UPD025E

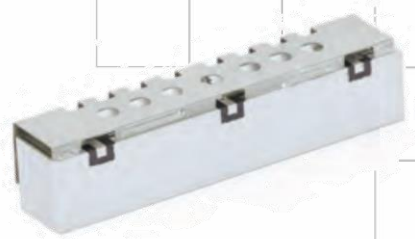
Extended Band 25 UPD Series Duplexer

Features

- Extension of Band 25 to include Downlink of B70
- Low Loss, High Rejection, Superior power handling & reliability
- Universal footprint across all FDD frequency bands

Applications

- High-performance carrier-grades systems using linearized PA for 0.25-0.5W and linear PA to 1.0W at the antenna port.
- Wide-band femto-cells or pico-cells requiring multi-channel or carrier aggregation.



Part Dimensions: 44.3 × 10.1 × 8.5 mm • 11.9 g
Materials: Ag plated ceramic block with tin plated brass shield

Description

Surface mount 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.

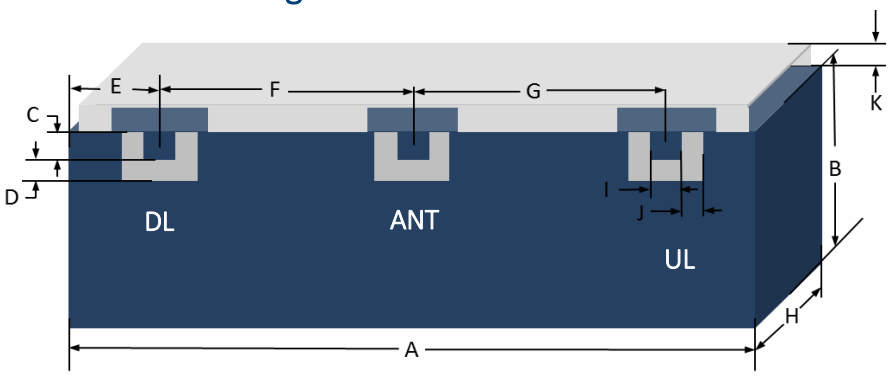
Electrical Specifications

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	-	-	-	3.0 Watt max
Peak Input Power	-	-	-	30 Watt max
Antenna to UL Response				
Passband Insertion Loss (5 MHz avg)	1850-1910	2.4 dB	2.9 dB max	3.0 dB max
(5 MHz avg)	1910-1915	3.7 dB	4.0 dB max	4.2 dB max
Passband Ripple	1850-1915	3.2 dB	4.0 dB max	4.0 dB max
Passband Return Loss	1850-1915	11 dB	10 dB min	10 dB min
Attenuation: (5 MHz avg)	1930-2020	54 dB	52 dB min	52 dB min
	2305-2690	>50 dB	24 dB min	24 dB min
DL to Antenna Response				
Passband Insertion Loss (5 MHz avg)	1935-2020	2.5 dB	3.0 dB max	3.2 dB max
(5 MHz avg)	1930-1935	3.6 dB	4.2 dB max	4.4 dB max
Passband Ripple	1930-2020	3.2 dB	4.0 dB max	4.0 dB max
Passband Return Loss	1930-2020	11 dB	10 dB min	10 dB min
Attenuation: (5 MHz avg)	1910-1915	54 dB	52 dB min	52 dB min
(5 MHz avg)	1850-1910	56 dB	55 dB min	55 dB min
	1-1849	>50 dB	27 dB min	27 dB min
DL to UL Response				
Attenuation for UL band (5 MHz avg)	1850-1915	58 dB	55 dB min	55 dB min
Attenuation for DL band (5 MHz avg)	1930-2020	55 dB	52 dB min	52 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.

