

# UPD028A

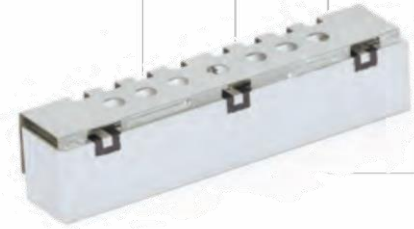
## Band 28 UPD Series Duplexer

### 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: 42.9 × 15.7 × 8.2 mm • 22.3 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)	703-748	3.0 dB	3.1 dB max	3.2 dB max
Passband Return Loss	703-748	12 dB	11 dB min	11 dB min
Attenuation: (single point)	758-803	54 dB	52 dB min	52 dB min

#### DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	758-803	3.0 dB	3.1 dB max	3.2 dB max
Passband Return Loss	758-803	12 dB	11 dB min	11 dB min
Attenuation: (single point)	703-748	61 dB	59 dB min	59 dB min

#### DL to UL Response

Attenuation for UL band (5 MHz avg)	703-748	64 dB	63 dB min	63 dB min
Attenuation for DL band (5 MHz avg)	758-803	57 dB	55 dB min	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.

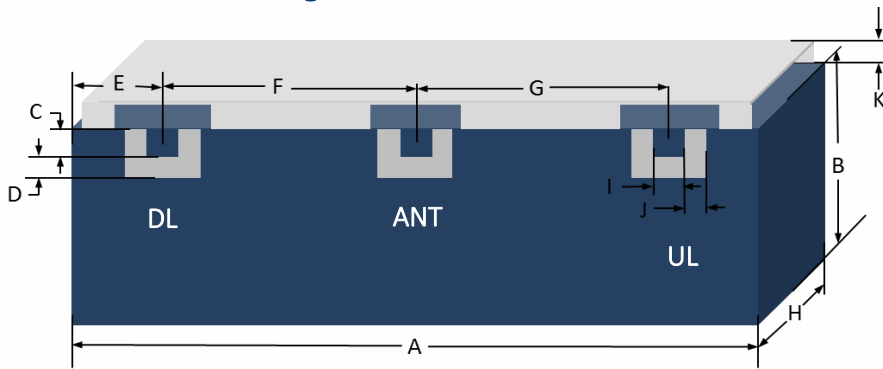
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB



# PRELIMINARY - UPD028A

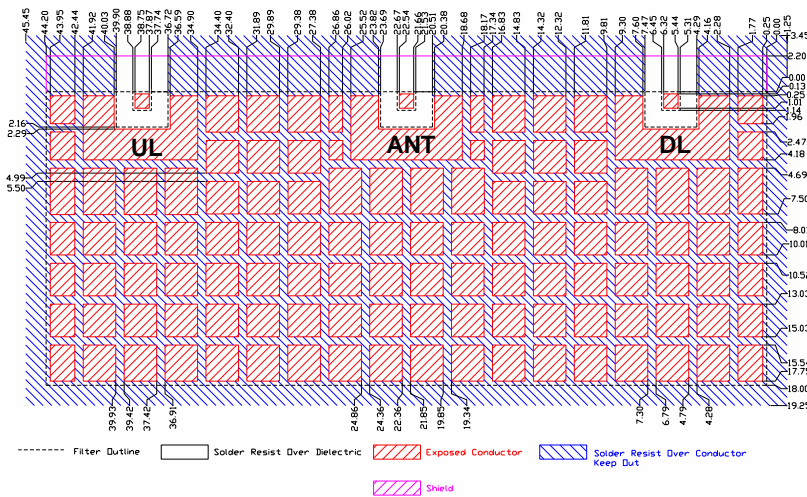
Band 28 UPD Series Duplexer

## Mechanical Drawing

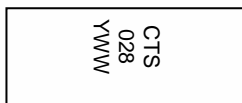


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	42.50	0.40
B	13.80	0.30
C	1.10	0.13
D	1.10	0.13
E	5.03	0.20
F	16.22	0.13
G	16.22	0.13
H	8.00	0.20
I	1.00	0.13
J	1.00	0.13
K	1.40	0.20

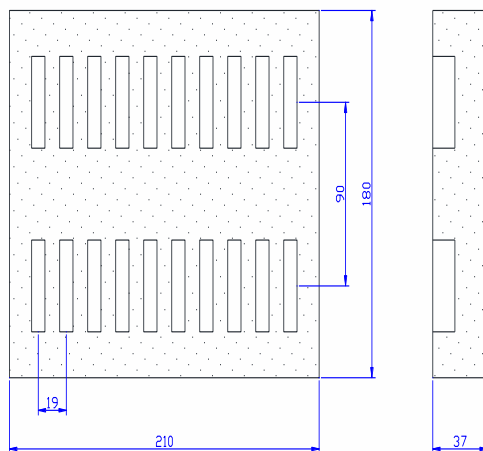
## PCB Layout



## Packaging and Marking

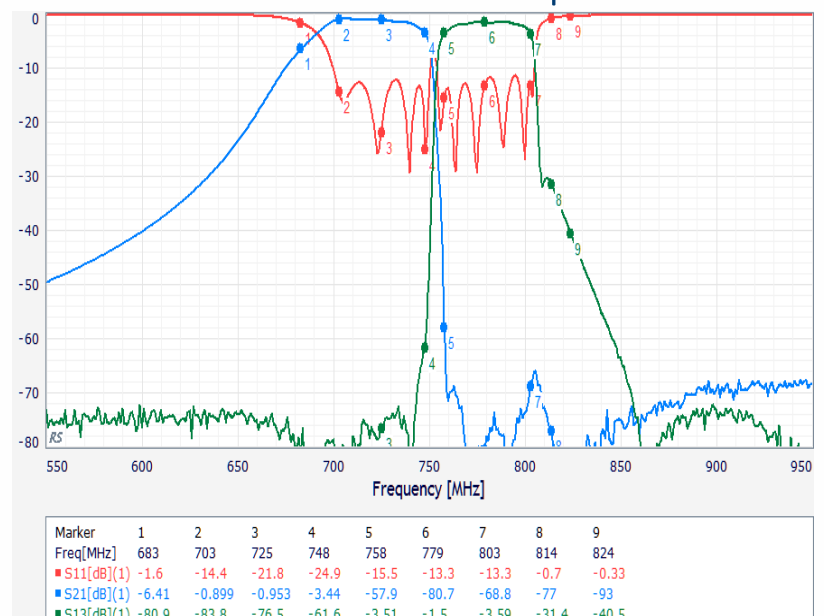


Product is shipped in  
Pre-formed foam trays



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





## 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 - 500			33 dB min
	500 - 683			5 dB min
	803 - 960			43 dB min
	960 - 1560			23 dB min
DL to Antenna Response				
Attenuation:	1 - 703			>43 dB min
	814 - 823			28 dB min
	824 - 960			37 dB min

## Wideband Response