

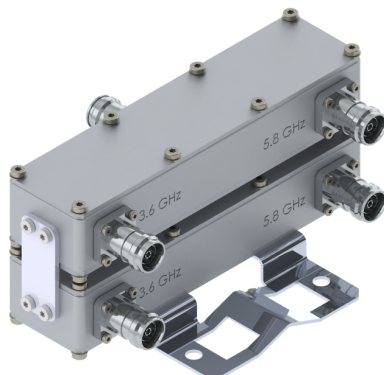


Filters & Combiners

DATA SHEET

Broadband Outdoor Diplexer

DPO-3228-xxx



- Combines two frequency ranges 3300-4200 MHz with 5150-5925 MHz onto a single common port.
- High power 200 W per port with low insertion loss in a small, lightweight enclosure
- Isolation of >50 dB port to port
- Available dual unit configuration
- High reliability of >500K Hours MTBF and multi-strike lightning protection
- Available outdoor pole or wall mounting options

Overview

The CCI Outdoor Broadband Diplexer passes 3300-4200 MHz on its low band input port and 5150-5925 MHz on its high band input port. The Diplexer combines the low band and high band signals on to a common port and is specifically intended for use in multi-band systems with limited feeder lines. The Diplexer facilitates the addition of new technologies including LTE and new spectrum to existing sites while providing a high degree of isolation between systems. Decreasing the number of feeder lines lowers tower loading, leasing and installation expenditures and significantly reduces the total cost to upgrade a site.

The Diplexer provides full band coverage for each band with low insertion loss and high 200 W per port power handling. Excellent return loss performance delivers the best match to the antennas and base station, saving precious transmit power. CCI Diplexer is available in single and twin configurations.

Technical Description:

The CCI Outdoor Broadband Diplexer consists of multiple filters and can be used as either a splitter or combiner to aggregate the 3300-4200 MHz band with the 5150-5925 MHz band on to a common feeder line. The Diplexer has internal multi-strike lightning protection.

The unit has been designed to minimize insertion loss while maximizing isolation. The Diplexer housing is constructed from die cast aluminum and consists of an IP67 moisture proof enclosure, with IP68 connectors suited to long-life masthead mounting. The Diplexer can be pole or wall mounted with the included bracket. The RF ports are configured with 4.3-10 connectors. CCI filter and combiner products are designed and produced to ISO 9001 certification standards for reliability and quality at our state-of-the-art engineering and manufacturing facilities.



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SPECIFICATIONS

Broadband Outdoor Diplexer

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Electrical Specification

RF Parameters	Ports	Frequency(MHz)	Specification
Return Loss	COMMON	3300-4200	18 dB minimum, 20 dB typical
		5150-5925	18 dB minimum, 20 dB typical
	3.6 GHz Port	3300-4200	18 dB minimum, 20 dB typical
	5.8 GHz Port	5150-5925	18 dB minimum, 20 dB typical
Insertion Loss	COMMON to 3.6 GHz Port	3300-4200	0.15 dB typical, 0.2 dB maximum
	COMMON to 5.8 GHz Port	5150-5925	0.25 dB typical, 0.3 dB maximum
Isolation	5.8 GHz Port to 3.6 GHz Port	5150-5925	50 dB minimum
	3.6 GHz Port to 5.8 GHz Port	3300-4200	50 dB minimum

General Characteristics

Impedance	50 ohms
Continuous Average Power	200 W maximum all ports
Peak Envelope Power	2 kW maximum all ports

Environmental

Operating Temperature	-40 °C to +65 °C
Enclosure	Unit Body IP67, Connector IP68
MTBF	>500,000 hours
Lightning Protection	8/20us, ±10KA max, 10 strikes per IEC61000-4-5

Mechanical

Model	DPO-3228-x-S2 (Single)	DPO-3228-x-T2 (Twin)
Connectors	3 x 4.3-10 female	6 x 4.3-10 female
Dimensions w/Bracket (HxWxD)	5.91 x 8.07 x 2.32 in. (150.0 x 205.0 x 59.0 mm)	5.91 x 8.54 x 4.21 in. (150.0 x 217.0 x 107.0 mm)
Housing Dimensions (HxWxD)	2.09 x 8.07 x 1.85 in. (53.0 x 205.0 x 47.0 mm)	5.91 x 8.54 x 3.74 in. (150.0 x 217.0 x 95.0 mm)
Weight	2.9 lbs (1.311 Kg)	5.6 lbs (2.538 Kg)
Frontal Wind Load @ 150 km/hour	16.4 lbs (73.0 N)	16.4 lbs (73.0 N)
Lateral Wind Load @ 150 km/hour	1.6 lbs (7.1 N)	3.5 lbs (15.7 N)
Mounting	Pole (3 - 4.65 in) and Wall mounting bracket	

