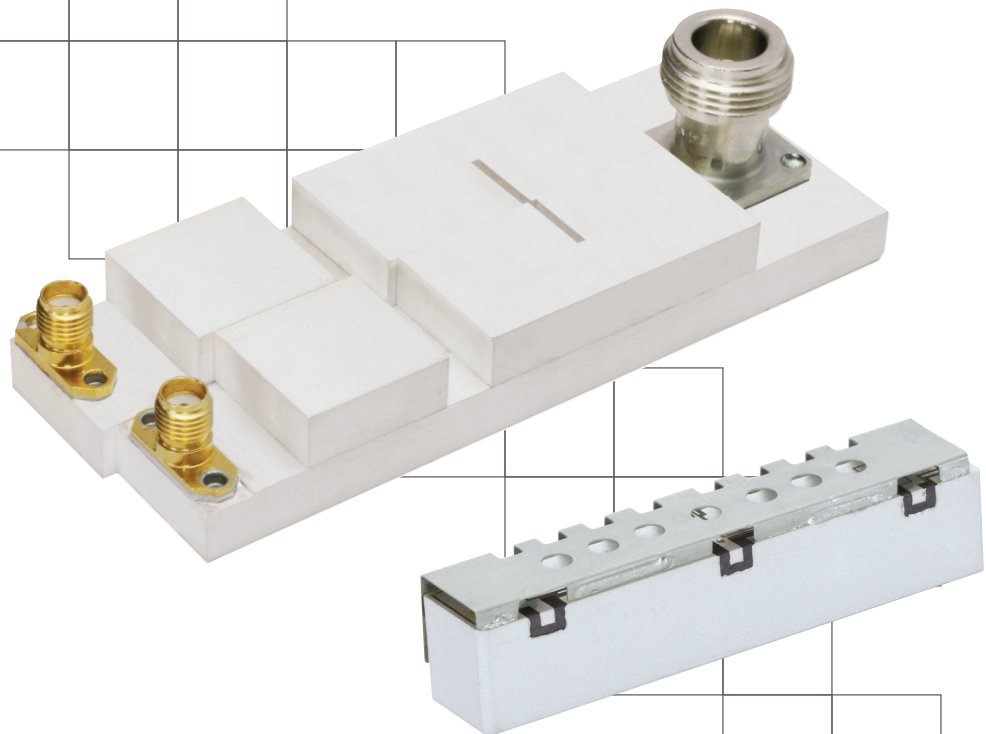


Duplexers



Duplexers

A duplexer is a 3-port radio frequency (RF) filter component which is used in frequency division duplexed (FDD) systems to enable antenna sharing between the transmit and receive paths of a radio system. It accomplishes this with low insertion loss while isolating the receive path from interference caused by the transmit signal path and suppressing out-of-band signals on both paths.

CTS' ceramic duplexers are well-suited for use in indoor and outdoor small cells as well as distributed antenna systems (DAS), active antenna systems (AAS), remote radio heads and other wireless infrastructure systems. In addition, CTS duplexers are suitable for a wide variety of applications including military, public safety and aerospace.

CTS has developed high-reliability surface-mounted and ceramic cavity waveguide ceramic filters. These product families offer versions for all of the major frequency bands while sharing a common printed circuit board (PCB) layout, enabling a platform solution.

We offer a range of duplexer performance to better than 80dB of rejection and 200W of peak input power handling. At every performance level, CTS duplexers offer superior size, insertion loss (IL) and rejection.

Our latest technology offers full families of duplexers which share a universal-footprint so that a common (PCB) layout can be populated with a duplexer for any major FDD frequency band without any modifications.

Universal-footprint Pico Cell Duplexers (UPD)

Delivers the isolation and rejection required for 0.25-1W at the antenna for carrier-grade pico cells and remote radio heads. This includes applications needing multi-band co-location, linearized PAs, carrier-aggregation and "whole-band" systems.