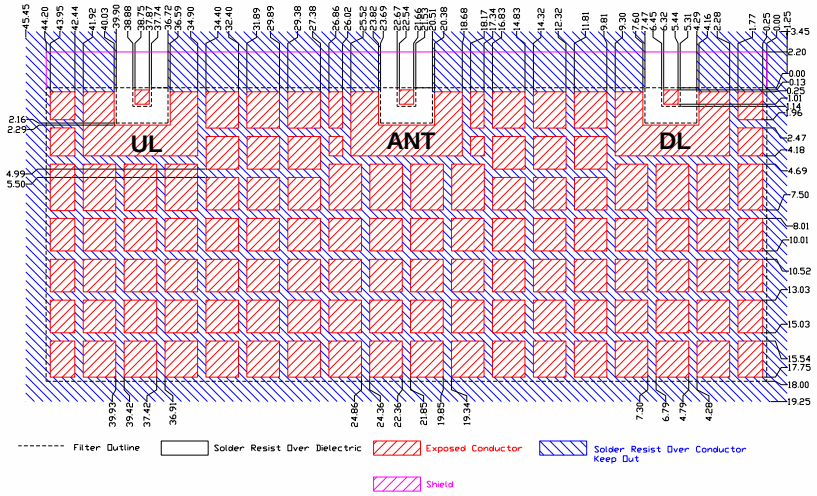
Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

Mechanical Drawing

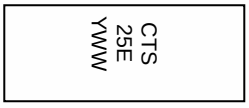


Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	44.00	0.30
B	8.00	0.30
C	1.10	0.13
D	1.10	0.13
E	5.78	0.13
F	16.22	0.13
G	16.22	0.13
H	8.30	0.20
I	1.00	0.13
J	1.00	0.13
K	1.60	0.20

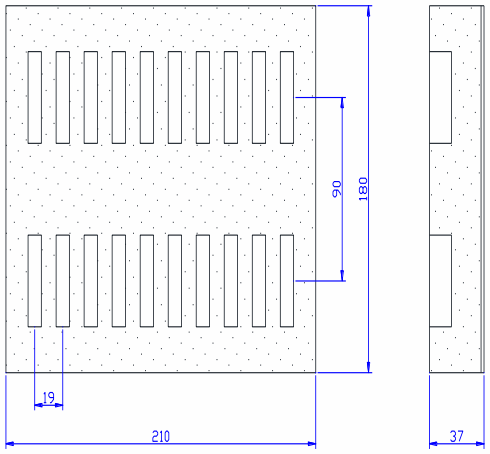
PCB Layout



Packaging and Marking

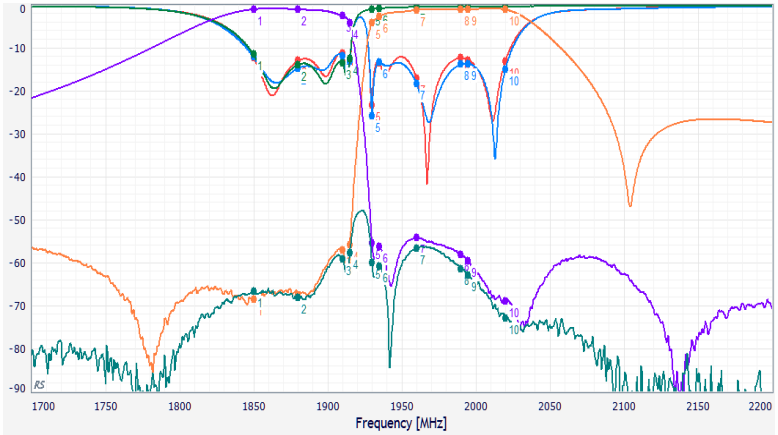


Product is shipped in Pre-formed foam trays



The trays have 20 slots each with one filter per slot. Boxes are packed with 12 Trays per box for a total of 240 filters per box.

Electrical Response



Marker	1	2	3	4	5	6	7	8	9	10
Freq[MHz]	1850	1880	1910	1915	1930	1935	1960	1990	1995	2020
S11[dB](1)	-12.2	-12.9	-11.2	-13.6	-23.2	-13.5	-16.9	-12.3	-12.7	-13
S11[dB](2)	-12	-14.6	-11.9	-13	-25.7	-13.3	-18.2	-13.7	-13.6	-15
S11[dB](3)	-11.5	-13.8	-13.4	-12.4	-0.86	-0.683	-0.383	-0.277	-0.266	-0.213
S21[dB](1)	-68.5	-67.4	-57	-55.6	-4.06	-2.51	-1.08	-0.978	-0.939	-0.995
S21[dB](2)	-0.91	-0.95	-2.42	-4.13	-55.3	-56.1	-54.1	-58	-59.6	-68.9
S21[dB](3)	-66.6	-68.1	-59.1	-57.6	-59.9	-60.6	-56.6	-61.3	-62.8	-72.8