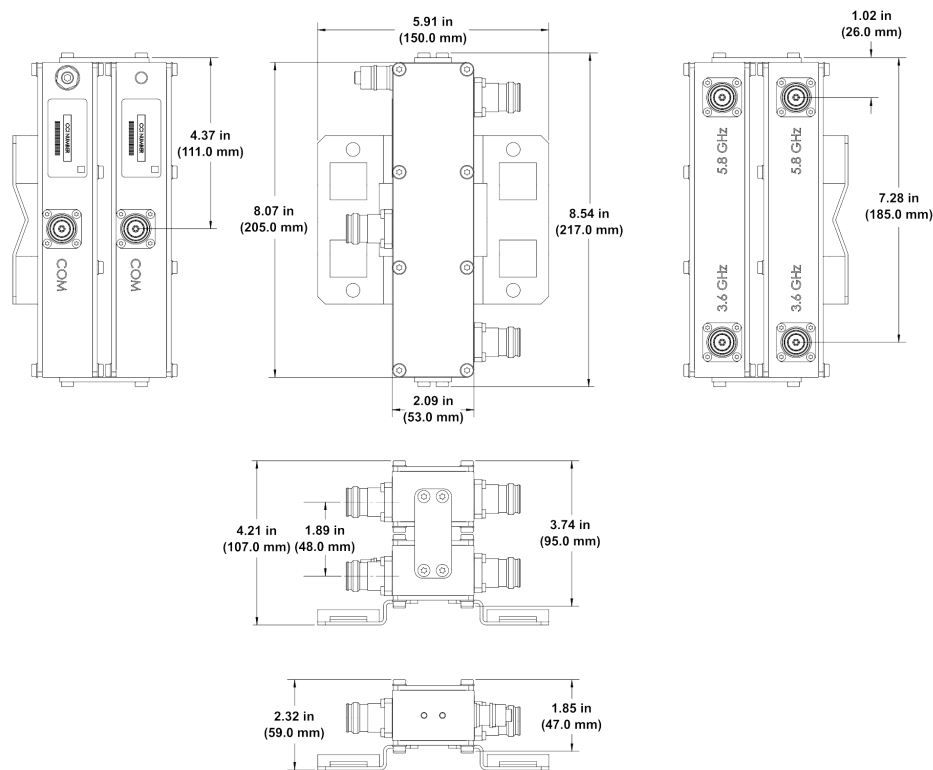


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SPECIFICATIONS

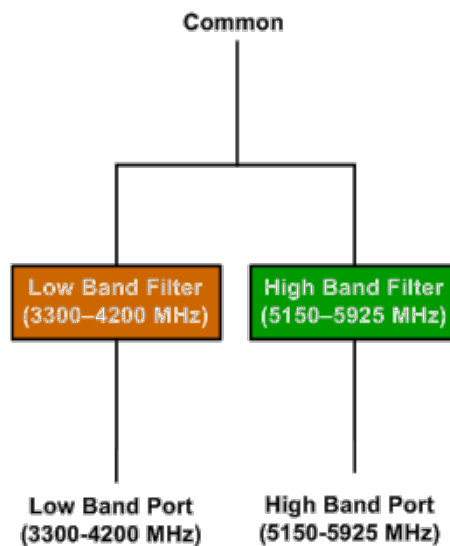
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Outdoor Broadband Diplexer Outline Drawing

Block Diagram



Outdoor Broadband Diplexer with No DC/ASIG Pass-through Block Diagram



Filters & Combiners

STANDARDS & CERTIFICATIONS

Broadband Outdoor Diplexer

DPO-3228-xxx

Parts & Accessories

DPO-3228-0-S2 Outdoor Broadband Diplexer with 4.3-10 connectors

DPO-3228-0-T2 Outdoor Twin Broadband Diplexer with 4.3-10 connectors

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

Antenna Interface Standards Group (AISG), Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US, ISO 9001



CCI Communication Components Inc.
EXTENDING WIRELESS PERFORMANCE