

UMD001A - Preliminary

Band 1 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 × 13 mm • <90 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 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 TBC

Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	1920 - 1980			1.8 dB max
Passband Return Loss	1920 - 1980	15 dB	14 dB min	14 dB min
Attenuation:	2110 - 2170	74 dB	72 dB min	72 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	2110 - 2170			1.8 dB max
Passband Return Loss	2110 - 2170	15 dB	14 dB min	14 dB min
Attenuation:	1920 - 1980	80 dB	78 dB min	78 dB min

DL to UL Response

Attenuation for UL band	1920 - 1980	82 dB	80 dB min	80 dB min
Attenuation for DL band	2110 - 2170	76 dB	74 dB min	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

TBC = To be confirmed



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 - 1804			60 dB min
	1805 - 1880			47 dB min
	1900			5 dB min
	2000			5 dB min
	2181 - 2483			60 dB min
DL to Antenna Response				
Attenuation:	1 - 1919			60 dB min
	2300 - 2483			50 dB min

Ordering Options

Part Number	Code	Connector Option Description
UMD001A	[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 Female