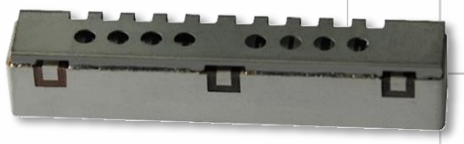
UPD001A

Band 1 UPD Series Duplexer

Features

- Low Loss with High Rejection
- Superior power handling and reliability
- Universal footprint across all FDD frequency bands
- Sufficient rejection for co-location with Band 3



Part Dimensions: 40.1 × 10.5 × 8.3 mm • 10.3 g
Materials: Ag plated ceramic block with tin plated brass shield

Applications

- Wireless Infrastructure applications
- High-performance carrier-grade Pico-cells using linearized PA for 0.25-0.5W and linear PA to 1.0W at the antenna port.
- Wide-band femto-cells or pico-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.

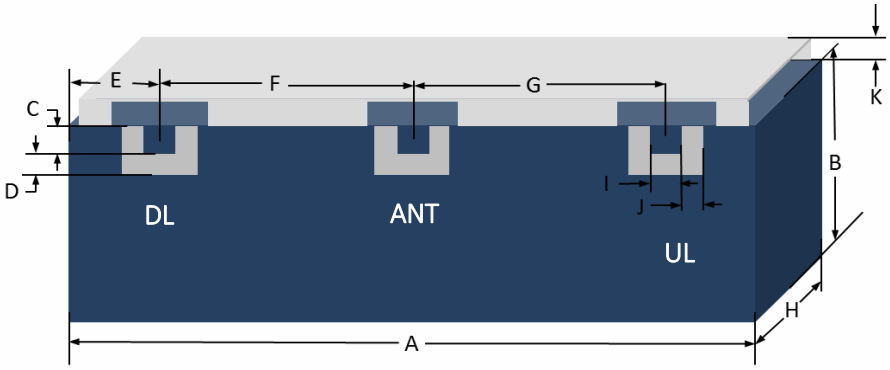
Electrical Specifications

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	-	-	-	3.0 Watt max
Peak Input Power	-	-	-	30 Watt max
Antenna to UL Response				
Passband Insertion Loss (5 MHz avg)	1920-1980	1.4 dB	1.5 dB max	1.7 dB max
Passband Return Loss	1920-1980	15 dB	12 dB min	12 dB min
Attenuation:	2110-2170	61 dB	58 dB min	58 dB min
	1805-1880	13 dB	10 dB min	10 dB min
	1710-1804	31 dB	30 dB min	30 dB min
DL to Antenna Response				
Passband Insertion Loss (5 MHz avg)	2110-2170	1.2 dB	1.4 dB max	1.6 dB max
Passband Return Loss	2110-2170	15 dB	12 dB min	12 dB min
Attenuation:	1920-1980	65 dB	63 dB min	63 dB min
DL to UL Response				
Attenuation for UL band	1920-1980	65 dB	63 dB min	63 dB min
Attenuation for DL band	2110-2170	61 dB	58 dB min	58 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.

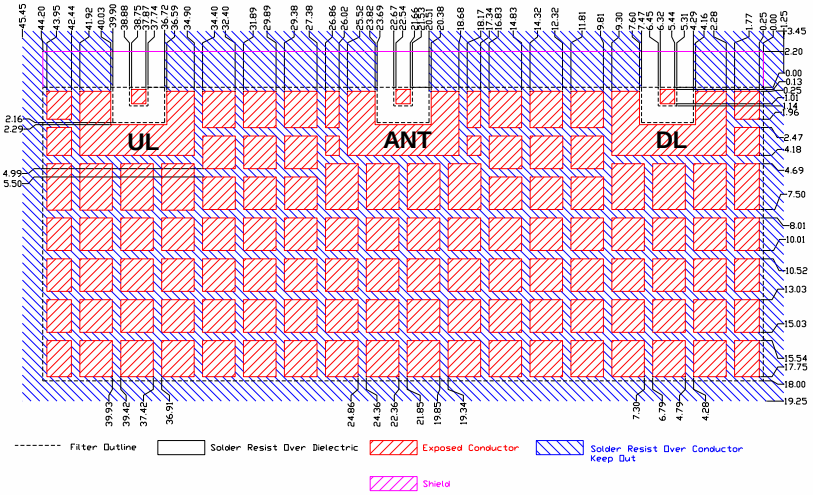
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

