INNOWAVE RF

Innovation in Every Wave

420-600-6000

20 dB Wideband Directional Couplers

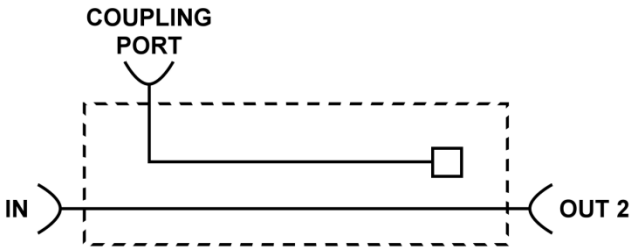
-163 dBc PIM, 600-6000 MHz, IP67

420-600-6000 Series is a 20dB Wideband Directional Couplers are Low-PIM devices that operate from 600MHz – 6000MHz. It covers all cellular bands, including CBRS, C-Band and LTE-LAA. It has excellent directivity and coupling flatness across the entire band. It also exhibits a very low insertion loss along with outstanding VSWR at all three ports. These units are weatherproof and suitable for extreme conditions. Available in different connector options. **Other Coupling Values are available on request.**

FEATURES:

- Operates from 600 MHz to 6000 MHz
- Covers ***600MHz (Band 71), CBRS, C-Band & LTE-LAA***
- Low Insertion Loss and Low VSWR
- Excellent PIM rating, -163dBc
- *RoHS* Compliant
- Weatherproof / Outdoor unit
- In Stock to low lead time delivery
- Superior Construction and High Power Handling
- Available in 4.3-10 or NEX10 Connectors

Block Diagram for Directional Couplers



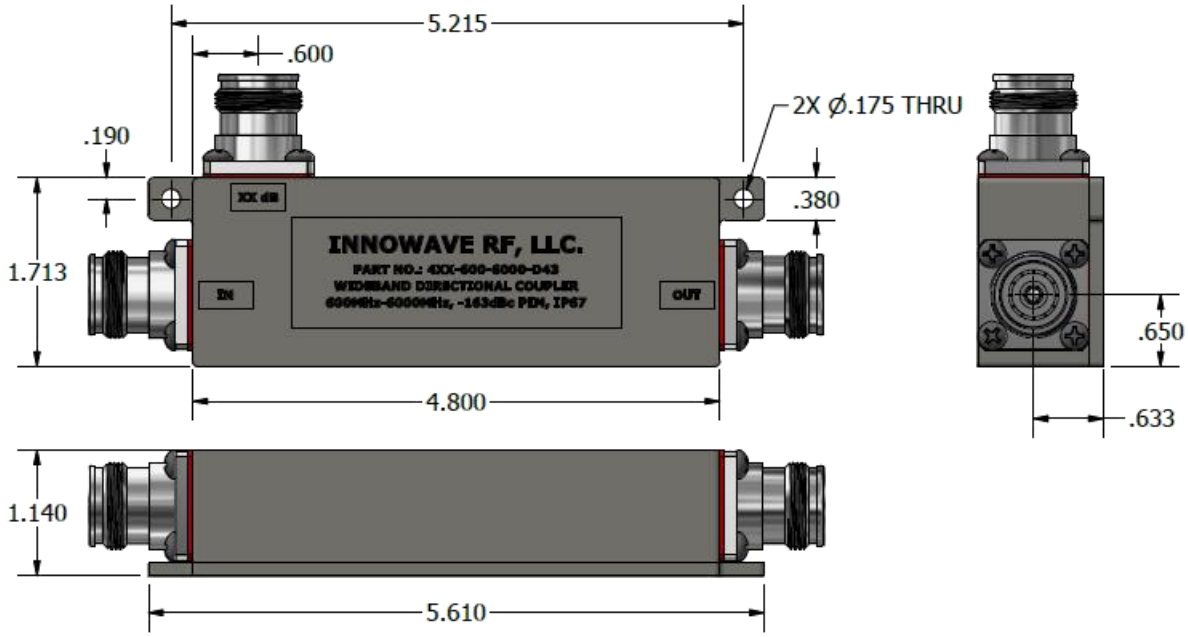
ELECTRICAL SPECIFICATIONS:

Coupling Value	3dB	5dB	6dB	7dB	8dB	10dB	12dB	13dB	15dB	20dB	25dB	30dB
Frequency Bands	600 MHz – 6000 MHz											
Insertion Loss (dB) (Typ)	3.10	1.90	1.50	1.20	1.00	0.75	0.50	0.50	0.50	0.30	0.25	0.25
Frequency Sensitivity (dB)												
600 – 698 MHz	±0.50	±0.50	±0.60	±0.75	±0.90	±1.60	±1.65	±1.65	±1.70	±1.75	±1.80	±1.80
698 – 2700 MHz	±0.50	±0.50	±0.60	±0.75	±0.90	±1.60	±1.70	±1.70	±1.75	±1.75	±1.80	±1.80
2700 – 6000 MHz	±0.55	±0.55	±0.65	±0.80	±1.00	±1.75	±1.70	±1.70	±1.75	±1.80	±1.90	±1.90
Directivity (dB)												
600 – 698 MHz	≥ 24	≥ 25	≥ 25	≥ 28	≥ 28	≥ 29	≥ 32	≥ 32	≥ 34	≥ 37	≥ 47	≥ 47
698 – 2700 MHz	≥ 24	≥ 25	≥ 25	≥ 27	≥ 27	≥ 27	≥ 30	≥ 30	≥ 32	≥ 35	≥ 45	≥ 45
2700 – 6000 MHz	≥ 23	≥ 23	≥ 23	≥ 25	≥ 25	≥ 25	≥ 28	≥ 28	≥ 30	≥ 30	≥ 42	≥ 42
Return Loss	-19dB @ 600 – 4200 MHz / -17 dB @ 4200 – 6000 MHz											
Impedance	50 Ω											
Intermodulation (PIM-3rd)	-163 dBc (2 Tones +43 dBm)											
Input Power	300 Watts (Avg); 500 Watts (Peak)											
Other Coupling Values are available on Request												

MECHANICAL SPECIFICATIONS:

Connectors:	4.3-10 (D43) / NEX10 (X10)	Temperature Range:	-30°C to 75°C
Housing Finish:	Aluminum Body	Weight:	0.75 lbs
Mounting Method:	Mounting Panel	Relative Humidity:	5% - 95%
		Environment:	IP67

Dimensions for 420-600-6000-D43



ORDERING INFO:

Coupling Value	Corresponding Part Number	
	4.3-10	NEX10
3 dB	403-600-6000-D43	403-600-6000-X10
5 dB	405-600-6000-D43	405-600-6000-X10
6 dB	406-600-6000-D43	406-600-6000-X10
7 dB	407-600-6000-D43	407-600-6000-X10
8 dB	408-600-6000-D43	408-600-6000-X10
10 dB	410-600-6000-D43	410-600-6000-X10
12 dB	412-600-6000-D43	412-600-6000-X10
13 dB	413-600-6000-D43	413-600-6000-X10
15 dB	415-600-6000-D43	415-600-6000-X10
20 dB	420-600-6000-D43	420-600-6000-X10
25 dB	425-600-6000-D43	425-600-6000-X10
30 dB	430-600-6000-D43	430-600-6000-X10
XX dB *(Custom Value)*	4XX-600-6000-D43	4XX-600-6000-X10

Please contact our sales department at 737-200-7090 or sales@InnowaveRF.com for any custom requirements.

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