Universal-footprint Small Cell Duplexers (USD)

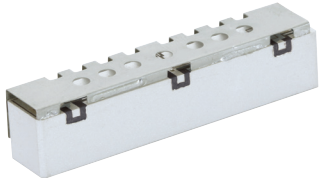
Delivers the isolation and rejection required for $\leq 2W$ at the antenna for small cells, remote radio heads, repeaters and indoor DAS systems. This includes applications needing multi-band co-location, linearized PAs, carrier-aggregation and "whole-band" systems.

ClearPlex Metro Cell Duplexers (CMD) and Universal-footprint Metro Cell Duplexers (UMD)

Delivers the isolation and rejection required for 4-10W at the antenna for metro cell base stations and radio heads, as well as medium-power DAS systems. This includes applications needing multi-band co-location, linearized PAs, carrier-aggregation and "whole-band" systems.

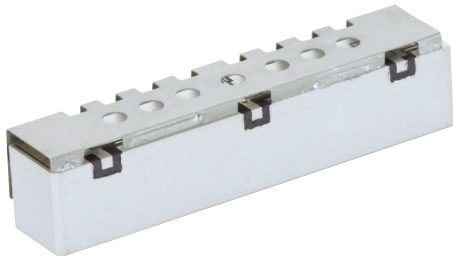


Universal-footprint Pico Cell Duplexers (UPD)



Insertion Loss (5MHz avg)	< 3.0 dB
Uplink Atten	63 dB typical / 61 dB minimum
Downlink Atten	57 dB typical / 55 dB minimum
Return Loss	> 12.0 dB
Input Power Rating	3.0W Average / 30W Peak
Size (L x W x H) incl. shield	44.2 x < 20.0 x ≤ 10mm
Maximum Weight	< 18g
Temperature Range	-40 °C to +85 °C

Universal-footprint Small Cell Duplexers (USD)



Insertion Loss (5MHz avg)	< 2.6 dB
Uplink Atten	73 dB typical / 71 dB minimum
Downlink Atten	67 dB typical / 65 dB minimum
Return Loss	> 12.0 dB
Input Power Rating	6.0W Average / 60W Peak
Size (L x W x H) incl. shield	63.0 x < 20.0 x ≤ 12mm
Maximum Weight	< 36g
Temperature Range	-40 °C to +85 °C