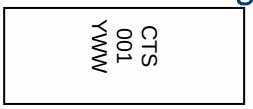


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	39.75	0.30
B	8.50	0.30
C	1.10	0.13
D	1.10	0.13
E	3.66	0.13
F	16.22	0.13
G	16.22	0.13
H	8.10	0.20
I	1.00	0.13
J	1.00	0.13
K	1.50	0.20

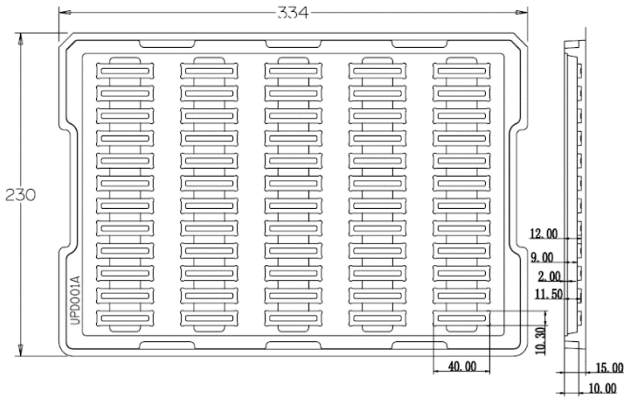
PCB Layout



Packaging and Marking

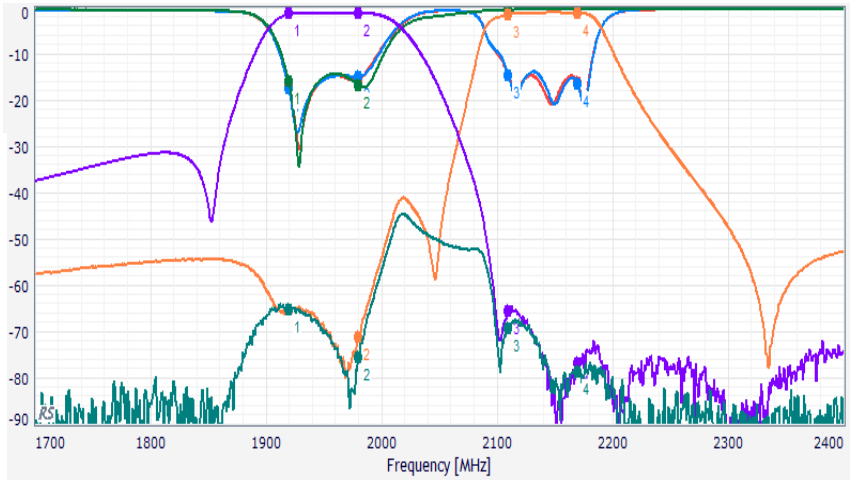


Product is shipped in Pre-formed foam trays



The trays have 60 slots each with one filter per slot. Boxes are packed with 9 Trays per box for a total of 540 filters per box.

Electrical Response



Marker	1	2	3	4
Freq[MHz]	1920	1980	2110	2170
S11[dB](1)	-16	-15.4	-14.5	-16
S11[dB](2)	-17.4	-14.7	-14.4	-16.3
S11[dB](3)	-15.8	-16.6	-0.347	-0.164
S21[dB](1)	-65.2	-71	-1.34	-1.07
S21[dB](2)	-1.25	-1	-65.5	-76.6
S21[dB](3)	-65.1	-75.4	-69.3	-78.5