



DCNE

Directional 3dB Couplers

DC Series 470 - 860 MHz

- This product range is most commonly used within combiners, diplexers and switchframes, but can be used as stand alone combiners and splitters. The flanged versions are fully pressurized to 70kPa and are of gas through construction via the connectors.
- Crossed outputs (i.e. on same side of coupler) are standard in order to simplify equipment layout (not available in "N" type versions).
- Each coupler size is defined by its "standard" connector size. For example: an FM 3dB coupler rated for 50kW usually has 3-1/8" connectors, so this coupler is defined as a model DC31BU. Using RFS developed R series adaptors for connector sizes 7/8" to 6-1/8", all coupler ports can be adapted to any size flanged or unflanged EIA or IEC standard.
- A coupler consists of a pair of strip lines approximately a quarter wavelength long configured in such a way to provide the required couplings.
- If two signals of similar amplitude in phase quadrature are applied to Ports A and B (with B leading) the sum will appear at Port C. The arrangement provides good isolation between inputs with low VSWR over a wide bandwidth without adjustment.
- If the inputs do not have the correct amplitude and/or phase relationship, an out of balance signal is dissipated in a load connected to Port D. Conversely a signal applied to Port C will split to give two outputs of equal amplitude in quadrature at Ports A and B.



3dB coupler with Type-N connectors

FEATURES / BENEFITS

Technical features

GENERAL SPECIFICATIONS

Product Line		Components
Product Type		Directional 3dB Couplers

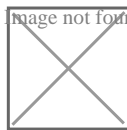
ELECTRICAL SPECIFICATIONS

Frequency Range	MHz	470 - 860
Frequency Band		UHF Band IV/V
Power Rating	kW	0.25
Power Rating Comments		Note 1
Input Return Loss	dB	35
Isolation	dB	32
Output Power Split	dB	3 +/- 0.35 Note#2
Output Phase	degrees	90 +/- 2 Note#2

MECHANICAL SPECIFICATIONS

Standard Connector Size		N
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External Document Links

Notes

Note 1 Power ratings are based on an ambient temperature of 40 degrees C and represent the maximum average power at any ports, at the highest operating frequency in each band.

Note 2 Across full band.