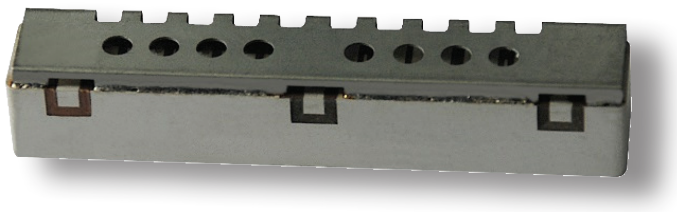
USD: Universal-footprint Small Cell Duplexers

Highest performance monoblock duplexers



CTS Electronic Components introduces the new high-reliability, surface-mounted ceramic filter that delivers the isolation and rejection required for ≤ 2W at Antenna small cells, remote radio heads, repeaters, and indoor DAS systems including applications needing multi-band co-location, linearized PAs, carrier-aggregation, and "whole-band" systems.

Product family offers versions for all of the major frequency bands while sharing a common PCB layout enabling a platform solution.

Model	Freq Band#	DL Freq Range [MHz]	UL Freq Range [MHz]
USD001A	1	2110 - 2170	1920 - 1980
USD002A	2	1930-1990	1850 - 1910
USD003A	3	1805 - 1880	1710 - 1785
USD004A	4	2110 - 2155	1710 - 1755
USD005A	5	869 - 894	824 - 849
USD007A	7	2620 - 2690	2500 - 2570
USD008A	8	925 - 960	880 - 915
USD010A	4 10	2110 - 2180	1710 - 1780
USD012A	12 17	728- 746	698 - 716
USD013A	13	746- 756	777 - 787
USD014A	14	758- 768	788 - 798
USD020A	20	791 - 821	832 - 862
USD025A	2 25	1930-1995	1850 - 1915
USD026A	5 26	859 - 894	814 - 849
USD027A	27	851 - 869	806 - 824
USD028A	28	758 - 803	703 - 748
USD030A	30	2350 -2360	2305-2315

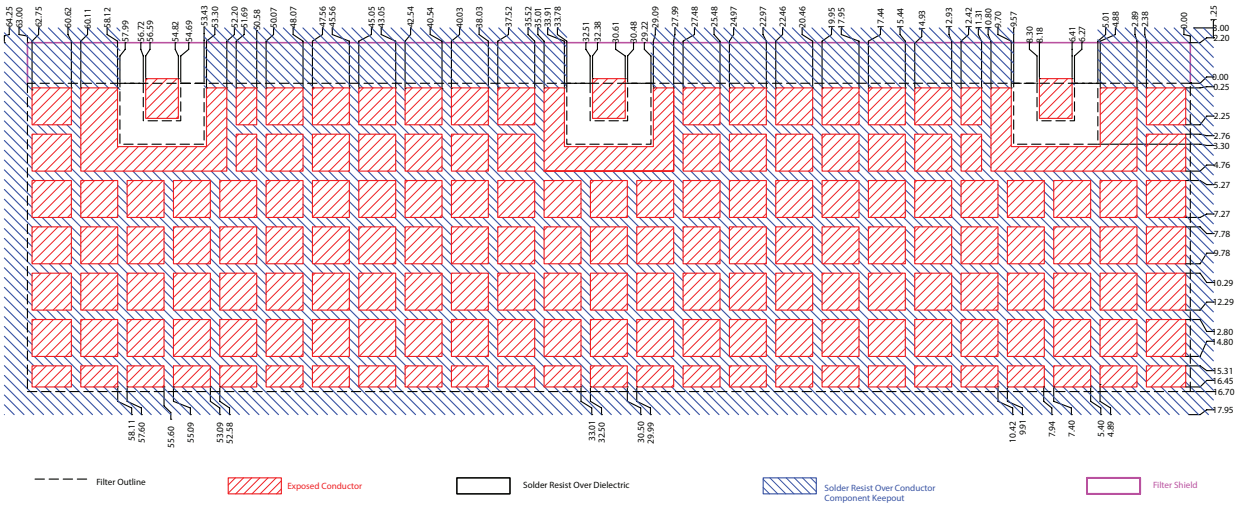
Insertion Loss (5MHz avg)	< 2.6 dB
Uplink Atten	73 dB typ 71 dB min
Downlink Atten	67 dB typ 65 dB min
Return Loss	> 12.0 dB
Input Power Rating	6.0W Avg 60W Peak
Size (L x W x H) (incl shield)	63.0 x <20.0 x 10.9 mm
Max Weight	<36 g
Temperature Range	-40°C to +85°C

