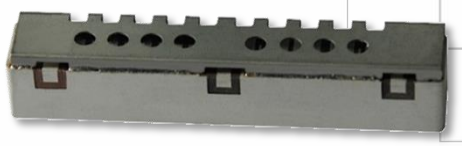
USD066A

Band 66 USD Series Duplexer

Features

Supports the asymmetric AWS+AWS3+AWS4 band(70/90MHz)

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



Part Dimensions: 61.6 × 11.4 × 10.9 mm • 22.1 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.

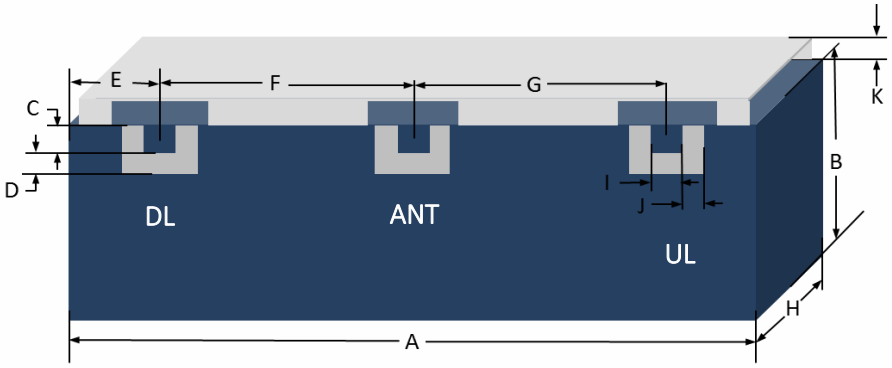
Electrical Specifications

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)	1710 - 1780	1.3 dB	1.5 dB max	1.7 dB max
Passband Insertion Loss (single point)	1710 - 1780	1.4 dB	1.6 dB max	1.9 dB max
Passband Return Loss	1710 - 1780	14 dB	12 dB min	12 dB min
Attenuation:	2110 - 2200	71 dB	68 dB min	68 dB min
DL to Antenna Response				
Passband Insertion Loss (5 MHz avg)	2110 - 2200	1.9 dB	2.2 dB max	2.4 dB max
Passband Insertion Loss (single point)	2110 - 2200	2.2 dB	2.5 dB max	2.8 dB max
Passband Return Loss	2110 - 2200	14 dB	12 dB min	12 dB min
Attenuation:	1710 - 1780	72 dB	70 dB min	70 dB min
DL to UL Response				
Attenuation for UL band	1710 - 1780	71 dB	70 dB min	70 dB min
Attenuation for Transition band	1780 - 2110		45 dB min	45 dB min
Attenuation for DL band	2110 - 2200	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.

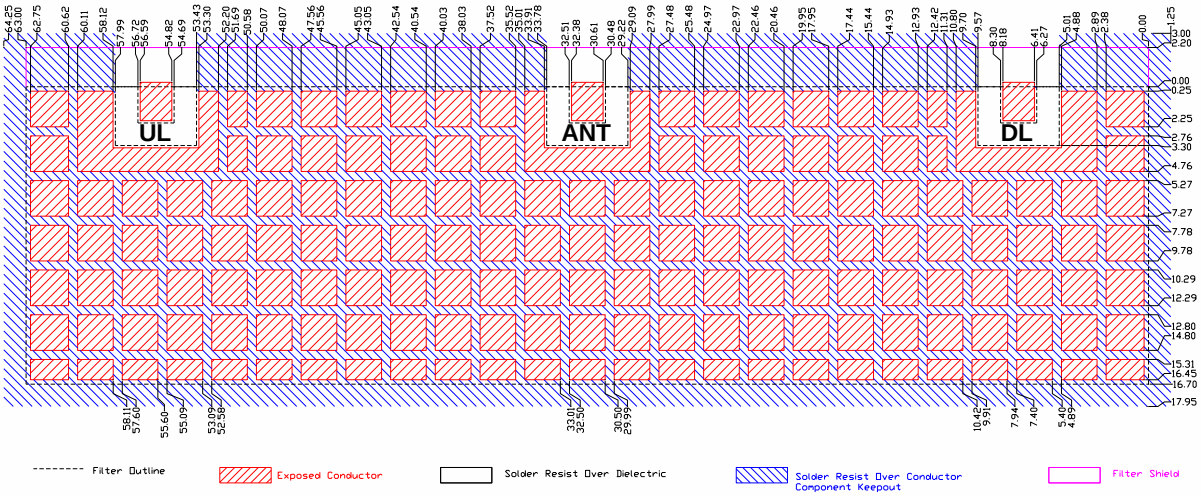
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing



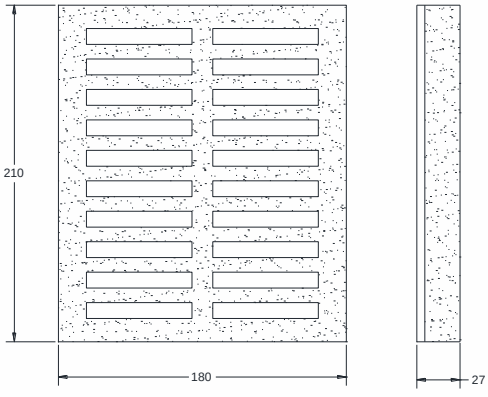
Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	61.60	Max
B	9.00	Max
C	2.03	0.13
D	1.27	0.13
E	6.49	0.13
F	24.21	0.13
G	24.21	0.13
H	10.90	Max
I	2.03	0.13
J	1.27	0.13
K	2.20	0.20

PCB Layout



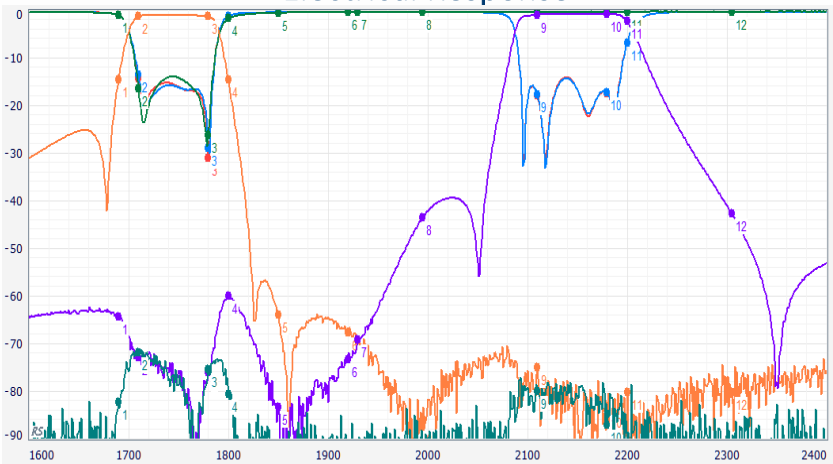
Packaging and Marking

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	12
Freq[MHz]	1690	1710	1780	1800	1850	1920	1930	1995	2110	2180	2200	2305
S11[dB](1)	-0.988	-14.2	-30.9	-1.12	-0.38	-0.316	-0.321	-0.311	-17.8	-17.4	-6.68	-0.265
S11[dB](2)	-0.991	-13.5	-28.9	-1.1	-0.372	-0.329	-0.323	-0.317	-17.7	-17.2	-6.72	-0.282
S11[dB](3)	-0.981	-16.4	-26.2	-1.62	-0.441	-0.337	-0.318	-0.262	-0.225	-0.212	-0.216	-0.215
S21[dB](1)	-14.4	-1.21	-1.25	-14.6	-64	-67.6	-69.2	-87.5	-74.8	-83.9	-80.2	-80
S21[dB](2)	-64.3	-72.8	-75.9	-60	-83.2	-73.3	-69.1	-43.4	-0.886	-0.751	-2.19	-42.6
S21[dB](3)	-82.1	-71.8	-75.4	-80.5	-96.1	-103	-99.2	-92	-79.9	-86.9	-91.8	-97.5

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:	1 - 1200	56 dB	50 dB min	50 dB min
	1200 - 1559	35 dB	30 dB min	30 dB min
	1690	14 dB	10 dB min	10 dB min
	1800	14 dB	10 dB min	10 dB min
	1930 - 2110	55 dB	48 dB min	48 dB min
DL to Antenna Response				
Attenuation:	1 - 1710	62 dB	52 dB min	52 dB min
	1850 - 1920	70 dB	52 dB min	52 dB min
	1930 - 1995	43 dB	30 dB min	30 dB min
	2305 - 2315	42 dB	38 dB min	38 dB min