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Contact Sales
North America
T: +1 (800) 982-5737
rffilters@ctscorp.com
www.ctscorp.com

Asia
T: +65-6481-1466

All Other Regions
T: +1 (508) 435-6831

www.ctscorp.com
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.

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- **Insertion Loss (5MHz avg)**: < 3.0 dB
- **Uplink Attenuation**: 63 dB typical / 61 dB minimum
- **Downlink Attenuation**: 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**: 1.8g
- **Temperature Range**: -40°C to +85°C

**Universal-footprint Small Cell Duplexers (USD)**
- **Insertion Loss (5MHz avg)**: < 2.6 dB
- **Uplink Attenuation**: 73 dB typical / 71 dB minimum
- **Downlink Attenuation**: 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**: 3.6g
- **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 Attenuation**: 82 dB typical / 80 dB minimum
- **Downlink Attenuation**: 77 dB typical / 75 dB minimum
- **Return Loss**: > 14.0 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**
- **Band A**: UPD001A
- **Band B**: UPD002A
- **Band C**: UPD003B
- **Band D**: UPD004A
- **Band E**: UPD005A
- **Band F**: UPD007A
- **Band G**: UPD008A
- **Band H**: UPD009A
- **Band I**: UPD10A
- **Band J**: UPD12A
- **Band K**: UPD13A
- **Band L**: UPD14A
- **Band M**: UPD25A
- **Band N**: UPD26A
- **Band O**: UPD27A
- **Band P**: UPD28A
- **Band Q**: UPD30A

**USD Model**
- **Band A**: USD001A
- **Band B**: USD002A
- **Band C**: USD003A
- **Band D**: USD004A
- **Band E**: USD005A
- **Band F**: USD007A
- **Band G**: USD008A
- **Band H**: USD10A
- **Band I**: USD12A
- **Band J**: USD13A
- **Band K**: USD14A
- **Band L**: USD25A
- **Band M**: USD26A
- **Band N**: USD28A
- **Band O**: USD30A

**CMD/UMD Model**
- **Band A**: CMD001A
- **Band B**: CMD002A
- **Band C**: CMD003A
- **Band D**: CMD004A
- **Band E**: CMD005A
- **Band F**: CMD007A
- **Band G**: CMD008A
- **Band H**: CMD10A
- **Band I**: CMD12A
- **Band J**: CMD13A
- **Band K**: CMD14A
- **Band L**: CMD25A
- **Band M**: CMD26A
- **Band N**: CMD28A
- **Band O**: CMD30A

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<th>UPD Model</th>
<th>USD Model</th>
<th>CMD/UMD</th>
<th>Frequency Band Number</th>
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</table>

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Duplexers

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- **Uplink Attenuation**: 63 dB typical / 61 dB minimum
- **Downlink Attenuation**: 57 dB typical / 55 dB minimum
- **Return Loss**: > 12.0 dB
- **Input Power Rating**: 3.0W Average / 50W Peak
- **Size**: L x W x H incl. shield: 44.2 x < 20.0 x ≤ 10mm
- **Maximum Weight**: < 1.8g
- **Temperature Range**: -40°C to +85°C

### Universal-footprint Small Cell Duplexers (USD)

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<thead>
<tr>
<th>Model</th>
<th>Frequency Band</th>
<th>DL Frequency Range (MHz)</th>
<th>UL Frequency Range (MHz)</th>
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<td>UPD012A</td>
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<td>UPD013A</td>
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<td>2230 - 2270</td>
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