

- High power coupler at 500 W across a wideband from 698 to 2700 MHz
- Low RF Insertion Loss and excellent return loss performance
- Outdoor unit with a wide range of coupling values from 6 to 20 dB
- Available with N-type, 7-16 DIN, and 4.3-10 Connectors
- Rugged and high reliability design
- Designed for ultra-low PIM performance
- RoHS compliant

Overview

CCI's QC-0727 series of directional couplers covers a broad frequency range from 698 to 2700 MHz, while delivering high power performance at 500 W for units with DIN and 4.3-10 connectors and 300 W for units with N-type connectors. Each model has a nominal coupling value with very low insertion loss and excellent return loss performance. The units are offered in a wide range of coupling values and are ideal for optimizing RF power distribution, which is often required for distributed antenna systems (DAS).

The extremely wide frequency range of the couplers enables use with multiband and broadband antennas as well as a wide variety of DAS systems including leaky cable. The CCI couplers with the 7-16 DIN and 4.3-10 connectors are also rated for outdoor use; this along with the high power handling makes them well-suited for use with wireless base stations. The air dielectric design of CCI's directional couplers provides for extremely low insertion loss and excellent PIM performance. These units have been constructed with minimal solder joints which enhances the overall reliability.



SPECIFICATIONS

High Power Directional Coupler

QC-0727-xxx

Electrical Specification

Connector type	Models					
DIN Female	QC-0727-06D	QC-0727-08D	QC-0727-10D	QC-0727-13D	QC-0727-15D	QC-0727-20D
N-type Female	QC-0727-06N	QC-0727-08N	QC-0727-10N	QC-0727-13N	QC-0727-15N	QC-0727-20N
4.3-10 Female	QC-0727-06M	QC-0727-08M	QC-0727-10M	QC-0727-13M	QC-0727-15M	QC-0727-20M
RF Parameter						
Coupling Values	6.0 dB	8.0 dB	10.0 dB	13.0 dB	15.0 dB	20.0 dB
Insertion Loss	-1.6 dB	-1.1 dB	-0.6 dB	-0.4 dB	-0.3 dB	-0.2 dB
Frequency Range	698 - 2700 MHz					
Coupling Variation	±1.0 dB maximum					
Directivity	≥ 20 dB typical					
Return Loss	≤ -20 dB typical					

General Characteristics by Model	QC-0727-xxD	QC-0727-xxN	QC-0727-xxM
Continuous Average Power	500 W	300 W	500 W
Peak Envelope Power	3 kW max.	3 kW max.	3 kW max.
Impedance	50 ohms		
Intermodulation Performance	< -110 dBm (-153 dBc) minimum, 2 x 43 dBm tones		

Environmental Specification

Model	QC-0727-xxD	QC-0727-xxN	QC-0727-xxM
Operating Temperature	-10 °C to +60 °C	-10 °C to +60 °C	-10 °C to +60 °C
Enclosure	IP66, outdoor use	IP20, indoor use	IP66, outdoor use
Relative Humidity	5 - 95 %	indoor	5 - 95 %