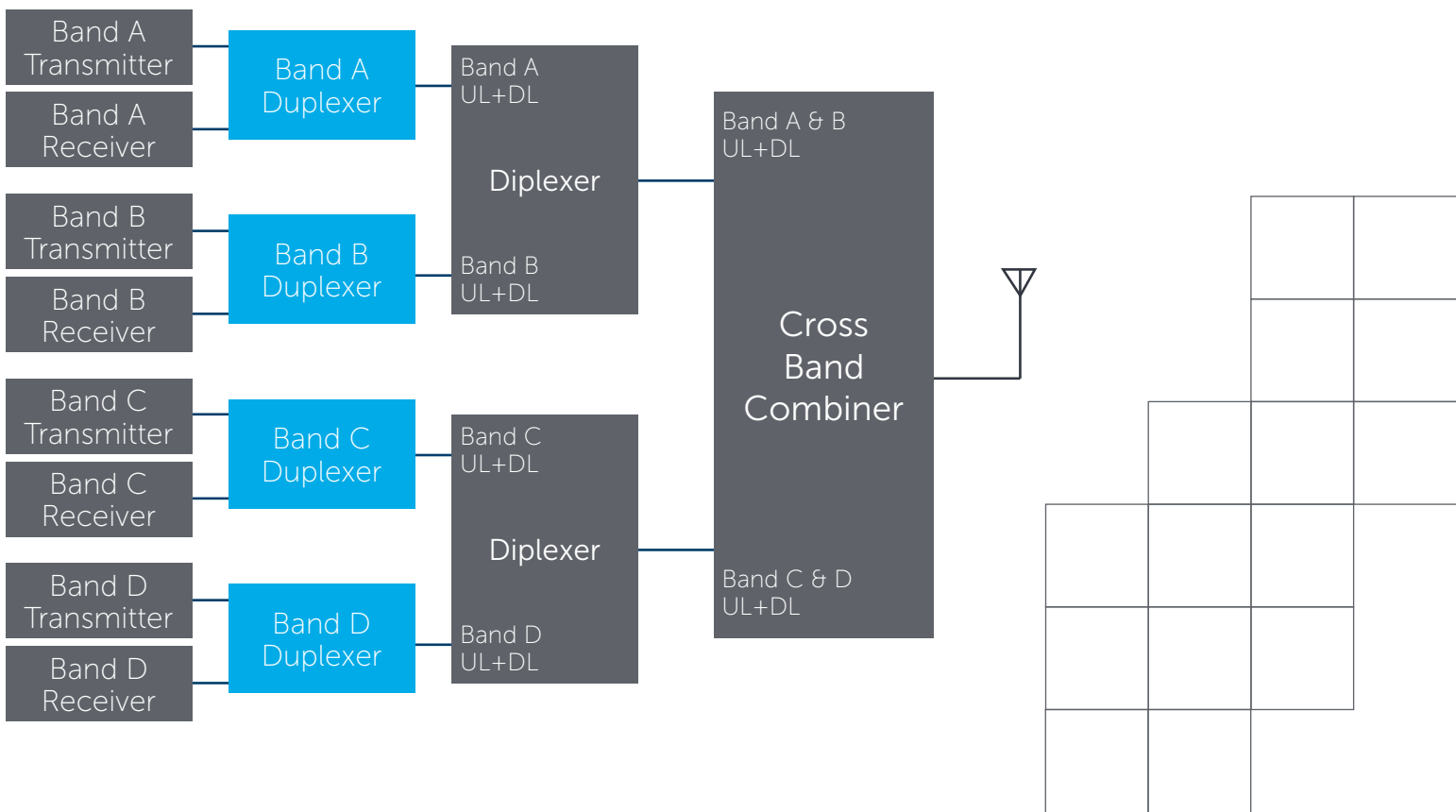
ClearPlex Metro Cell Duplexers (CMD) and Universal-footprint Metro Cell Duplexers (UMD)

