

USD007D - Preliminary

Band 7 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: 61.4 × 8.8 × 10.9 mm • 14.1 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)	2500 - 2570	1.8 2.1 dB	1.9 2.2 dB max	2.1 2.3 dB max
Passband Insertion Loss (single point)	2500 - 2570	2.1 dB	2.2 dB max	2.4 dB max
Passband Return Loss	2500 - 2570	14 dB	11 dB min	11 dB min
Attenuation:	2620 - 2690	63 dB	61 dB min	61 dB min
	2483	11 dB	10 dB min	10 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	2625 - 2690	2.1 2.2 dB	2.3 2.4 dB max	2.5 2.6 dB max
	2620 - 2625	2.9 3.0 dB	3.1 3.2 dB max	3.3 3.4 dB max
Passband Insertion Loss (single point)	2625 - 2690	2.3 dB	2.5 dB max	2.7 dB max
	2620 - 2625	3.4 dB	3.6 dB max	3.8 3.9 dB max
Passband Return Loss	2620 - 2690	14-15 dB	11-12 dB min	11-12 dB min
Attenuation:	2500 - 2570	66 dB	65 dB min	65 dB min
	2610	17 dB	15 dB min	13 dB min

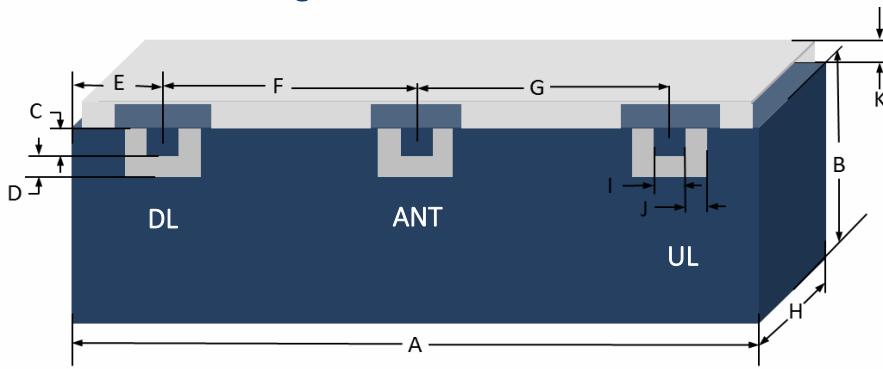
DL to UL Response

Attenuation for UL band	2500 - 2570	67 dB	66 dB min	66 dB min
Attenuation for DL band	2620 - 2690	63 dB	61 dB min	61 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.

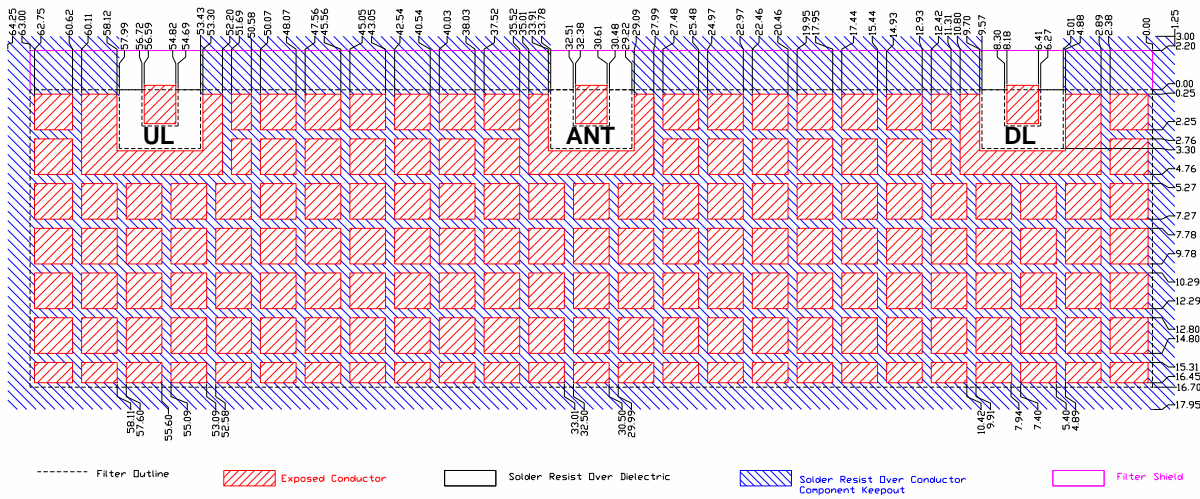
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

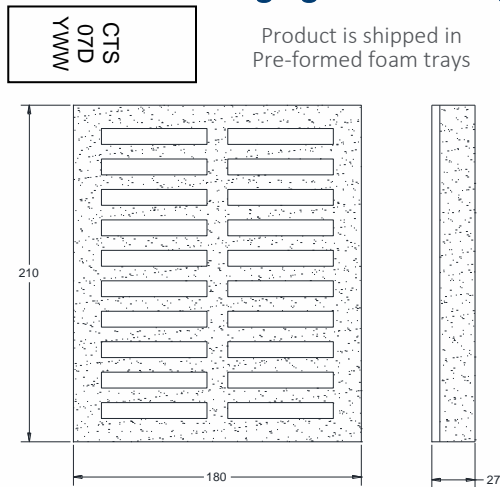


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	61.40	Max
B	6.80	Max
C	2.03	0.13
D	1.27	0.13
E	6.49	0.13
F	24.21	0.13
G	24.21	0.13
H	10.90	Max
I	2.03	0.13
J	1.27	0.13
K	2.00	Max

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