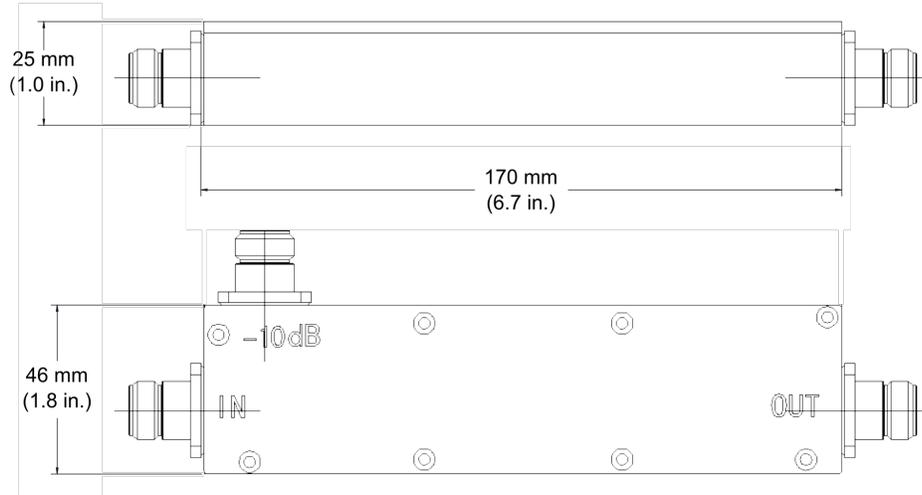
Mechanical Specification

Model	QC-0727-xxD	QC-0727-xxN	QC-0727-xxM
Connectors	7-16 DIN-Female x 3	N-Female x 3	4.3-10-Female x 3
Dimensions unit body (HxWxD)	173 x 46 x 33 mm (6.81 x 1.81 x 1.30 in.)	170 x 46 x 25 mm (6.69 x 1.81 x 0.98 in.)	173 x 46 x 33 mm (6.81 x 1.81 x 1.30 in.)
Weight	0.728 Kg (1.60 lbs)	0.479 Kg (1.06 lbs)	0.607 Kg (1.34 lbs)

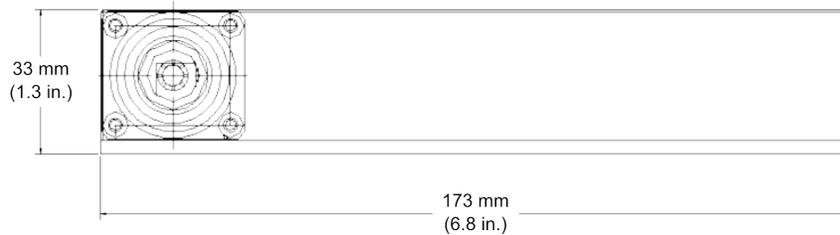
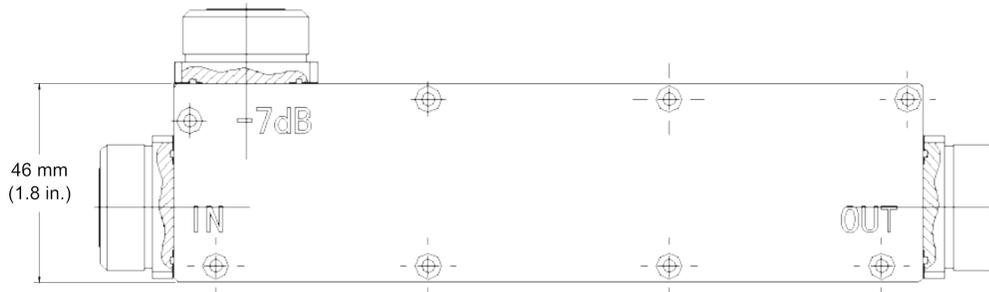


High Power Directional Coupler

QC-0727-xxx



High Power Coupler with N-type Female Connector (QC-0727-xxN) Outline Drawing



High Power Coupler with DIN-type Female Connector (QC-0727-xxD) Outline Drawing



DAS Products

ORDERING

High Power Directional Coupler

QC-0727-xxx

Parts & Accessories

QC-0727-06D	High Power 6dB Coupler with DIN Connectors
QC-0727-08D	High Power 8dB Coupler with DIN Connectors
QC-0727-10D	High Power 10dB Coupler with DIN Connectors
QC-0727-13D	High Power 13dB Coupler with DIN Connectors
QC-0727-15D	High Power 15dB Coupler with DIN Connectors
QC-0727-20D	High Power 20dB Coupler with DIN Connectors
QC-0727-06N	High Power 6dB Coupler with N-Type Connectors
QC-0727-08N	High Power 8dB Coupler with N-Type Connectors
QC-0727-10N	High Power 10dB Coupler with N-Type Connectors
QC-0727-13N	High Power 13dB Coupler with N-Type Connectors
QC-0727-15N	High Power 15dB Coupler with N-Type Connectors
QC-0727-20N	High Power 20dB Coupler with N-Type Connectors
QC-0727-06M	High Power 6dB Coupler with 4.3-10 Connectors
QC-0727-08M	High Power 8dB Coupler with 4.3-10 Connectors
QC-0727-10M	High Power 10dB Coupler with 4.3-10 Connectors
QC-0727-13M	High Power 13dB Coupler with 4.3-10 Connectors
QC-0727-15M	High Power 15dB Coupler with 4.3-10 Connectors
QC-0727-20M	High Power 20dB Coupler with 4.3-10 Connectors



DAS Products

STANDARDS & CERTIFICATIONS

High Power Directional Coupler

QC-0727-xxx

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, GR-63-CORE 4.3.1, EN 60529 IP20, IP66

Certifications

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



CCI | Communication Components Inc.

EXTENDING WIRELESS PERFORMANCE