

UMD014A - PRELIMINARY

Band 14 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.

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 (10 MHz avg)	788 - 798	1.4 dB	1.6 dB max	1.8 dB max
Passband Return Loss	788 - 798	16 dB	15 dB min	15 dB min
Attenuation:	758 - 768			75 dB min
	716 - 758			67 dB min

DL to Antenna Response

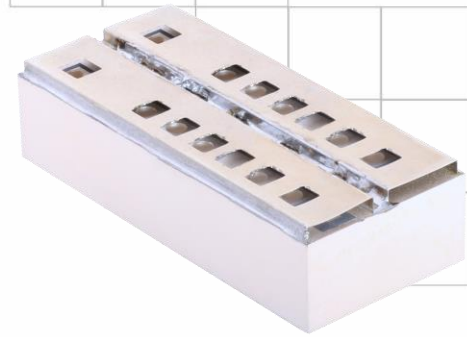
Passband Insertion Loss (10 MHz avg)	758 - 768	1.4 dB	1.6 dB max	1.8 dB max
Passband Return Loss	758 - 768	16 dB	15 dB min	15 dB min
Attenuation:	788 - 798			77 dB min

DL to UL Response

Attenuation for UL band (10MHz avg)	788 - 798			78 dB min
Attenuation for Transition band	768 - 788			47 dB min
Attenuation for DL band (10MHz avg)	758 - 768			77 dB min
	716 - 758			67 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.

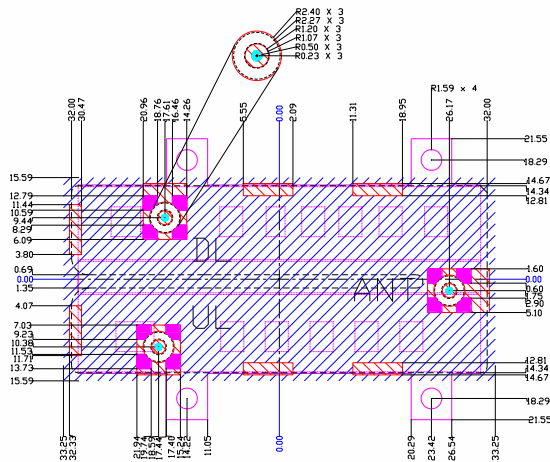
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB



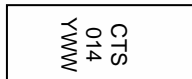
ESTIMATE Part Dimensions: 64 × 29 × 17 mm • <105 g
Materials: Ag plated ceramic block with tin plated brass shield

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)

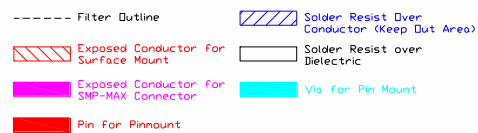


Packaging and Marking

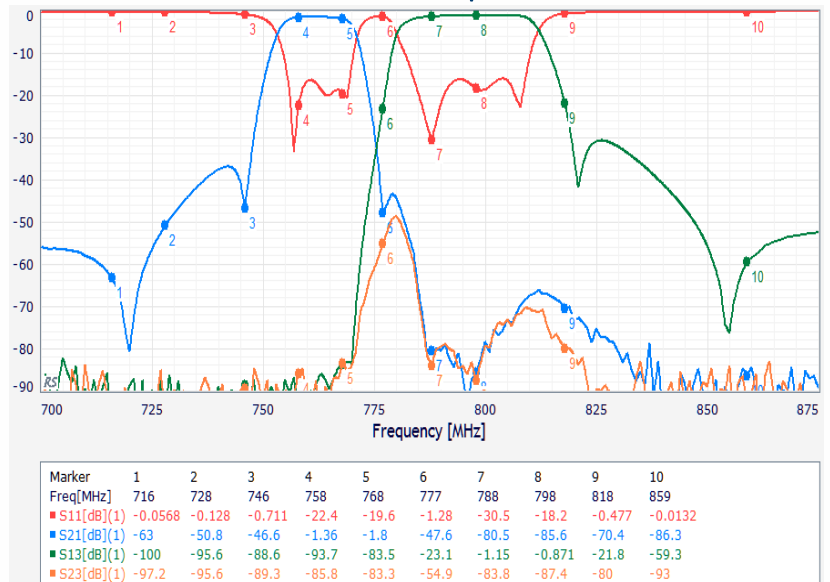


Product is shipped in
Pre-formed foam trays

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.

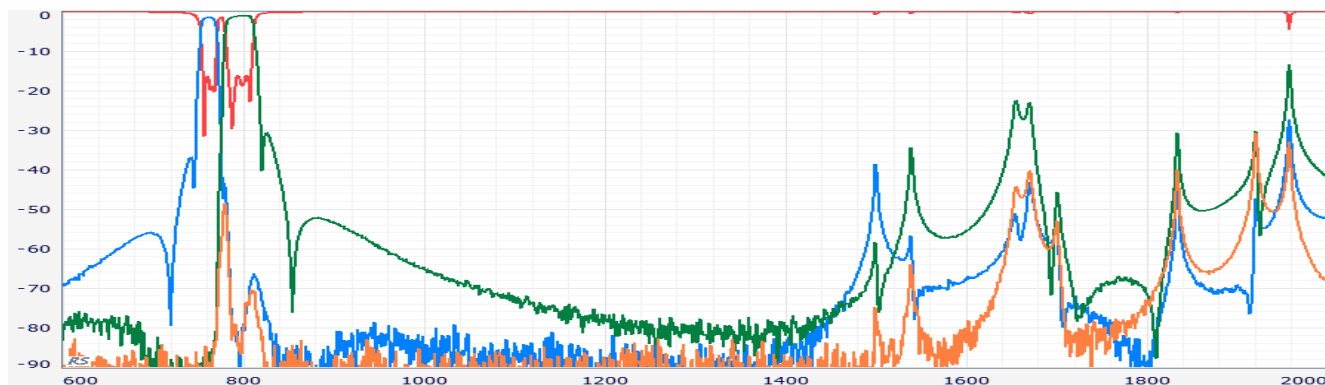


Electrical Response



Electrical Specifications – Supplemental Spectrum Specifications

Parameter	Frequency (MHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Antenna to UL Response				
Attenuation:	1 - 758			60 dB min
	818 - 859			20 dB min
	859 - 924			47 dB min
DL to Antenna Response				
Attenuation:	1 - 716			50 dB min
	728 - 746			20 dB min
	777-787			40 dB min
	798-1465			60 dB min



Ordering Options

Part Number	Code	Connector Option Description
UMD014A	[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
	-P3	3 thru-hole pins for soldering to PCB
	-S3	3 SMA Male