

USD1214B - PRELIMINARY

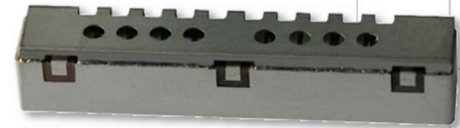
Band 12/13/14 USD Series Duplexer

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.



ESTIMATE
Part Dimensions: 63.5 × 16.5 × 10.9 mm • TBD 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 - 798		2.8 dB max	3.0 dB max
Passband Insertion Loss (single-point)	777 - 798		3.6 dB max	4.0 dB max
Passband Ripple	777 - 798		2.6 dB max	3.0 dB max
Passband Return Loss	777 - 798	14 dB	12 dB min	12 dB min
Attenuation:	728 - 768		>50 dB min	>50 dB min
	862 - 928		>33-35dB min	>33-35dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	728 - 768		2.8 dB max	3.0 dB max
Passband Insertion Loss (single-point)	728/9 - 768		3.8 dB max	4.3 dB max
Passband Ripple	728/9 - 768		2.8 dB max	3.3 dB max
Passband Return Loss	728 - 768	14 dB	12 dB min	12 dB min
Attenuation:	777 - 798		>55 dB min	>55 dB min
	663 - 715/6		>33-35dB min	>33-35dB min

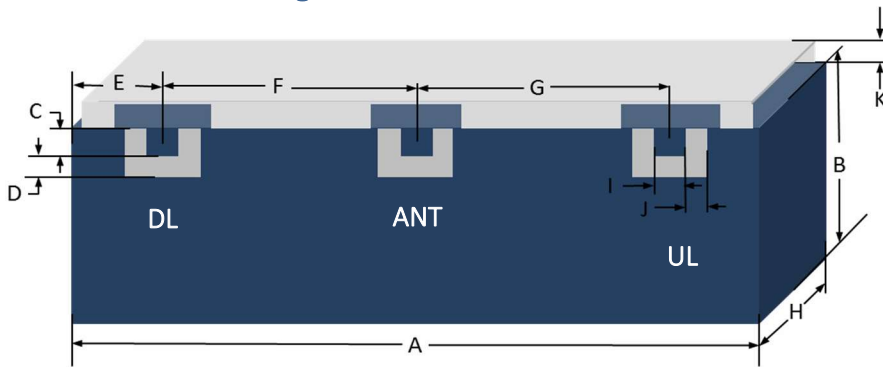
DL to UL Response

Attenuation for UL band	777 - 798		>55 dB min	>55 dB min
Attenuation for DL band	728 - 768		>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.

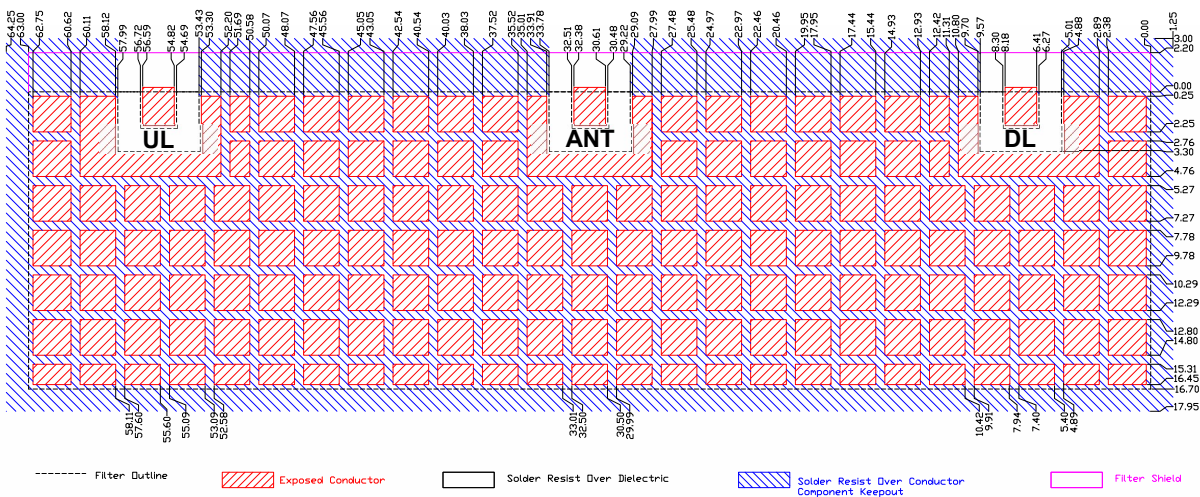
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

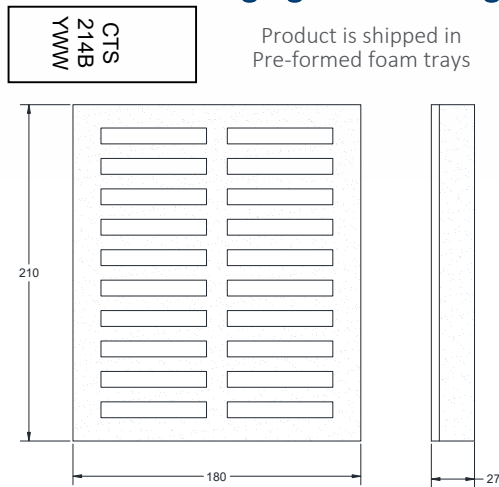


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	63.00	0.5
B	14.20	Max
C	2.03	0.13
D	1.27	0.13
E	7.29	0.20
F	24.21	0.13
G	24.21	0.13
H	10.90	Max
I	2.03	0.13
J	1.27	0.13
K	2.00	0.30

PCB Layout

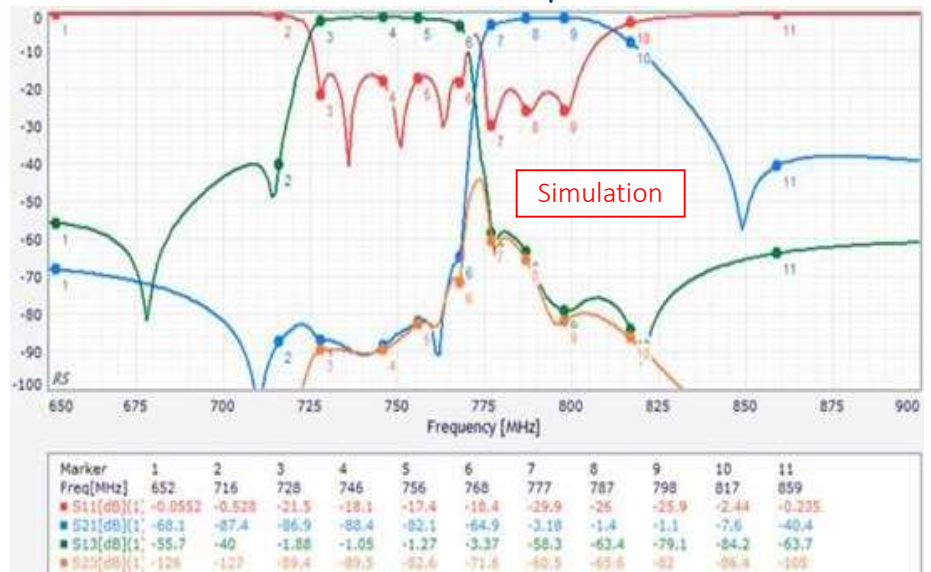


Packaging and Marking



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





Electrical Specifications – Supplemental Spectrum Specifications

Parameter	Frequency (MHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Antenna to UL Response				
Attenuation:				
DL to Antenna Response				
Attenuation:				

Preliminary specifications, subject to change