

UMD008A - PRELIMINARY Band 8 UMD Series Duplexer

Features

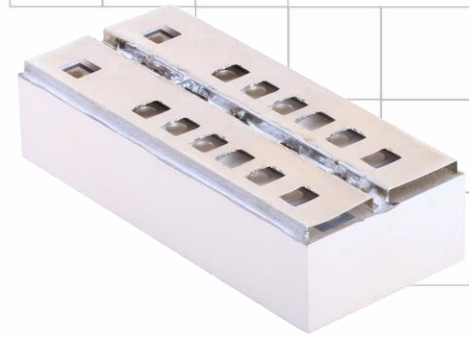
- Low Loss with High Rejection
- Superior power handling and reliability
- Universal footprint across all UMD Series frequency bands
- Available for either PCB mounting or with various connectors including SMA, SMP-Max, and other options.

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

Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	880 - 915	2.2 dB	2.4 dB max	2.5 dB max
Passband Return Loss	880 - 915			14 dB min
Attenuation:	925 - 960			74 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	925 - 960	2.2 dB	2.4 dB max	2.5 dB max
Passband Return Loss	925 - 960			14 dB min
Attenuation:	880 - 915			78 dB min

DL to UL Response

Attenuation for UL band (5 MHz avg)	880 - 915			78 dB min
Attenuation for Transition band	915 - 925			55 dB min (only 45dB)
Attenuation for DL band (5 MHz avg)	925 - 960			74 dB min

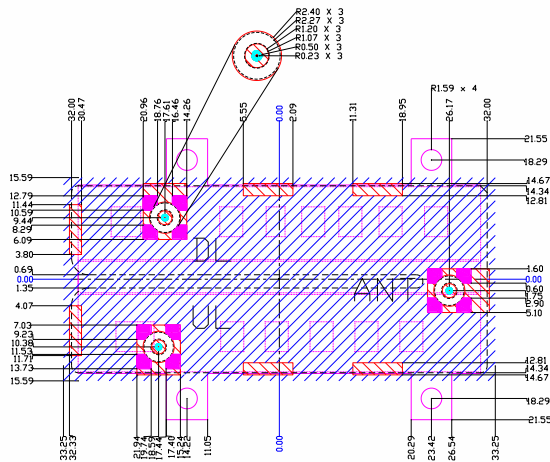
Note: CTS tests each unit to the critical specifications above. Subsequent audits may deviate due to repeatability among different test systems which shall not exceed these allowances.

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

Mechanical Drawing

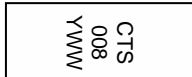
Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	64.00	Max
B	29.00	Max
C		
D		
E		
F		
G		
H		
I		
J		
K		

PCB Layout (Top-Down View)



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

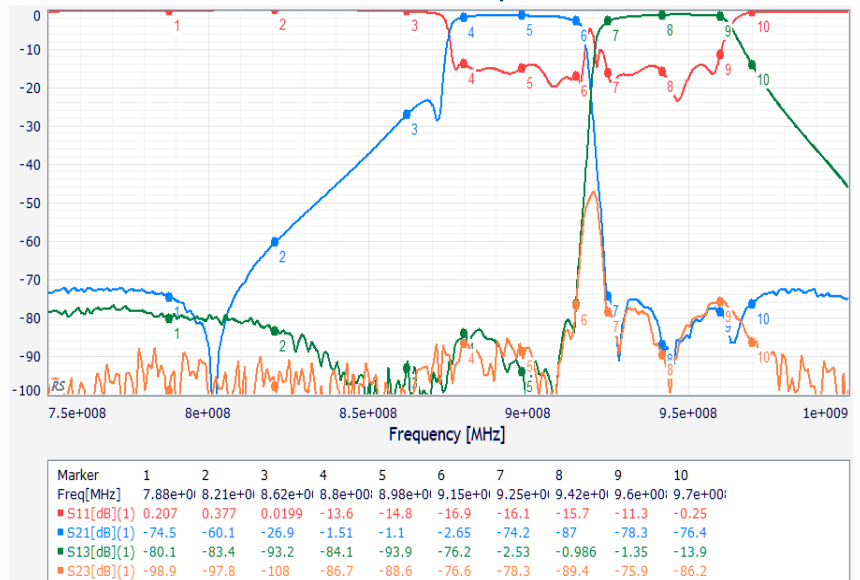
Packaging and Marking



Product is shipped in Pre-formed foam trays

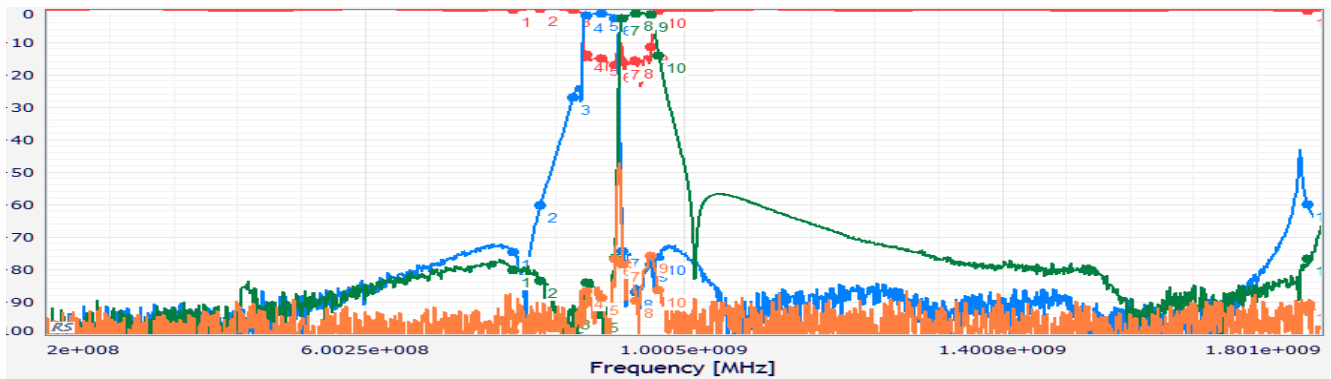
The trays have xx slots each with one filter per slot. Boxes are packed with 12 Trays per box for a total of xx filters per box.

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 - 788			>60 dB min
	791-821			47 dB min
	832-862			15 dB min
	960 - 1880			>47 dB min
DL to Antenna Response				
Attenuation:	1 - 880			>60 dB min
	970			12 dB min
	1020-1785			50 dB min



Ordering Options

Part Number	Code	Connector Option Description
UMD008A	[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