

UMD028A

Full Band 28 UMD Series Duplexer

Features

- 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.



Available as direct-solder to PCB or with various connector options.

ESTIMATE Part Dimensions: 64 × 29 × 16 mm • <105 g (excl. connectors)
Materials: Ag plated ceramic block with tin plated brass shield

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.

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

Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	703 - 748	1.8 dB	2.2 dB max	2.4 dB max
Passband Return Loss	703 - 748	13 dB	12 dB min	12 dB min
Attenuation:	759 - 803	78 dB	76 dB min	76 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	758 - 803	1.8 dB	2.2 dB max	2.4 dB max
Passband Return Loss	758 - 803	13 dB	12 dB min	12 dB min
Attenuation:	703 - 747	80 dB	78 dB min	78 dB min

DL to UL Response

Attenuation for UL band	703 - 747	82 dB	80 dB min	80 dB min
Attenuation for Transition band	748 - 758			35 dB min
Attenuation for DL band	759 - 803	78 dB	76 dB min	76 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.

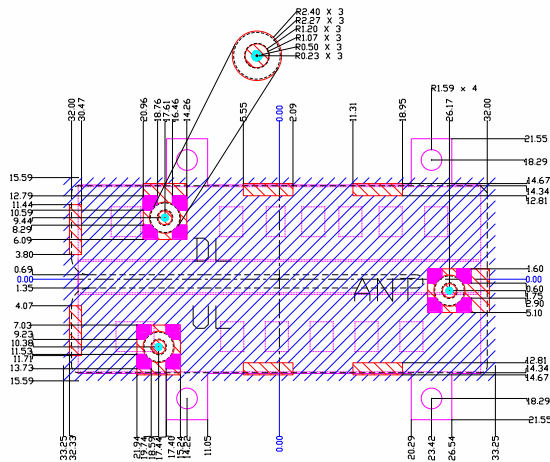
Specification	Allowance
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

TBC = To be confirmed

Mechanical Drawing

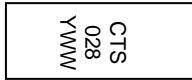
Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	64.00	Max
B	29.00	Max
C		
D		
E		
F		
G		
H		
I		
J		
K		

PCB Layout (Top-Down View)



- Filter Outline
- Exposed Conductor for Surface Mount
- Exposed Conductor for SMP-MAX Connector
- Pin for Pinmount
- Solder Resist Over Conductor (Keep Out Area)
- Solder Resist over Dielectric
- Via for Pin Mount

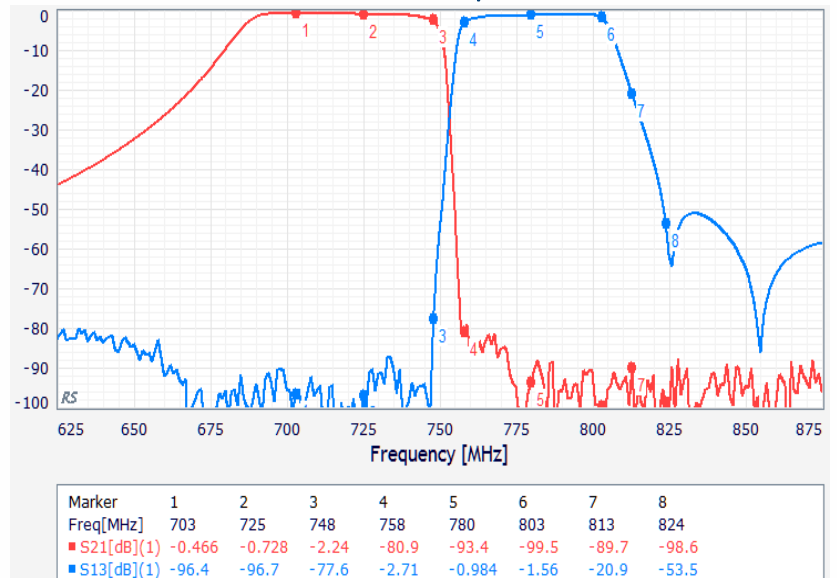
Packaging and Marking



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
Antenna to UL Response				
Attenuation:	1 - 600			50 dB min
	600 - 654			27 dB min
	683			6dB min
	803 - 960			60 dB min
DL to Antenna Response				
Attenuation:	1 - 703			60 dB min
	813 - 824			12 dB min
	824 - 862			44 dB min
	880 - 915			50 dB min

Ordering Options

Part Number	Code	Connector Option Description
UMD028A	[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