 dB	45 dB min	45 dB min
	2430-2500	51 dB	50 dB min	50 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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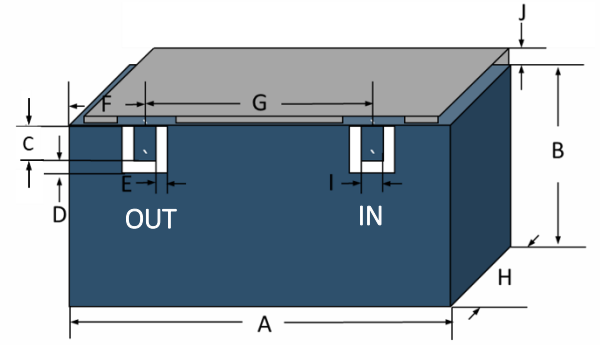
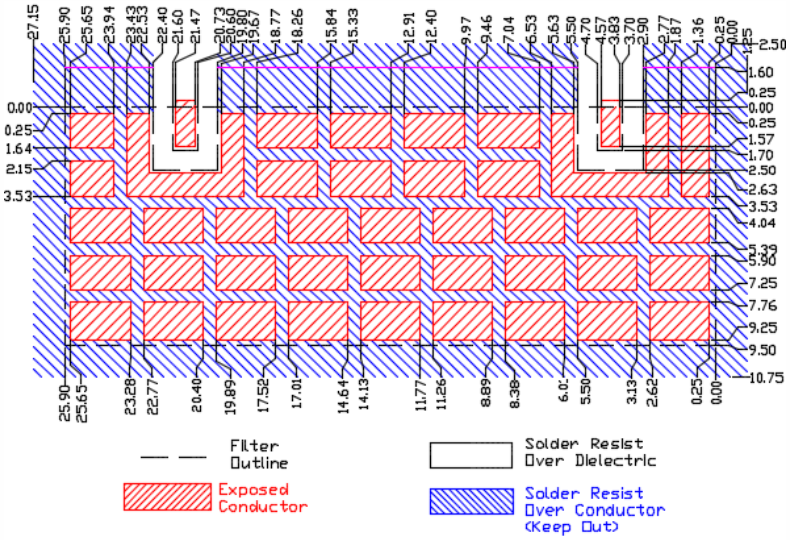
Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	25.90	max
B	6.00	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	1.60	max

PCB Layout



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.

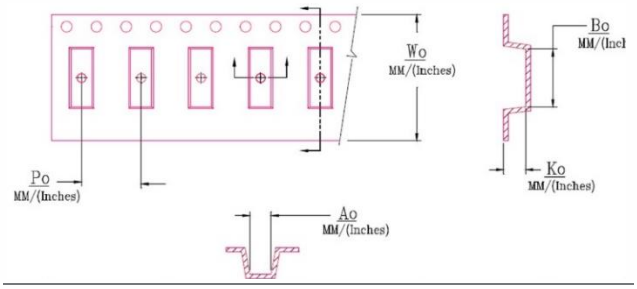
Packaging and Marking

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

Product Marking

CTS
40C
YWW

Customer Feed Direction → → →



W_o	A_o	B_o	K_o	P_o
1.732 in	0.295 in	1.028 in	0.283 in	0.472 in
44.0 mm	7.50 mm	26.10 mm	7.20 mm	12.0 mm

Electrical Response

Marker	1	2	3	4	5	6	7	8
Freq[MHz]	2000	2170	2300	2350	2380	2420	2430	2500
S11[dB](1)	-0.274	-0.227	-21.5	-17.8	-16.5	-0.154	-0.131	-0.198
S21[dB](1)	-46.6	-38.9	-0.945	-0.871	-1.46	-46.5	-53.9	-91