

UED007A

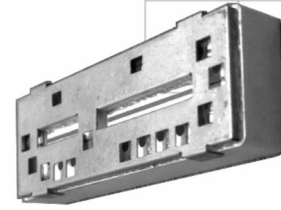
Band 7 UED Series Duplexer

Features

- Low Loss with High Rejection
- Superior power handling and reliability
- Universal footprint across all UED Series frequency bands
- Surface-mount using embedded strip-line RF signal traces

Applications

- Wireless Infrastructure applications
- High-performance carrier-grade small-cells or DAS <=2W at the antenna port requiring multi-channel or carrier aggregation.



Part Dimensions: 59 x 21 x 7 mm • 23 g
Materials: Ag plated ceramic block with tin plated brass shield

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	-	-	-	8.0 Watt max
Peak Input Power	-	-	-	80 Watt max

Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	2500 - 2565	3.2 dB	3.3 dB max	3.3 dB max
Passband Insertion Loss (5 MHz avg)	2565 - 2570	3.6 dB	3.7 dB max	3.9 dB max
Passband Ripple	2500 - 2570	2.3 dB	2.7 dB max	2.9 dB max
Passband Return Loss	2500 - 2570	10.5 dB	10 dB min	10 dB min
Attenuation:	2620 - 2690	64 dB	62 dB min	62 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	2625 - 2690	3.2 dB	3.3 dB max	3.3 dB max
Passband Insertion Loss (5 MHz avg)	2620 - 2625	3.6 dB	3.7 dB max	3.9 dB max
Passband Ripple (over passband)	2620 - 2690	2.5 dB	2.7 dB max	2.9 dB max
Passband Return Loss	2620 - 2690	10.5 dB	10 dB min	10 dB min
Attenuation:	2500 - 2570	70 dB	68 dB min	68 dB min

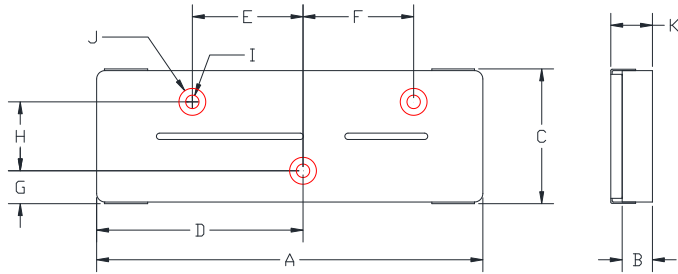
DL to UL Response

Attenuation for UL band	2500 - 2570	71 dB	70 dB min	70 dB min
Attenuation for DL band	2620 - 2690	67 dB	64 dB min	64 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.

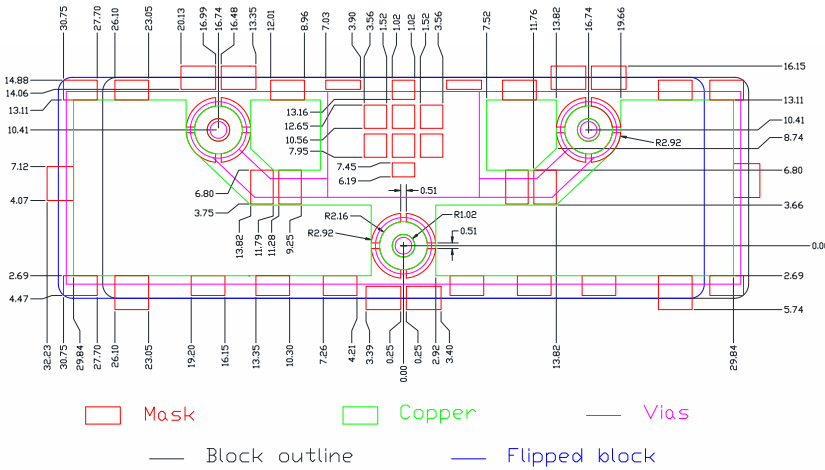
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing (Bottom View)