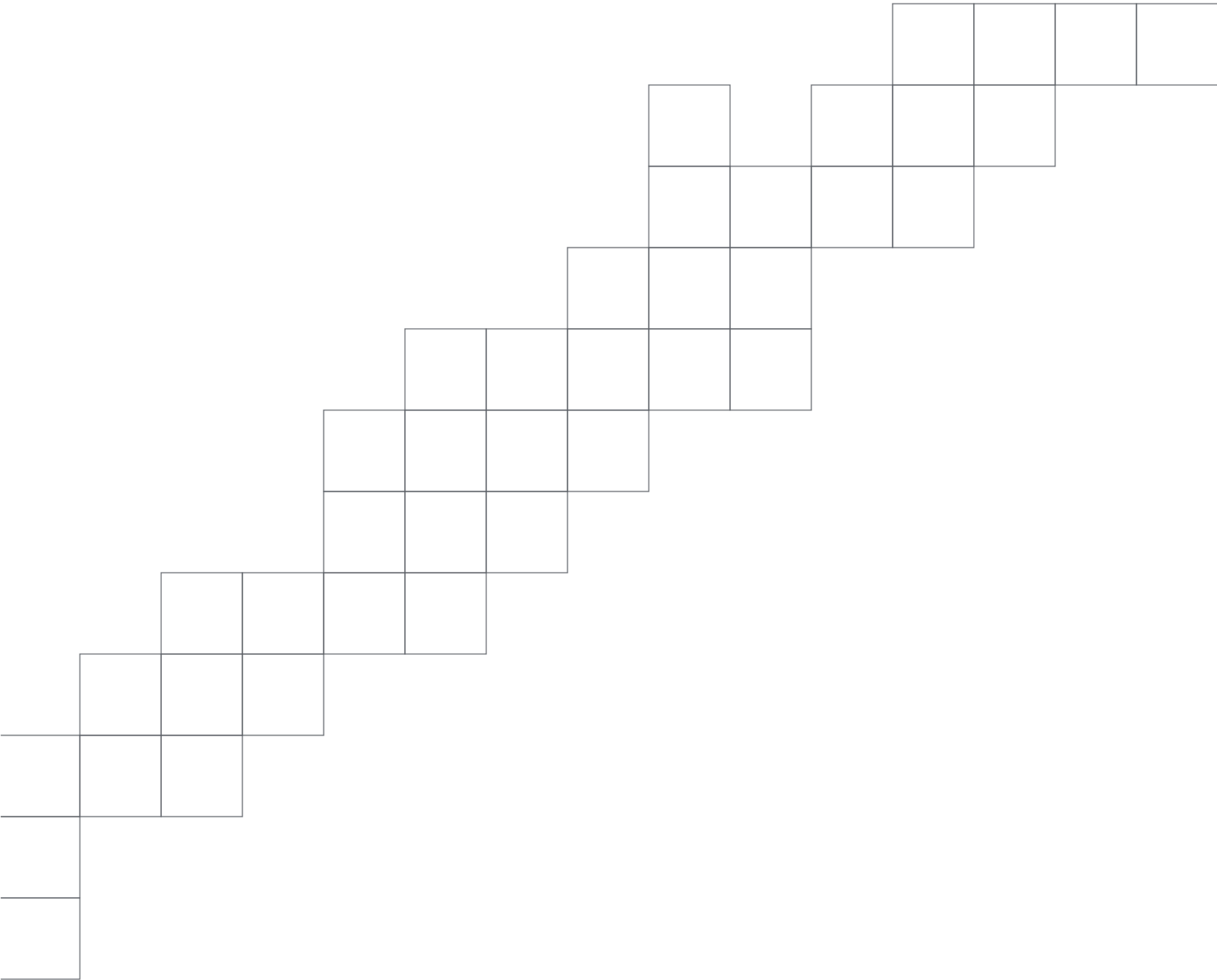


Insertion Loss (5MHz avg)	< 2.2 dB
Uplink Atten	82 dB typical / 80 dB minimum
Downlink Atten	77 dB typical / 75 dB minimum
Return Loss	> 16.0 dB
Input Power Rating	20W Average / 200W Peak
Passive Inter-Modulation	< -110 dBm (2x5W)
Size (L x W x H) incl. shield	< 100 x < 40 x < 18mm
Maximum Weight	< 235g
Temperature Range	-40 °C to +85 °C

UPD Model	USD Model	CMD/UMD	Frequency Band Number	DL Frequency Range (MHz)	UL Frequency Range (MHz)
UPD001A	USD001A	CMD001A	1	2110 - 217	1920 - 1980
UPD002A	USD002A	CMD002A	2	1930-1990	1850 - 1910
UPD003B	USD003A	CMD003A	3	1805 - 1880	1710 - 1785
UPD004A	USD004A	CMD004A	4	2110 - 2155	1710 - 1755
UPD005A	USD005A	UMD005A	5	869 - 894	824 - 849
UPD007A	USD007A	CMD007A	7	2620 - 2690	2500 - 2570
UPD008A	USD008A	UMD008A	8	925 - 960	880 - 915
UPD010A	USD010A	CMD010A	4 10+	2110 - 2180	1710 - 1780
UPD012A	USD012A	UMD012A	12 17	728- 746	698 - 716
UPD013A	USD013A	UMD013A	13	746- 756	777 - 787
UPD014A	USD014A	UMD014A	14	758- 768	788 - 798
UPD020A	USD020A	UMD020A	20	791 - 821	832 - 862
UPD025A	USD025A	CMD025A	2 25	1930-1995	1850 - 1915
UPD026A	USD026A	UMD026A	5 26	859 - 894	814 - 849
UPD027A	USD027A	UMD027A	27	851 - 869	806 - 824
UPD028A	USD028A	UMD028A	28	758 - 803	703 - 748
UPD030A	USD030A	CMD030A	30	2350 -2360	2305-2315

Contact CTS to discuss other bands.





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