

USD013A

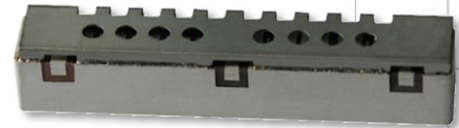
Band 13 USD Series Duplexer

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 × 14.8 × 10.9 mm • 35.4 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)	777 - 787	2.0 dB	2.2 dB max	2.4 dB max
Passband Insertion Loss (single point)	777 - 787	2.2 dB	2.4 dB max	2.6 dB max
Passband Return Loss	777 - 787	16 dB	14 dB min	14 dB min
Attenuation:	746 - 756	69 dB	66 dB min	66 dB min
	817 - 849	39 dB	36 dB min	36 dB min
	859 - 894	68 dB	52 dB min	52 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	746 - 756	2.0 dB	2.2 dB max	2.4 dB max
Passband Insertion Loss (single point)	746 - 756	2.4 dB	2.6 dB max	2.8 dB max
Passband Return Loss	746 - 756	16 dB	14 dB min	14 dB min
Attenuation:	777 - 787	72 dB	71 dB min	71 dB min
	663 - 716	39 dB	36 dB min	36 dB min

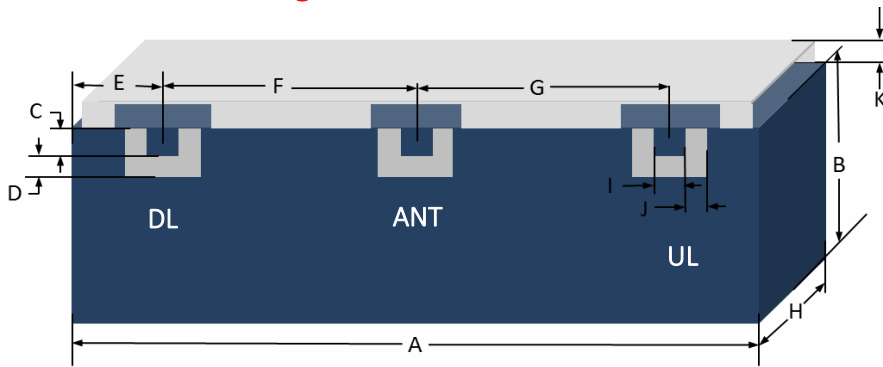
DL to UL Response

Attenuation for DL band	746 - 756	67 dB	66 dB min	66 dB min
Attenuation over mid-band	757 - 776	60 dB	40 dB min	40 dB min
Attenuation for UL band	777 - 787	74 dB	73 dB min	73 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.

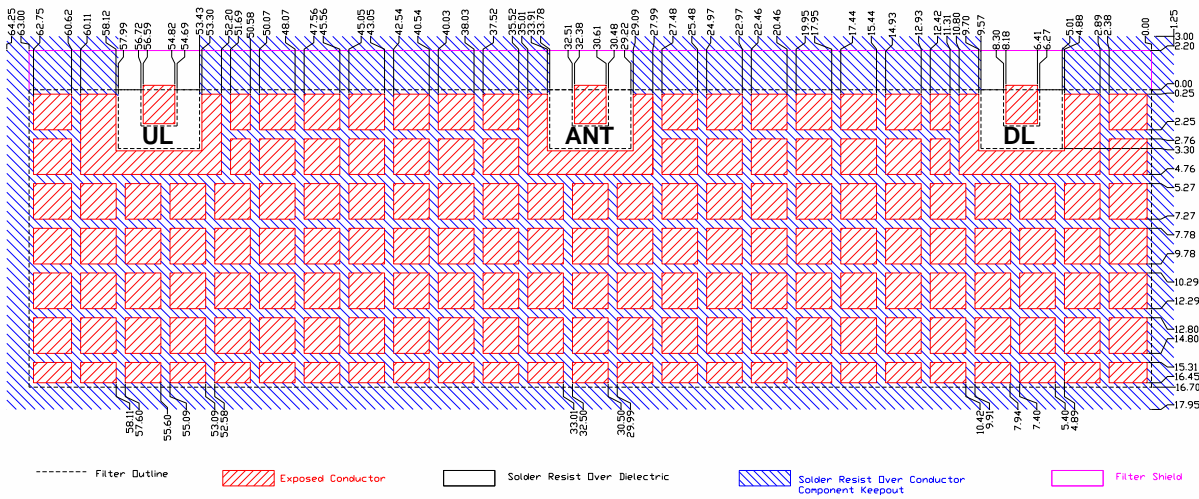
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

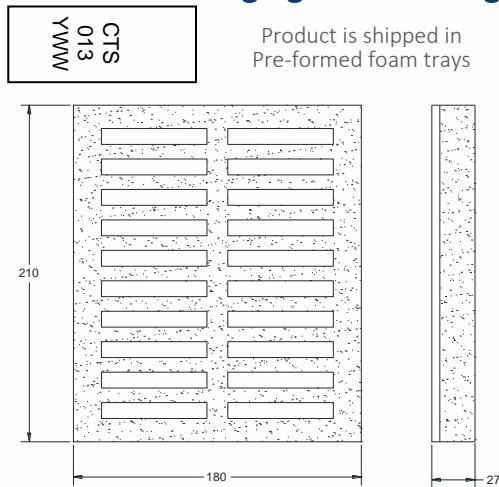


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	63.00	Max
B	13.00	Max
C	2.03	0.13
D	1.27	0.13
E	6.49	0.13
F	24.21	0.13
G	24.21	0.13
H	10.70	Max
I	2.03	0.13
J	1.27	0.13
K	1.80	0.13

PCB Layout



Packaging and Marking



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