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	59.00	Max
B	5.20	Max
C	21.00	Max
D	31.22	0.20
E	16.74	0.13
F	16.74	0.13
G	4.97	0.20
H	10.41	0.13
I (radius)	1.02	0.13
J (radius)	2.03	0.13
K	7.00	Max

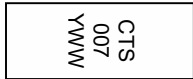
PCB Layout (Top-Down View)



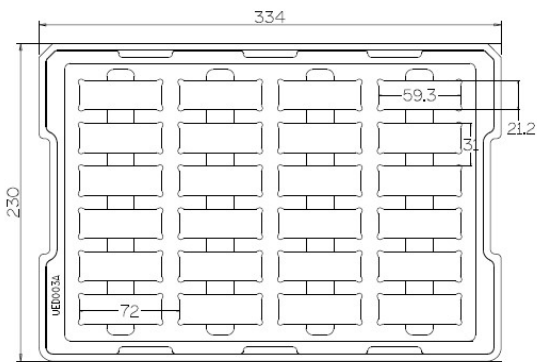
Align part to Black outline on the PCB Layout
IMPORTANT: Please assure ≥ 20 mils (0.5mm) thickness of dielectric beneath the top-metal.
 Please assure sufficient ground vias between the top metal ground planes and the primary ground plane.
 Recommended solder: 6 mils of SAC305 with reflow including 120s of soak at 217°C, and up to 30 sec peak at 241°C.

NOTE: While each unit is only 59mm length, the Universal footprint allocates 62.5mm for support of freq bands with low-band as DL. Signal vias directly under the I/Os should be blind-vias to embedded strip-lines.

Packaging and Marking

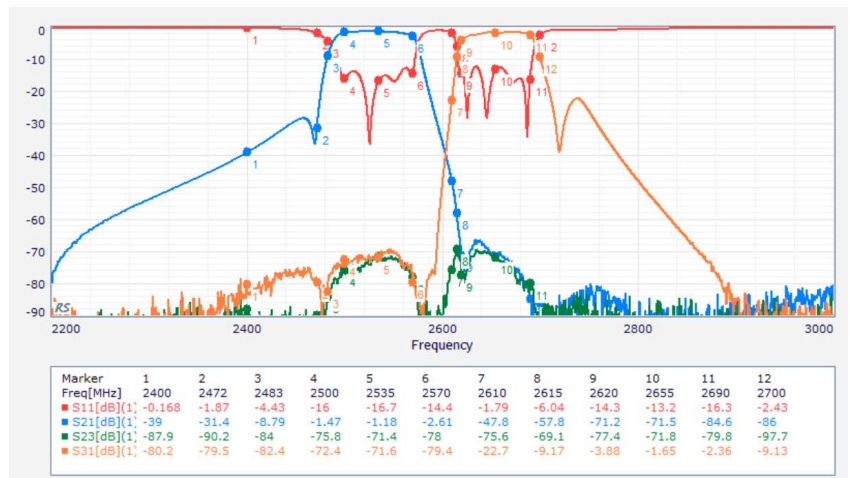


Product is shipped in thermo formed plastic trays



The trays have 24 slots each with one filter per slot. Boxes are packed with 5 Trays per box for a total of 120 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 - 1700	70 dB	60 dB min	60 dB min
	1701 - 2400	39 dB	38 dB min	38 dB min
	2401 - 2472	29 dB	28 dB min	28 dB min
	2483		Get data, No spec	Get data, No spec
	3300 - 3800	68 dB	35 dB min	35 dB min
DL to Antenna Response				
Attenuation:	1 - 2483	70 dB	60 dB min	60 dB min
	2570 - 2610	23 dB	19 dB min	16 dB min
	2611 - 2615	8.5 dB	7.5 dB min	6 dB min
	2700 - 2709	8.5 dB	7.5 dB min	6 dB min
	3300 - 3800	70 dB		35 dB min