



Crossband Coupler

641280 Family of Indoor/Outdoor Diplexers for Dual-Band
Combining Signals of 806–960 MHz and 1710–2170 MHz

- Novel stripline printed circuit board
- Extremely low insertion loss
- IP68 moisture protection
- Stackable
- Mounting bracket and external grounding stud provided
- Integrated dc block/dc bypass versions available

The Andrew Crossband Coupler combines signals from wireless systems operating in the 806–960 MHz bands with signals from systems operating in the 1710–2170 MHz bands onto a common feeder cable.

These couplers use novel suspended stripline printed circuit board technology to provide extremely low insertion loss and high power handling capability in a compact rugged weatherproof housing. Sealing gaskets provide protection from moisture ingress at all interfaces.

The Andrew Crossband Coupler 641280 product family features extremely low insertion loss (0.10 dB @ 806–960 MHz and 0.15 dB @ 1710–2170 MHz). A minimum 47 dB isolation is provided between output ports

These couplers feature precision 7-16 DIN female connectors and an external grounding stud for lightning protection purposes. A mounting bracket and two band clamps are provided for quick deployment and installation. These units are stackable and do not require additional spacer hardware.

This product family is also available in different dc block and dc bypass versions. This feature allows full compatibility with systems requiring tower mount amplifiers. The internal dc block design provides lower insertion loss and better reliability than dc block designs that contain ceramic dc blocking capacitors.

SPECIFICATIONS

Andrew Crossband Coupler 641280 Product Family

Electrical

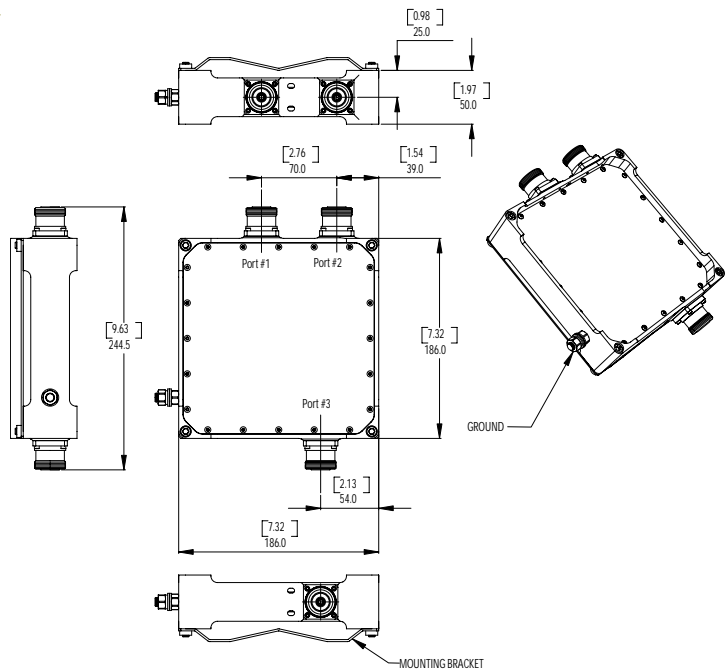
Insertion Loss: (low frequency port)	0.15 dB maximum, 0.10 dB typical (806–960 MHz)
Insertion Loss: (high frequency path)	0.20 dB maximum, 0.15 dB typical (1710–2160 MHz)
Insertion Loss: (high frequency path)	0.30 dB maximum, 0.15 dB typical (2160–2170 MHz)
Return Loss: (low frequency path)	20 dB minimum, 23 dB typical (806–960 MHz)
Return Loss: (high frequency path)	20 dB minimum, 23 dB typical (1710–2160 MHz)
Return Loss: (high frequency path)	16 dB minimum, 19 dB typical (2160–2170 MHz)
Isolation: (high frequency path)	47 dB minimum, 50 dB typical (806–960 MHz)
Isolation: (low frequency path)	47 dB minimum, 50 dB typical (1710–2170 MHz)
Maximum Power	Simultaneous operation of 500 W CW (806-960) and 275 W CW (1710–2170)
Peak Power (PEP) Rating	12 kW (806-960), 6 kW (1710–2170)
dc Breakdown	4000 volts (center conductor to ground)
Lightning Protection	.15 kA 8 x 20 center conductor, 50 kA 8 x 20 outer conductor
Passive IMD, (2 x 43 dBm carriers)	-153 dBc typical

Environmental

Operating Temperature	-40 °C to +65°C
Moisture Resistance	IP 68 (housing includes weatherproof watertight gaskets)
Vibration	IEC 68-2-6 (10–2000 Hz random amplitude 3 planes)
Mechanical Shock	IEC 68-2-27, 50 g
Salt Fog	IEC 68-2-11, 336 hrs
Solar Radiation	IEC 68-2-5
Thermal Shock	IEC 68-2-14
Humidity	IEC 68-2-30
Weight	4.3 lb (1.95 kg); with brackets 5.6 lb (2.54 kg)

Ordering Information

Part Number	Application	dc Characteristics between Port 3 and Port 2 (806–960 MHz)	dc Characteristics between Port 3 and Port 2 (806–960 MHz)
641280-DF	Indoor/Outdoor	Bypass (5 amps)	Bypass (5 amps)
641280-DF-9-DCB	Indoor/Outdoor	Blocked	Bypass (5 amps)



One Company. A World of Solutions.

Andrew Corporation
3 Westbrook Corporate Center
Suite 900
Westchester IL 60154 US

Customer Support Center
From North America
Telephone: 1-800-255-1479
Fax: 1-800-349-5444

International
Telephone: +1-708-873-2307
Fax: +1-708-349-5444

Internet: www.andrew.com

All designs, specifications, and availabilities of products and services presented in this bulletin are subject to change without notice.

Bulletin PA-100309.1-EN (5/06)

© 2006 Andrew Corporation, Orland Park, IL 60462 US