RoHS 6/6

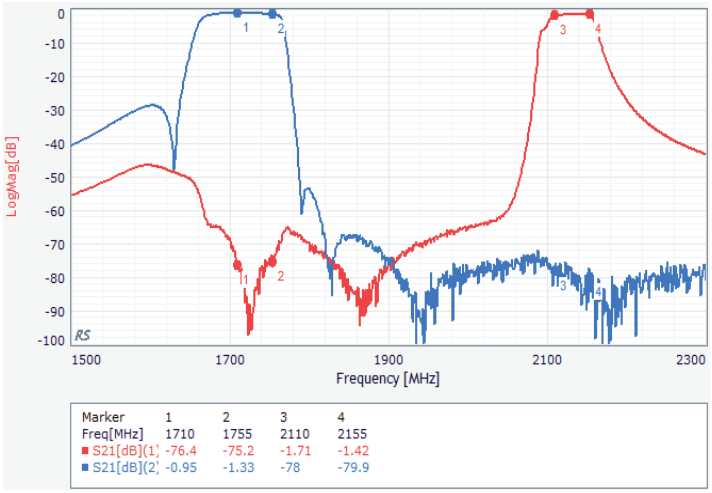
CTS®

Universal PCB Footprint for all USD frequency versions:

(a smaller universal footprint can be supported for frequencies >1.7GHz)

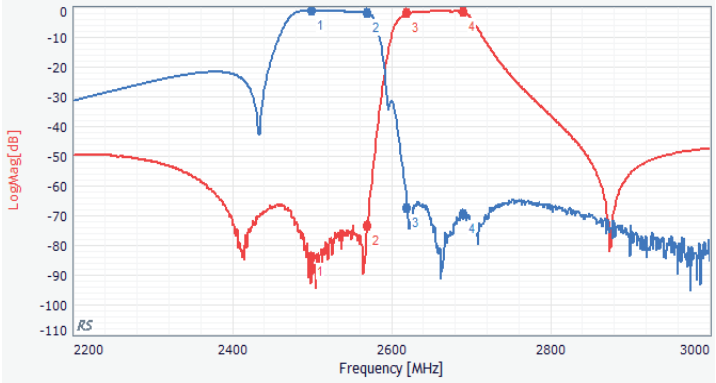


USD004A (measured)



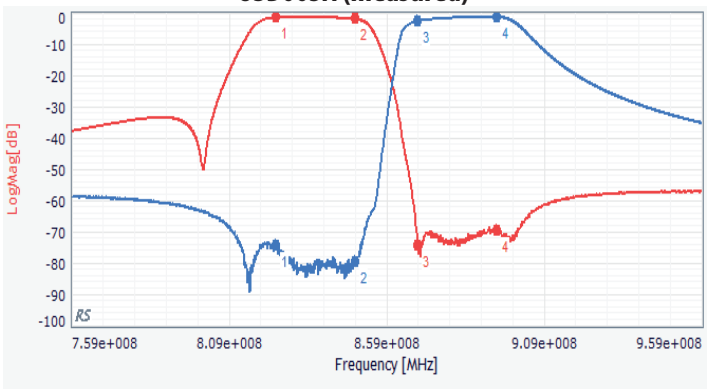
Marker	1	2	3	4
Freq[MHz]	1710	1755	2110	2155
S21[dB](1)	-76.4	-75.2	-1.71	-1.42
S21[dB](2)	-0.95	-1.33	-78	-79.9

USD007A (measured)



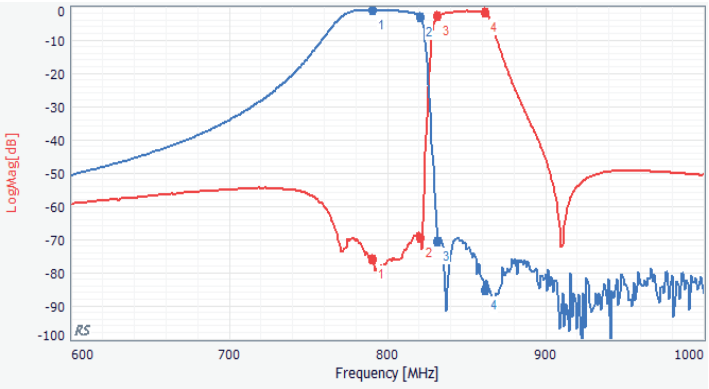
Marker	1	2	3	4
Freq[MHz]	2500	2570	2620	2690
S21[dB](1)	-83.9	-73.2	-1.85	-1.4
S21[dB](2)	-1.06	-1.77	-67.6	-69.2

USD005A (measured)



Marker	1	2	3	4
Freq[MHz]	8.24e+0	8.49e+0	8.69e+0	8.94e+0
S21[dB](1)	-1.19	-1.72	-74.2	-69.4
S13[dB](1)	-74.3	-79.4	-2.28	-1.06

USD020A (measured)



Marker	1	2	3	4
Freq[MHz]	791	821	832	862
S21[dB](1)	-75.9	-69.4	-2.79	-1.49
S21[dB](2)	-0.844	-2.96	-70.7	-85.1

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