

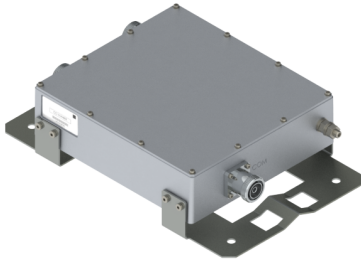


Filters & Combiners

DATA SHEET

Outdoor Low Band Diplexer

DPO-6E7C-XXX



- Combines the 600 MHz Band (617-688 MHz) and 700 low band (698-746 MHz) Band onto a common port.
- High power 200 W per port with low insertion loss
- AISG 2.0 compliant with multiple options for DC/AISG pass through
- Low intermodulation with isolation of >50 dB port to port
- Available twin unit configuration
- High reliability of >500K Hours MTBF and multi-strike lightning protection
- Lightweight outdoor enclosure with pole or wall mounting options

Overview

CCI's Outdoor Diplexer combines "LTE600" low band with "LTE700" low band base stations onto a common feeder line. Specifically intended for use in dual band systems, the diplexer reduces the number of required feeder lines while providing a high degree of isolation between systems. By reducing the number of feeder lines, the cost to upgrade a site is reduced. Additionally, diplexers can be utilized in "crowded" sites where feeder lines are not easily accessible. Optional Dual unit with two Diplexers mounted on a single bracket is available.

Technical Description:

The CCI Outdoor Diplexer provides full band performance in each band with low insertion loss, low Intermodulation, high isolation and high power handling. Excellent return loss and low insertion loss delivers an excellent match to antennas and base station, saving precious transmitter power. The fully weatherproof tower mount unit is available with a smart bias-tee. The Smart Bias-Tee architecture passes the DC and AISG carrier frequency from any of the input ports to the common port while blocking the DC and AISG signals from being re-injected into the other input ports. The Diplexer housing is constructed from die cast aluminum and consists of an IP67 moisture proof enclosure, with IP67 immersion proof connectors suited to long-life masthead mounting. With a variety of mounting options, the Diplexer can be adapted for use in all outdoor or indoor conditions.



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SPECIFICATIONS

Outdoor Low Band Diplexer

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Electrical

RF Parameters	Ports	Frequency(MHz)	Specification
Return Loss	Common	617 - 688	18 dB minimum, 20 dB typical
		698 - 746	18 dB minimum, 20 dB typical
Insertion Loss	600	617 - 688	18 dB minimum, 20 dB typical
	700 Low	698 - 746	18 dB minimum, 20 dB typical
Isolation	COM to 600	617 - 688	0.5 dB typical
	COM to 700 Low	698 - 746	0.5 dB typical
Isolation	COM to 600	617 - 688	50 dB minimum
	COM to 700 Low	698 - 746	50 dB minimum

General Characteristics

Impedance	50 ohms
Continuous Average Power	200 W max. per input port simultaneous
Peak Envelope Power	2 kW max. per input port simultaneous
Intermodulation Performance(all ports)	<-117dBm (-160 dBc) typical (2 x +43 dBm tones) all bands
DC Pass Current/AISG Pass (700 & 850 to COMMON port)	3A/AISG signal (2.176 Mhz) per AISG 2.0

Environmental

Operating Temperature	-40 °C to +65 °C
Ingress Protection	IP67
MTBF	>500,000 hours
Lightning Protection	8/20us, ±10KA max, 10 strikes per IEC61000-4-5

Mechanical

Model	DPO-6E7C-0-S1	DPO-6E7C-0-T1	DPO-6E7C-0-Q1
Modularity	Single	Twin	Quad
Weight with brackets	15.7 lbs (7.15 Kg)	31.5 lbs (14.3 Kg)	47.2 lbs (21.45 Kg)
Dimensions with brackets	14.13 x 8.98 x 3.31 in. (359.0 x 228.0 x 84.0 mm)	14.13 x 8.98 x 6.26 in. (359.0 x 228.0 x 84.0 mm)	14.13 x 8.98 x 12.17 in. (359.0 x 228.0 x 309.0 mm)
Dimensions enclosure only	10.32 x 8.98 x 2.83 in. (262.0 x 228.0 x 72.0 mm) - per Diplexer		
Connectors	3 x 7-16 DIN female or 4.3-10 female - per Diplexer		
Mounting	Pole/Wall mounting bracket		

