

USD1213A - PRELIMINARY

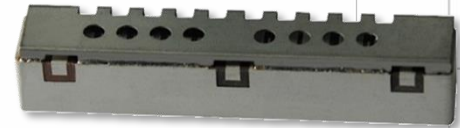
Band 12UL / 12+13DL USD Series Duplexer

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.



ESTIMATES

Part Dimensions: 61.4 × 18.7 × 12.0 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)	698 - 716	1.4 dB	1.6dB max	1.7dB max
	699 - 715	1.3 dB	1.5dB max	1.6dB max
Passband Return Loss	698 - 716	15 dB	12 dB min	12 dB min
Attenuation:	728 - 757	51 dB	50 dB min	50 dB min
	757 - 894	> 50 dB	30 dB min	30 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	728 - 757	1.4 dB	1.6 dB max	1.7 dB max
	729 - 756	1.3 dB	1.5 dB max	1.6 dB max
Passband Return Loss	729 - 757	15 dB	12 dB min	12 dB min
Attenuation:	698 - 716	54 dB	50 dB min	50 dB min
	776 - 787	31 dB	30 dB min	30 dB min

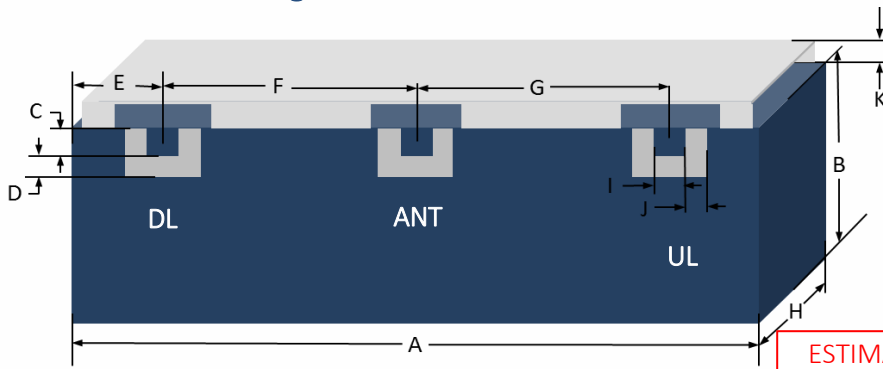
DL to UL Response

Attenuation for UL band	698 - 716	55 dB	50 dB min	50 dB min
Attenuation for DL band	728 - 757	55 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

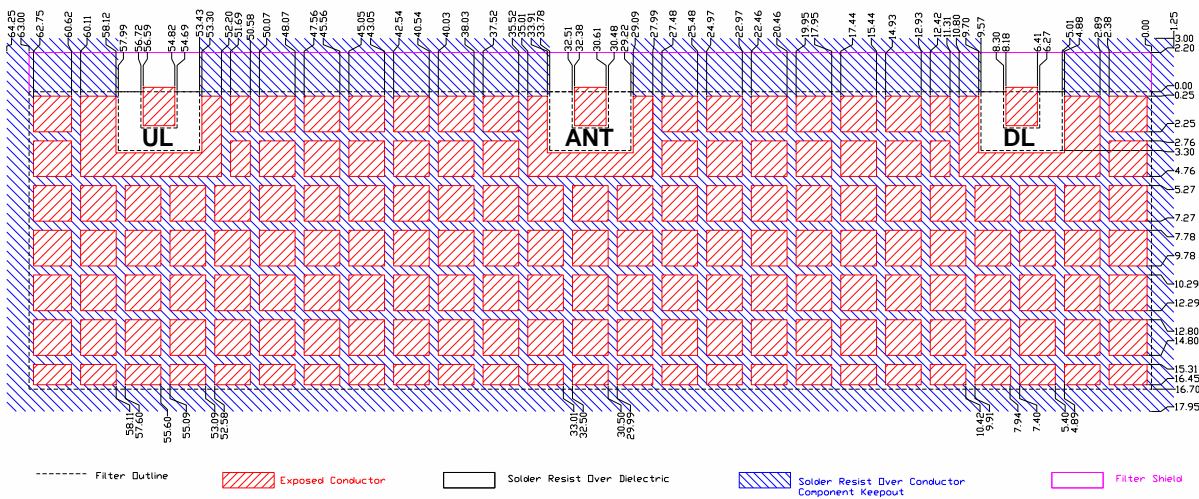
Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	61.40	Max
B	16.70	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	12.0 est	Max
I	2.03	0.13
J	1.27	0.13
K	2.00	0.13

ESTIMATES
Not final

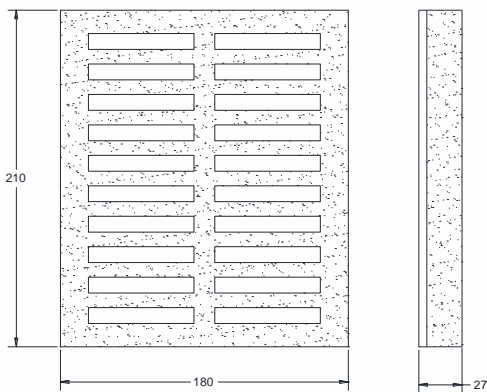
PCB Layout



Packaging and Marking

CTS
1213
YMMW

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

