

## N Directional Coupler 30 dB from 100 MHz to 800 MHz Rated to 500 Watts

Directional couplers are indispensable components for isolating, separating and combining signals. For example, they provide a simple way of sampling microwave signals. They also can make accurate attenuator measurements since reflections are eliminated. The FMCP1143-30 is a 30 dB directional coupler that operates from 100 to 800 MHz and can handle up to 500 Watts (CW) with 20 dB directivity minimum and 1.2:1 VSWR maximum. The package interface uses N female connectors.

The FMCP1143-30 is part of Fairview Microwave's family of directional/dual-directional couplers that offer coupling ratios up to 50 dB with excellent performance featuring high directivity, low insertion loss and VSWR. They are available in both narrow and broad bandwidths and can be used in a wide variety of applications including signal sampling, VSWR measurements, power combining and distribution.



### Features:

- Directional Coupler
- N Female Connectorized Design
- 100 to 800 MHz Frequency Range
- Coupling 30±1.5 dB
- Directivity > 20 dB
- VSWR < 1.2:1
- Max Power 500 Watts (CW)

### Electrical Specifications

| Description                                   | Min | Typ    | Max   | Units  |
|---|-----|--------|-------|--------|
| Frequency Range                               | 100 |        | 800   | MHz    |
| Impedance                                     |     | 50     |       | Ohms   |
| Coupling                                      | 29  | 30     | 33    | dB     |
| Freq. Sensitivity                             |     | ±0.7   | ±1.5  | dB     |
| Insertion Loss                                |     | 0.2    | 0.4   | dB     |
| Directivity                                   | 20  | 22     |       | dB     |
| Main Line VSWR                                |     | 1.15:1 | 1.2:1 |        |
| Sec. Line VSWR                                |     | 1.15:1 | 1.2:1 |        |
| Input Power (CW)                              |     |        | 500   | Watts  |
| Input Power (Peak)<br>10% Duty Cycle, 10us PW |     |        | 3     | kWatts |

### Applications:

- Test and Measurement
- Military Communications
- Commercial Communications
- Wireless Communications
- SATCOM

### Mechanical Specifications

|                              |                       |
|------------------------------|-----------------------|
| <b>Size</b>                  |                       |
| Length                       | 12.402 in [315.01 mm] |
| Width/Dia.                   | 1.521 in [38.63 mm]   |
| Height                       | 1.053 in [26.75 mm]   |
| Weight                       | 2.14 lbs [970.69 g]   |
| Housing Material and Plating | Aluminum              |

#### Configuration

|                    |          |
|--------------------|----------|
| Input Connector    | N Female |
| Output Connector   | N Female |
| Coupled Connectors | N Female |

### Environmental Specifications

|                    |                                |
|--------------------|--------------------------------|
| <b>Temperature</b> |                                |
| Operating Range    | -40 to +85 deg C               |
| Storage Range      | -50 to +105 deg C              |
| Humidity           | 100% RH at 35°C, 95%RH at 40°C |

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Shock 20G for 11msec half sine wave, 3 axis both directions  
Vibration 25g RMS (15 degrees 2KHz) endurance, 1 hour per axis  
Altitude 30,000 ft.

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

N Directional Coupler 30 dB from 100 MHz to 800 MHz Rated to 500 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [N Directional Coupler 30 dB from 100 MHz to 800 MHz Rated to 500 Watts FMCP1143-30](#)

URL: <https://www.fairviewmicrowave.com/directional-standard-30-db-100-mhz-to-800-mhz-fmcp1143-30-p.aspx>

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