

# USD001B

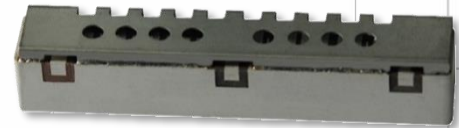
## Band 1 USD Series Duplexer

### Features

- Low Loss with High Rejection
- Superior power handling and reliability
- Universal footprint across all FDD frequency bands

### Applications

- Wireless Infrastructure applications
- High-performance carrier-grade small-cells using linearized PA for 1.0-2.0W at the antenna port.
- Wide-band pico-cells or small-cells requiring multi-channel or carrier aggregation.



Part Dimensions: 63.0 × 11.4 × 10.9 mm • 22.4 g  
Materials: Ag plated ceramic block with tin plated brass shield

### Description

Surface mount ceramic duplexer supports a universal footprint across all FDD 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 duplexer 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	-	-	-	6.0 Watt max
Peak Input Power	-	-	-	60 Watt max

#### Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	1920 - 1980	1.8 dB	2.3 dB max	2.4 dB max
Passband Return Loss	1920 - 1980	12 dB	11 dB min	11 dB min
Attenuation: (5MHz avg)	2110 - 2170	66 dB	62 dB min	62 dB min
	2171 - 2200	66 dB	62 dB min	62 dB min
<=1900 and >=2000		18 dB	17 dB min	16 dB min
	1805 - 1880	40 dB	38 dB min	38 dB min

#### DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	2110 - 2170	2.2 dB	2.4 dB max	2.5 dB max
Passband Return Loss	2110 - 2170	12 dB	11 dB min	11 dB min
Attenuation:	1920 - 1980	73 dB	70 dB min	70 dB min
	1710 - 1785	48 dB	42 dB min	42 dB min
5MHz avg: 2095-2100 & 2180-2185		10 dB	8 dB min	7 dB min
	2305 - 2315	45 dB	42 dB min	42 dB min

#### DL to UL Response

Attenuation for UL band	1920 - 1980	74 dB	72 dB min	72 dB min
Attenuation for DL band (5MHz avg)	2110 - 2170	68 dB	66 dB min	64 dB min
	2171 - 2200	70 dB	66 dB min	64 dB min

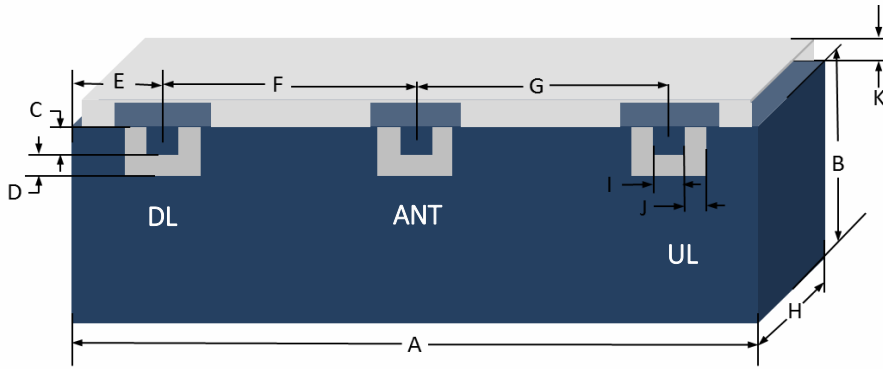
Note: CTS tests each unit to the critical specifications above.

Subsequent audits may deviate due to repeatability among different test systems which shall not exceed these allowances.

#### Specification Allowance

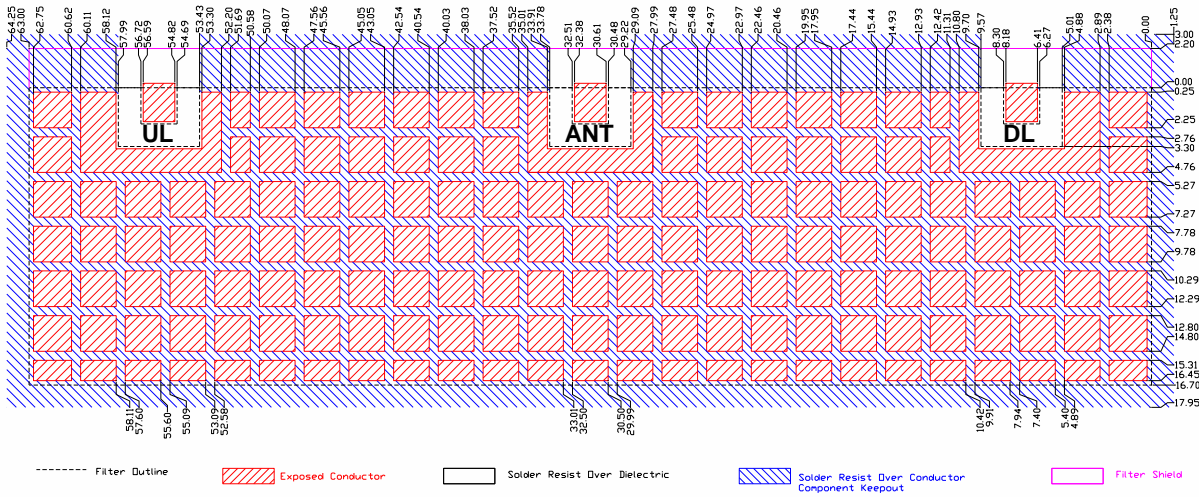
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

### Mechanical Drawing

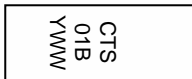


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	61.50	0.50
B	9.00	Max
C	2.03	0.13
D	1.27	0.13
E	6.54	0.25
F	24.21	0.13
G	24.21	0.13
H	10.90	Max
I	2.03	0.13
J	1.27	0.13
K	2.20	0.20

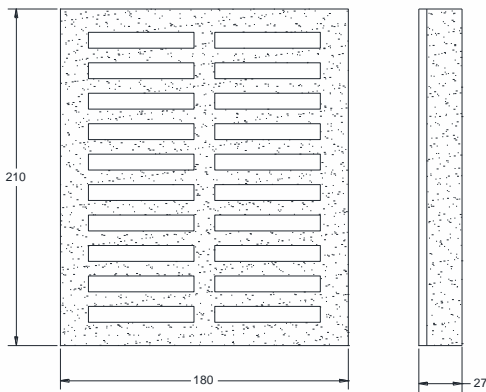
### PCB Layout



### Packaging and Marking



Product is shipped in Pre-formed foam trays



The trays have 20 slots each with 1 filter per slot. Boxes are packed with 12 Trays per box for a total of 240 filters per box.

### Electrical Response

