

# UMD028B - PRELIMINARY

## Subset of Band 28 (703-733/758-788)



### Features

- Subset of Band 28 for co-location with Band 20
- Low Loss with High Rejection
- Superior power handling and reliability
- Universal footprint across all UMD Series frequency bands
- Available for either PCB mounting or with various connectors including SMA, SMP-Max, and other options.

### Applications

- Wireless Infrastructure applications
- High-performance carrier-grade active antennas and small-cells for 4-10W at the antenna port.
- Wide-band DAS, Repeaters, or small-cells requiring multi-channel or carrier aggregation

### Description

Ceramic duplexer supports a universal footprint across all FDD frequency bands < 1 GHz 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.

ESTIMATE Part Dimensions: 64 × 29 × 17 mm • <105 g  
Materials: Ag plated ceramic block with tin plated brass shield

### 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	-	-	-	20.0 Watt max
Peak Input Power	-	-	-	200 Watt max
Passive Intermodulation (2x 5W)	-	-	-	-106 dBm (TBC)

#### Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	703 - 733	1.9 dB max
Passband Return Loss	703 - 733	16 dB min
Attenuation:	758 - 788	77 dB min

#### DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	758 - 788	1.9 dB max
Passband Return Loss	758 - 788	16 dB min
Attenuation:	703 - 733	80 dB min

#### DL to UL Response

Attenuation for UL band	703 - 733	80 dB min
Attenuation for Transition band	733 - 758	55 dB min
Attenuation for DL band	758 - 788	77 dB min

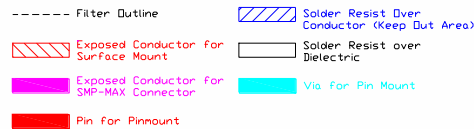
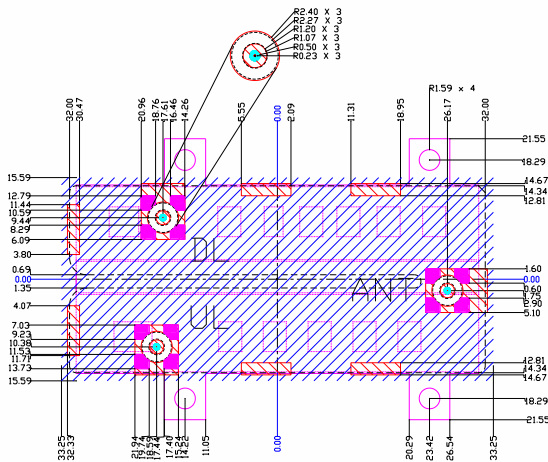
Note: CTS tests each unit to the critical specifications above. Subsequent audits may deviate due to repeatability among different test systems which shall not exceed these allowances.

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

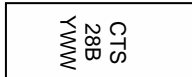
## Mechanical Drawing

Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	64.00	Max
B		
C		
D		
E		
F		
G		
H		
I		
J		0.13
K		0.20

## PCB Layout (Top-Down View)



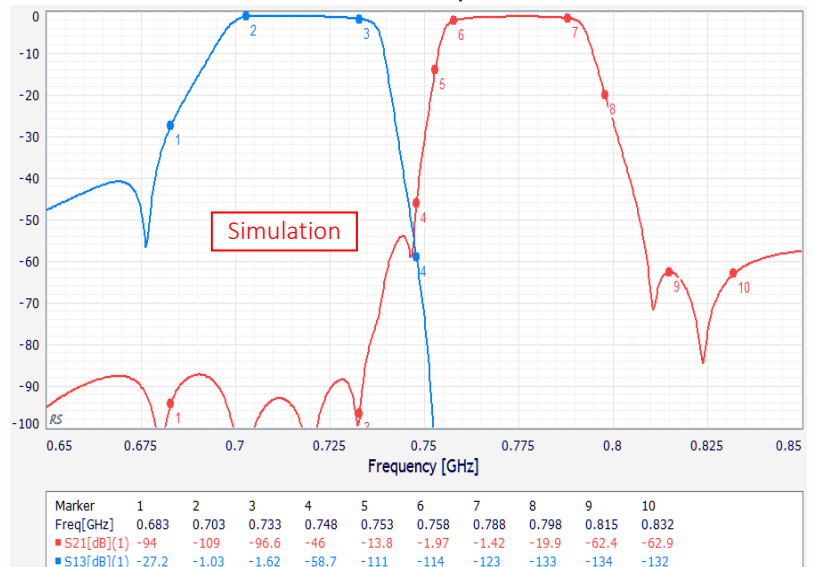
## Packaging and Marking



Product is shipped in Pre-formed foam trays

The trays have xx slots each with one filter per slot. Boxes are packed with 12 Trays per box for a total of xx 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
<b>Antenna to UL Response</b>				
Attenuation:	1 - 654			>40 dB min
	683			15-20 dB min
	753-758			20 dB min
	788 - 960			>60 dB min
<b>DL to Antenna Response</b>				
Attenuation:	1 - 703			>60 dB min
	733-748			15 dB min
	798 - 815			15 dB min
	815 - 915			>50 dB min

### Ordering Options

Part Number	Code	Connector Option Description
UMD028B	[blank]	No pins or connectors
	-C3	3 SMP-Com Male with limited detent
	-CF2	SMP-Com Male with limited detent antenna port + 2 SMP female cables
	-M3	3 SMP-Max Slide-type Male
	-NS2	N-type antenna port + 2 SMA Male (CMD only)
	-P3	3 thru-hole pins for soldering to PCB (UMD only)
	-S3	3 SMA Female