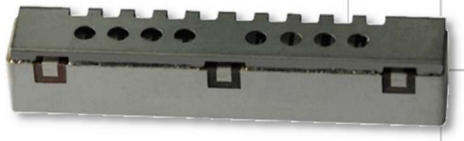
USD007B

Band 7 USD Series Duplexer

Features

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



Part Dimensions: 63.0 × 9.0. × 12.0 mm • 17.1 g
Materials: Ag plated ceramic block with tin plated brass shield

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.

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.

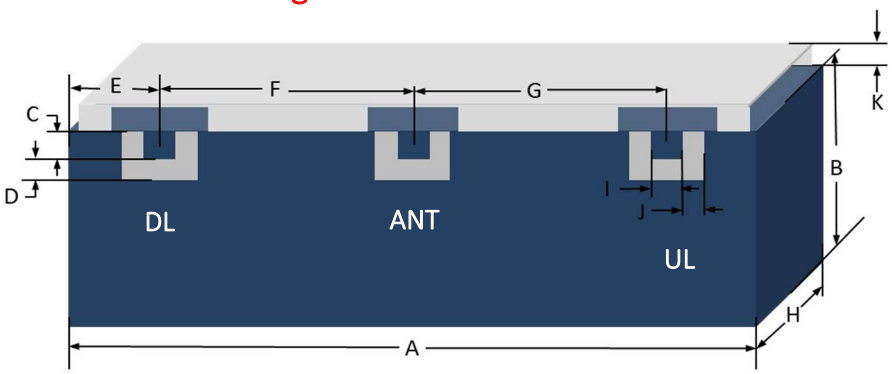
Electrical Specifications

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 dB	2.0 dB max	2.1 dB max
Passband Return Loss	2500 - 2570	16 dB	14 dB min	14 dB min
Attenuation:	2620 - 2690	72 dB	70 dB min	70 dB min
	2400 - 2483			24 dB min
	2590 - 2619			24 dB min
DL to Antenna Response				
Passband Insertion Loss (5 MHz avg)	2620 - 2690	2.3 dB	2.5 dB max	2.6 dB max
Passband Return Loss	2620 - 2690	16 dB	14 dB min	14 dB min
Attenuation:	2500 - 2570	72 dB	70 dB min	70 dB min
	2570 - 2610			15 dB min
	2700 - 2719			8 dB min
	2720 - 2790			28 dB min
DL to UL Response				
Attenuation for UL band	2500 - 2570	74 dB	72 dB min	72 dB min
Attenuation for DL band	2620 - 2690	72 dB	70 dB min	70 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.

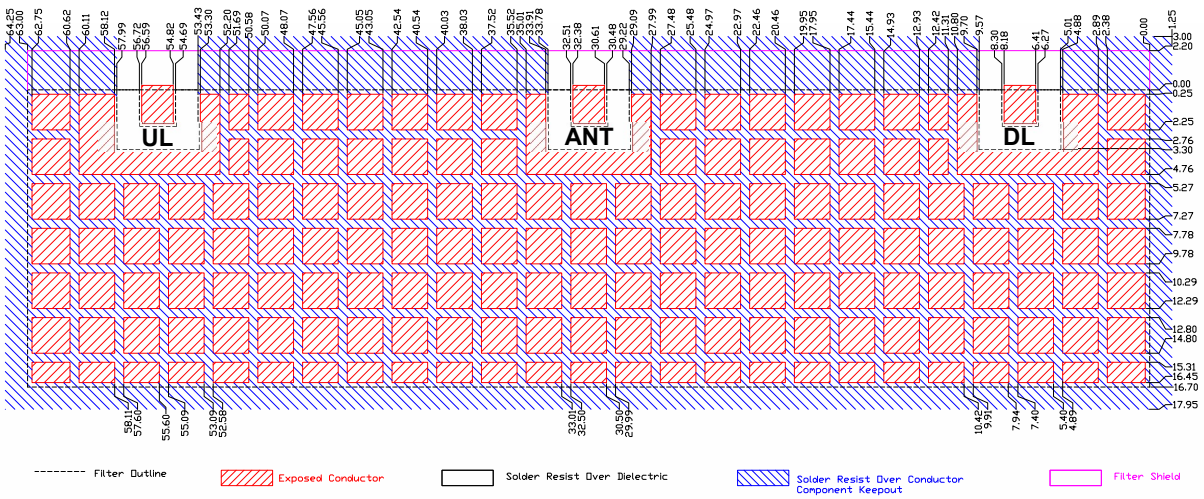
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

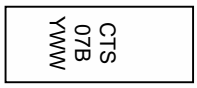


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	63.00	Max
B	6.80	Max
C	2.03	0.13
D	1.27	0.13
E	6.49	0.13
F	24.21	0.13
G	24.21	0.13
H	12.00	Max
I	2.03	0.13
J	1.27	0.13
K	2.00	0.13

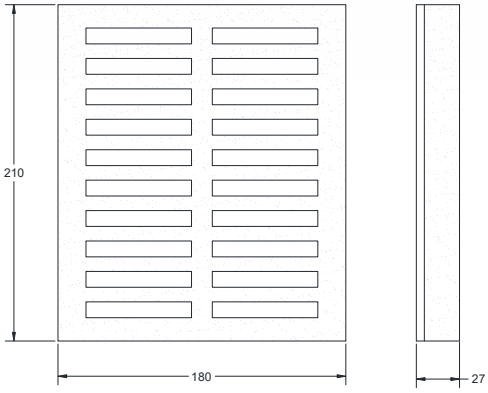
PCB Layout



Packaging and Marking

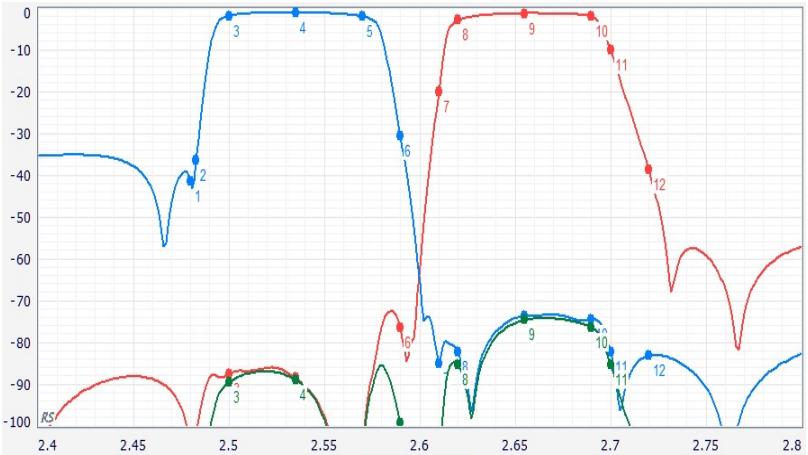


Product is shipped in Pre-formed foam trays



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



Marker	1	2	3	4	5	6	7	8	9	10	11
Freq[GHz]	2.48	2.483	2.5	2.535	2.57	2.59	2.61	2.62	2.655	2.69	2.7
S21[dB](1)	-106	-101	-87.3	-88.2	-105	-76.3	-19.8	-2.75	-1.11	-1.89	-9.78
S13[dB](1)	-41.2	-36.2	-1.69	-0.938	-1.84	-30.6	-84.8	-82	-73.5	-74.3	-82.1
S23[dB](1)	-145	-137	-89.3	-88.7	-106	-99	-109	-85.1	-74.4	-76.2	-85