

# USB053A - PRELIMINARY

## Band 53 USB Series TDD Bandpass Filter

### Features

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

### Applications

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



Part Dimensions: 25.9 × 8.4 × 6.7 mm • TBD 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	-	-	-	8.0 Watt max
Peak Input Power	-	-	-	80 Watt max

#### Input-Output Response

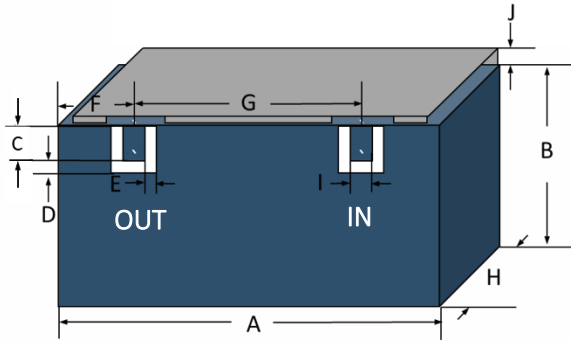
Passband Insertion Loss (5 MHz avg)	2483.5-2495	2.0 dB	2.4 dB max	2.6 dB max
Passband Return Loss	2483.5-2495	15 dB	14 dB min	14 dB min
Attenuation:	1-2463.5	12 dB	10 dB min	10 dB min
	2515-TBD	12 dB	10 dB min	10 dB min

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

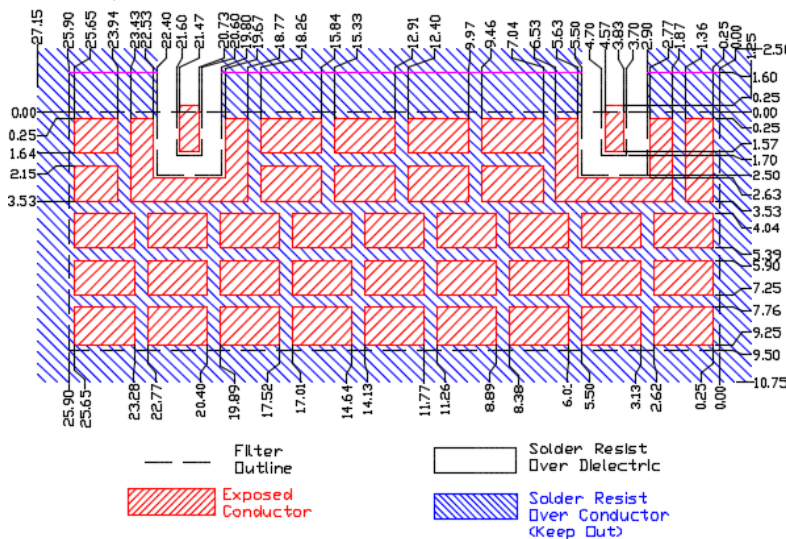
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

### Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	25.90	max
B	7.10	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	1.10	0.20

### PCB Layout

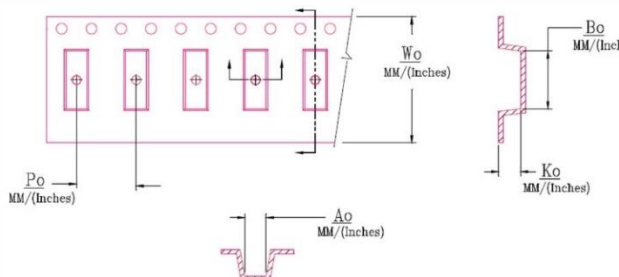


NOTE: The width of 9.50mm is necessary to support frequencies as low as 1885MHz for Band 39. If only higher frequency TDD bands are supported, then a smaller space can be allocated on the layout.

### Packaging and Marking

Dimension	Units	Spec.	Product Marking
Reel Diameter	mm	330	CTS
Reel Weight	kg	5.5	053
Reel Quantity	ea.	500	YWW

Customer Feed Direction → → →



W <sub>0</sub>	A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	P <sub>0</sub>
1.732 in 44.0 mm	0.343 in 8.70 mm	1.028 in 26.10 mm	0.283 in 7.20 mm	0.472 in 12.0 mm

### Electrical Response

