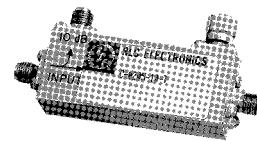


# Octave and Broadband Directional Couplers



RLC Electronics' Broadband Directional Coupler provide the ultimate in flat coupling and high directivity over the 2 to 18 GHz band. These miniaturized units are ideal where stringent wide band specifications must be maintained.

## Specifications

C-1-2-3

| Model Number | Frequency Range (GHz) | Directivity Min (dB) | VSWR (Max) | Frequency Deviation (dB) | Loss Max. (dB)* |
|--------------|-----------------------|----------------------|------------|--------------------------|-----------------|
| C-0205-      | 0.25-0.50             | 25                   | 1.15       | ±0.75                    | 0.20            |
| C-0510-      | 0.50-1.00             | 25                   | 1.15       | ±0.75                    | 0.20            |
| C-0912-      | 0.96-1.235            | 25                   | 1.10       | ±0.25                    | 0.15            |
| C-1020-      | 1.00-2.00             | 20                   | 1.15       | ±0.75                    | 0.25            |
| C-1530-      | 1.50-3.00             | 20                   | 1.20       | ±0.75                    | 0.25            |
| C-2040-      | 2.00-4.00             | 20                   | 1.25       | ±0.75                    | 0.30            |
| C-3060-      | 3.00-6.00             | 20                   | 1.25       | ±0.75                    | 0.35            |
| C-4080-      | 4.00-8.00             | 18                   | 1.35       | ±0.75                    | 0.40            |
| C-8012-      | 8.00-12.40            | 16                   | 1.45       | ±0.75                    | 0.40            |
| C-12180-     | 12.40-18.00           | 15                   | 1.50       | ±1.00                    | 0.60            |
| C-218-6**    | 2.00-18.00            | 15 < 12.4            | 1.50       | ±1.00                    | 0.90            |
| C-218-10**   |                       | 12 > 12.4            |            |                          | 0.90            |
| C-218-16**   |                       |                      |            |                          | 0.65            |

**Coupling(Nominal):** 6±0.5dB  
 10±0.5dB, 20±1.0dB, 30±1.0dB  
**Power:** 50 watts ave: C-218; 20 watts average.  
 5KW peak: C-218; 3 KW peak  
**Impedance:** 50 Ohms

**Connector Type:** SMA female  
**Temperature:** -55 C to +85 C  
**Environment:** MIL-E-5400, Class 1A  
**note:** \* Does not include coupling loss  
 \*\*Coupling referenced to output port.

### To designate coupler desired use:

- (1) 0205, 0510, etc for model number
- (2) Coupling value in dB
- (3) "T" for built in 2 watt termination, U for no termination.

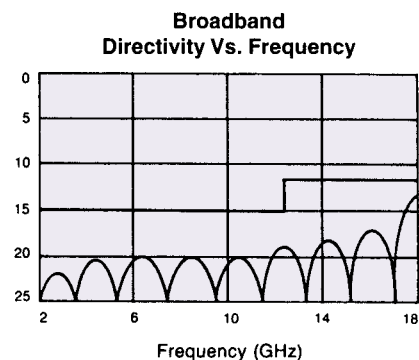
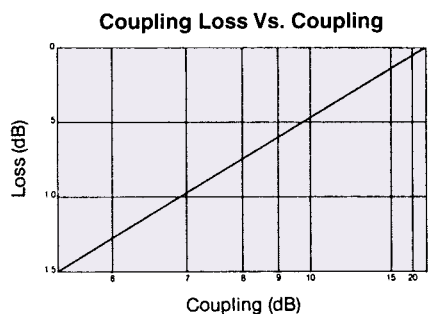
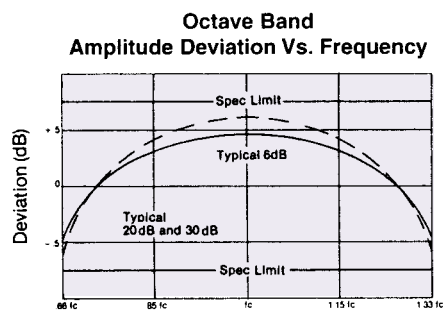
Example: C-2040-6-T a 6 dB coupler, 2 to 4 GHz frequency band, with internal termination



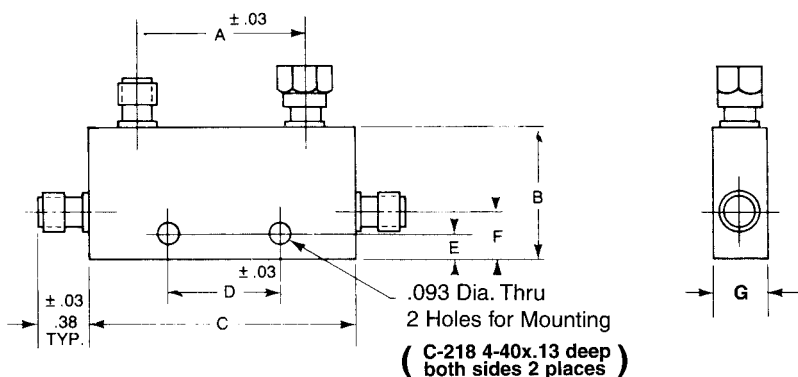
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# Typical Operating Curves



## Outline Drawing



| Model No. | A    | B    | C    | D    | E    | F   | G   |
|-----------|------|------|------|------|------|-----|-----|
| C-0205    | 1.50 | 2.00 | 2.13 | 1.97 | 1.75 | .31 | .38 |
| C-0510    | 2.64 | .75  | 3.14 | 2.98 | .50  | .25 | .38 |
| C-0912    | 1.92 | .75  | 2.43 | 2.27 | .50  | .25 | .38 |
| C-1020    | 1.32 | .75  | 1.83 | 1.67 | .50  | .25 | .38 |
| C-1530    | .96  | .75  | 1.47 | 1.31 | .50  | .25 | .38 |
| C-2040    | .66  | .75  | 1.17 | 1.01 | .50  | .25 | .38 |
| C-3060    | .50  | .75  | 1.00 | .84  | .50  | .25 | .38 |
| C-4080    | .50  | .75  | 1.00 | .84  | .50  | .25 | .38 |
| C-8012    | .50  | .75  | 1.00 | .84  | .50  | .25 | .38 |
| C-12180   | .50  | .75  | 1.00 | .84  | .50  | .25 | .38 |
| C-218     | 1.63 | .86  | 2.12 | 1.12 | .44  | .39 | .53 |

Tolerances unless otherwise specified are: .xx, ± .02, .xxx, ± .005.



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