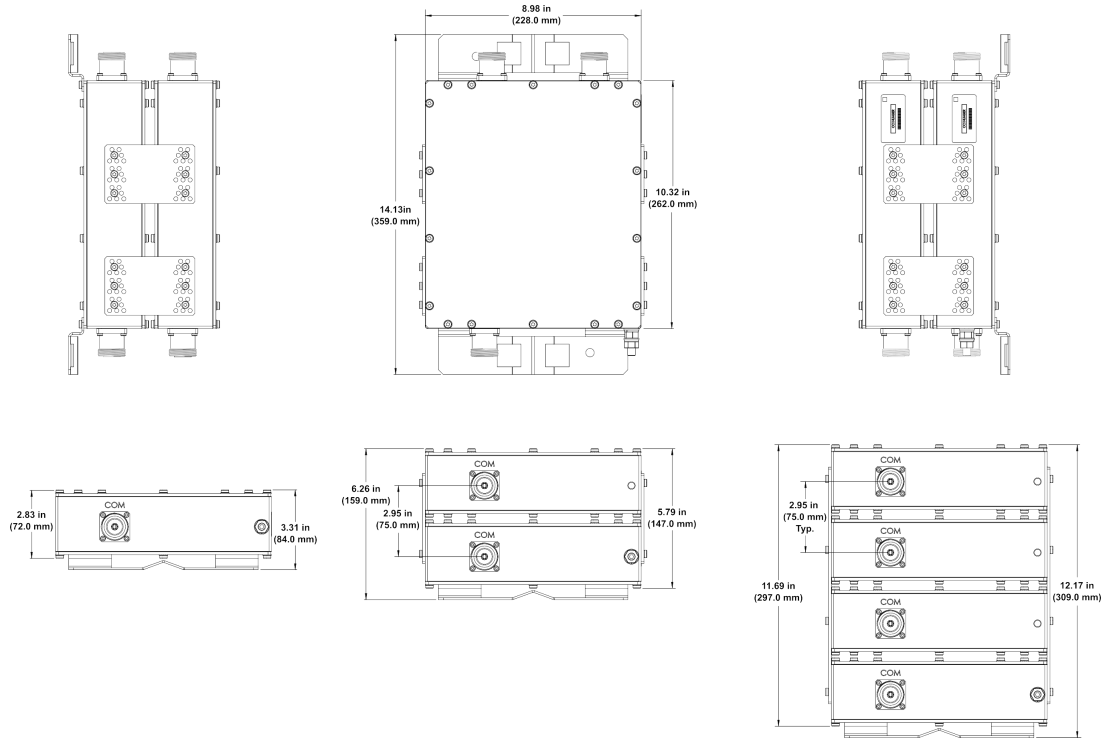


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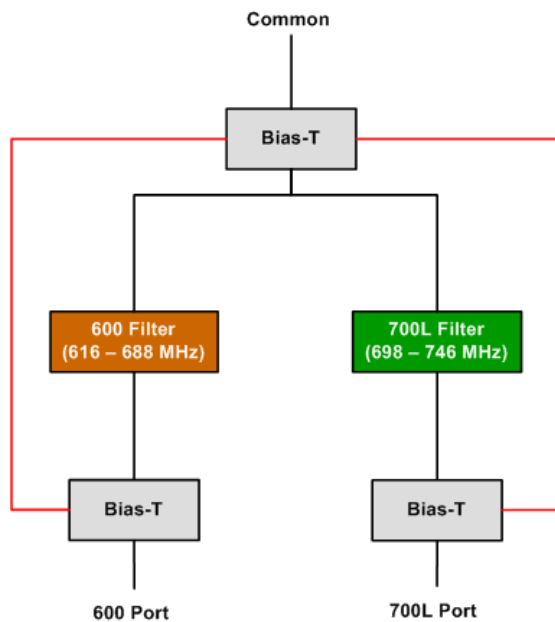
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Outdoor Single, Twin and Quad Diplexer Outline Drawing

Block Diagram



700 Low Band/FirstNet Diplexer with Smart Bias-T Block Diagram



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STANDARDS & CERTIFICATIONS

Outdoor Low Band Diplexer

DPO-6E7C-XXX

Parts & Accessories

DPO-6E7C-x-S1	Outdoor Diplexer with 7-16 DIN connectors
DPO-6E7C-x-S2	Outdoor Diplexer with 4.3-10 connectors
DPO-6E7C-x-T1	Outdoor Twin Diplexer with 7/16 DIN connectors
DPO-6E7C-x-T2	Outdoor Twin Diplexer with 4.3-10 connectors
DPO-6E7C-x-Q1	Outdoor Quad Diplexer with 7/16 DIN connectors
DPO-6E7C-x-Q2	Outdoor Quad Diplexer with 4.3-10 connectors

Option (-x)	Description
-S	Smart Bias-T, DC/AISG Pass through on either port
-0	No DC/AISG Pass through and No DC Block
-1	DC/AISG Pass through 700 Low Band to COMMON, DC Block on all other input ports
-2	DC/AISG Pass through FirstNet Band to COMMON, DC Block on all other input ports

Standards & Compliance

Safety	EN 60950-1, UL 60950-1
Emission	EN 55022
Immunity	EN 55024
Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-02-30, IEC 60068-2-52, IEC 60068-2-64, IEC61000-4-5, GR-63-CORE 4.3.1, EN 60529 IP67, IP68

Certifications

Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US, ISO 9001

