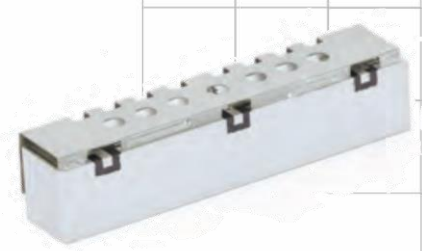
UPD005A - PRELIMINARY

Band 5 UPD Series Duplexer



Part Dimensions: 43.7 × 12.8 × 8.4 mm • 19.4 g
Materials: Ag plated ceramic block with tin plated brass shield

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 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.

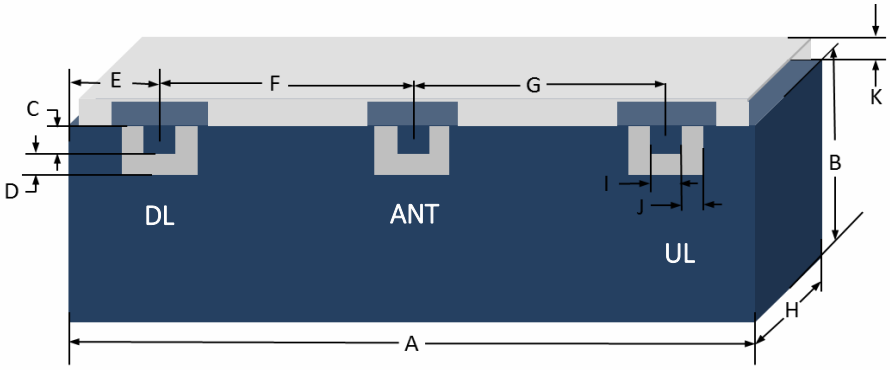
Electrical Specifications (These specs are NOT guaranteed. Will be revised following prototype run.)

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)	824-849			<=3.0 dB max
Passband Return Loss	824-849			>=12 dB min
Attenuation: (single point)	869-894			>=55 dB min
	756-768			>=21 dB min
	728-756			>=25 dB min
DL to Antenna Response				
Passband Insertion Loss (5 MHz avg)	869-894			<=3.0 dB max
Passband Return Loss	869-894			>=12 dB min
Attenuation: (single point)	824-849			>=60 dB min
	617-823		Flexible	>=43 dB min
DL to UL Response				
Attenuation for UL band (5 MHz avg)	824-849			63 dB min
Attenuation for DL band (5 MHz avg)	869-894			55 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.

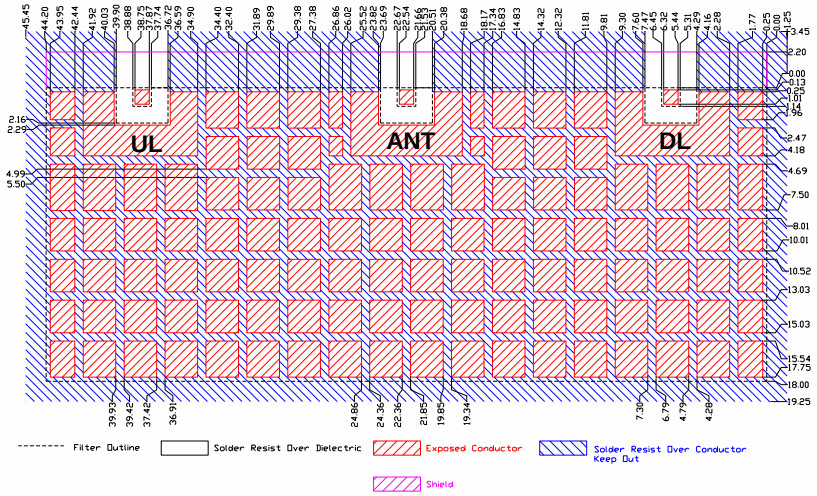
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

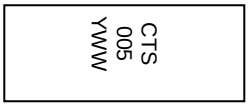


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	43.40	0.30
B	10.80	0.30
C	1.10	0.13
D	1.00	0.13
E	5.48	0.13
F	16.22	0.13
G	16.22	0.13
H	8.20	0.20
I	1.00	0.13
J	1.00	0.13
K	1.50	0.20

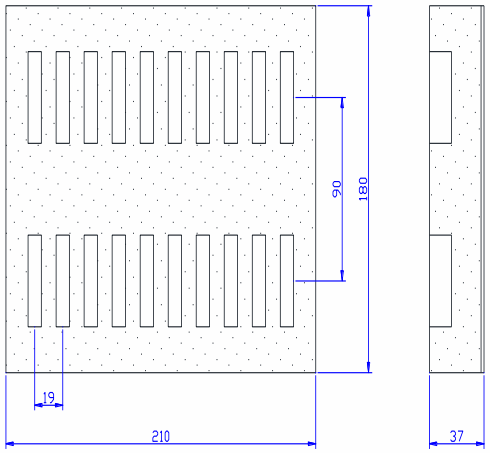
PCB Layout



Packaging and Marking

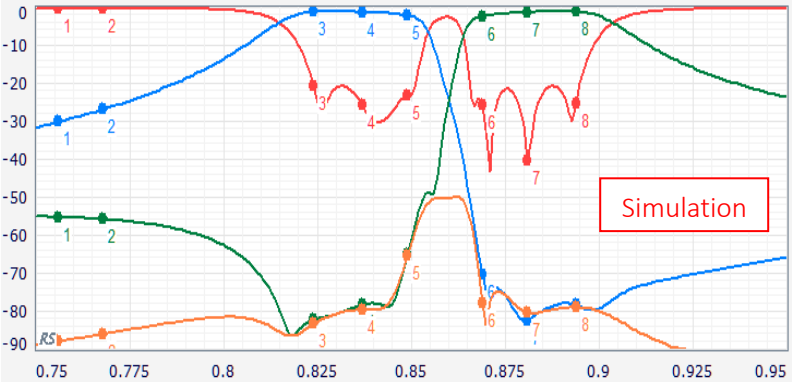


Product is shipped in Pre-formed foam trays



The trays have 20 slots each with one 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
Freq[GHz]	0.756	0.768	0.824	0.837	0.849	0.869	0.881	0.894
S11[dB](1)	-0.0561	-0.0819	-20.5	-25.5	-22.9	-25.5	-40.2	-25
S21[dB](1)	-30	-26.6	-1.02	-1.1	-1.95	-70.3	-82.2	-78.2
S13[dB](1)	-55.1	-55.6	-82	-78.1	-64.8	-2.19	-1.12	-1.01
S23[dB](1)	-87.8	-85.8	-83.2	-79.5	-65.3	-77.5	-80.3	-78.9

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:				
DL to Antenna Response				
Attenuation:				

Wideband Response