

UPD012A - PRELIMINARY

Band 12 UPD Series Duplexer

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.



Part Dimensions: 44.3 × 16.0 × 8.4 mm • 25 g
Materials: Ag plated ceramic block with tin plated brass shield

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)	699-715	2.2 dB	2.5 dB max	2.8 dB max
Passband Return Loss	699-715	15 dB	12 dB min	12 dB min
Attenuation:	729-745	60 dB	58 dB min	57 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	729-745	2.2 dB	2.5 dB max	2.8 dB max
Passband Return Loss	729-745	15 dB	12 dB min	12 dB min
Attenuation:	699-715	65 dB	63 dB min 71dB or best	63 dB min 71dB or best

DL to UL Response

Attenuation for UL band	699-715	65 dB	63 dB min 71dB or best	63 dB min 71dB or best
Attenuation for DL band	729-745	60 dB	58 dB min	57 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.

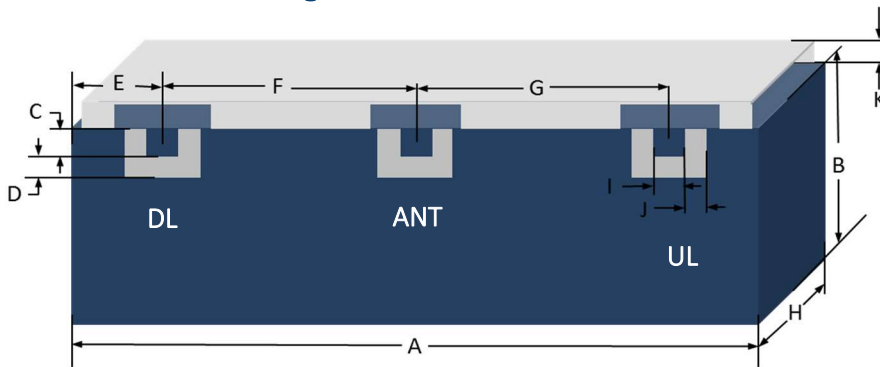
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB



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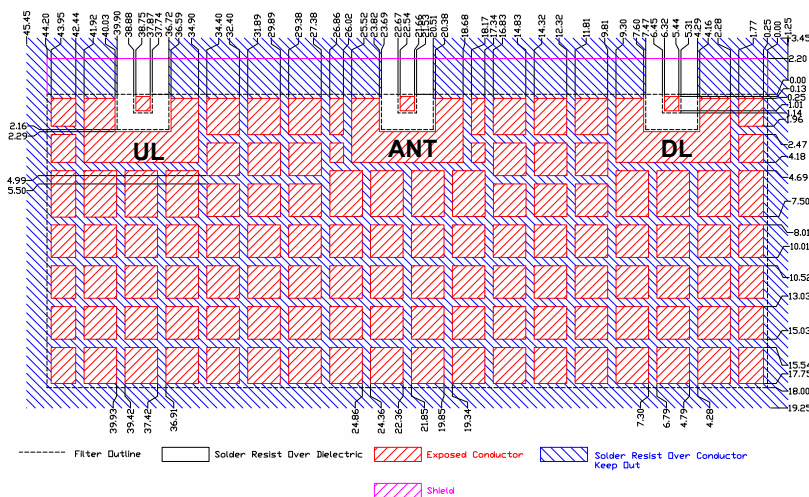
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Mechanical Drawing

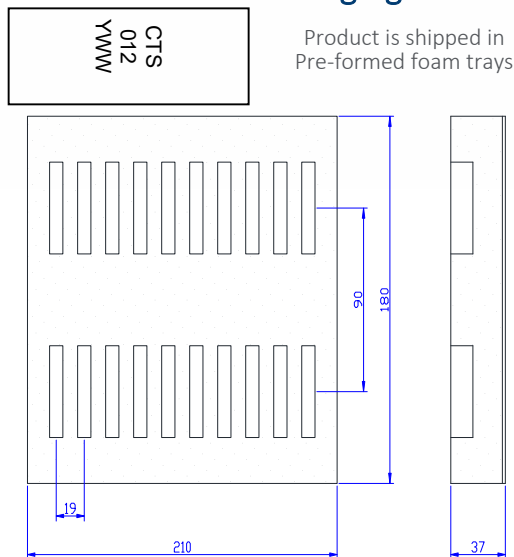


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	43.9	0.30
B	13.90	0.30
C	1.10	0.13
D	1.10	0.13
E	5.88	0.13
F	16.22	0.13
G	16.22	0.13
H	8.20	0.20
I	1.00	0.13
J	1.00	0.13
K	1.60	0.20

PCB Layout

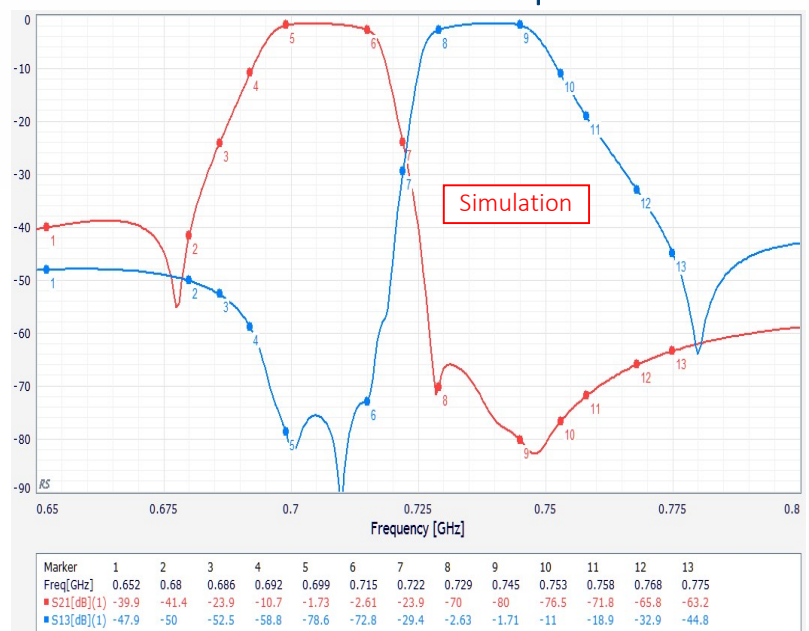


Packaging and Marking



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





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:	1-680			30 dB min
	680-686			20 dB min
	686-692			7 dB min
	722-728			20 dB min
	745-1100			45 dB min
DL to Antenna Response				
Attenuation:	1-699			43 dB min
	717-722			20 dB min
	753-758			7 dB min
	758-768			12 dB min
	768-1100			30 dB min

Wideband Response