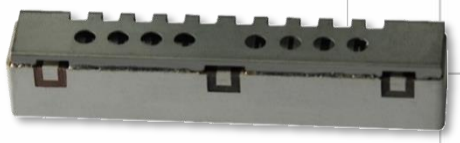
USD027A

Band 27 USD Series Duplexer

Features

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



Part Dimensions: 63.00 × 15.4 × 10.9 mm • 39.3 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)	806 - 825	2.4 dB	2.5 dB max	2.6 dB max
Passband Return Loss	806 - 825	14 dB	13dB min	13 dB min
Attenuation:	851 - 870	66 dB	64 dB min	64 dB min
DL to Antenna Response				
Passband Insertion Loss (5 MHz avg)	851 - 870	2.4 dB	2.5 dB max	2.6 dB max
Passband Return Loss	851 - 870	14 dB	13dB min	13 dB min
Attenuation:	806 - 825	73 dB	72 dB min	72 dB min
DL to UL Response				
Attenuation for UL band	806 - 825	74 dB	72 dB min	72 dB min
Attenuation for DL band	851 - 870	66 dB	64 dB min	64 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

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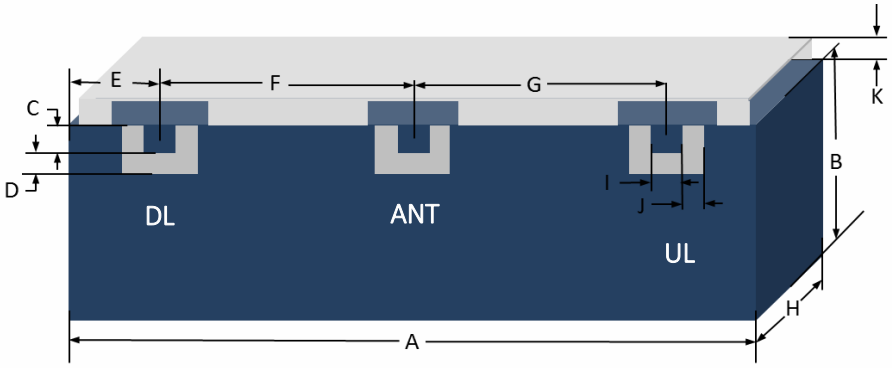
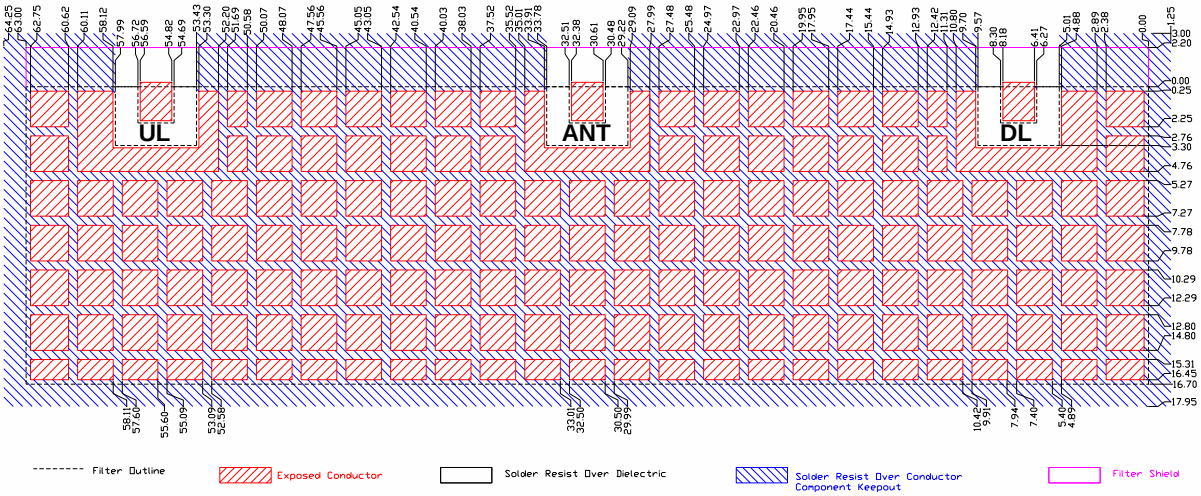
Mechanical Drawing

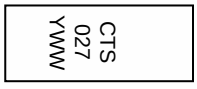


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	63.00	Max
B	12.40	0.50
C	2.03	0.13
D	1.27	0.13
E	6.49	0.13
F	24.21	0.13
G	24.21	0.13
H	12.00	Max
I	2.03	0.13
J	1.27	0.13
K	2.20	0.30

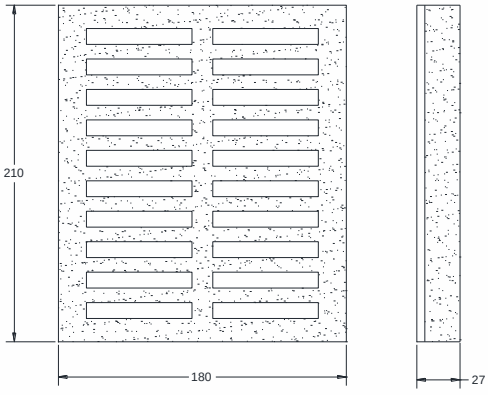
PCB Layout



Packaging and Marking

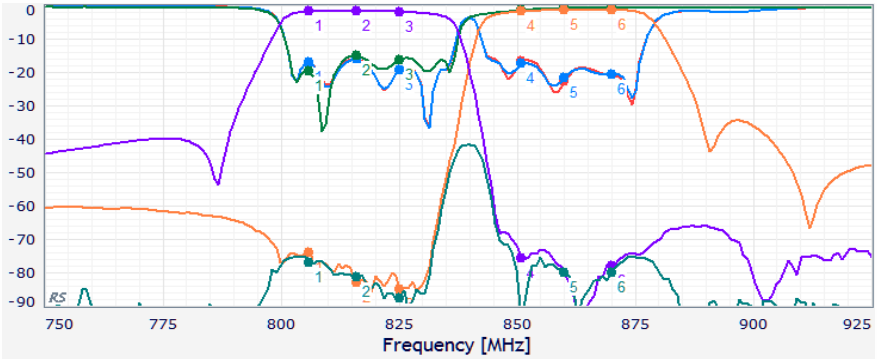


Product is shipped in Pre-formed foam trays



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
Freq[MHz]	806	816	825	851	860	870
S11[dB](1)	-16.9	-15.8	-19.1	-16.6	-22.5	-20.6
S11[dB](2)	-17	-16	-19.2	-17.3	-21.4	-20.4
S11[dB](3)	-19.4	-14.8	-16.1	-1.19	-0.651	-0.483
S21[dB](1)	-73.8	-82.9	-84.9	-1.58	-1.14	-1.18
S21[dB](2)	-1.6	-1.45	-1.67	-75.5	-79.8	-77.9
S21[dB](3)	-77	-81.2	-87.6	-95.8	-79.9	-79.7