



# MICROLAB/FXR

CA-34/44/54N

## Hybrid Couplers

Special Low PIM Wireless Band Versions

800 – 2,200 MHz, N connectors

- ◆ High Isolation, Low VSWR
- ◆ Versions for single and dual Wireless Bands
- ◆ 200W average Power Rating
- ◆ Moisture sealed for outside applications
- ◆ Convenient connector spacing
- ◆ N connectors standard, see CA-34/44/54D for 7-16 mm DIN version

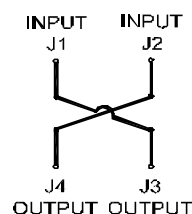
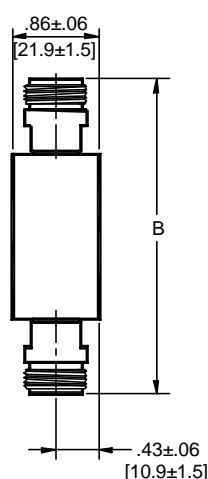
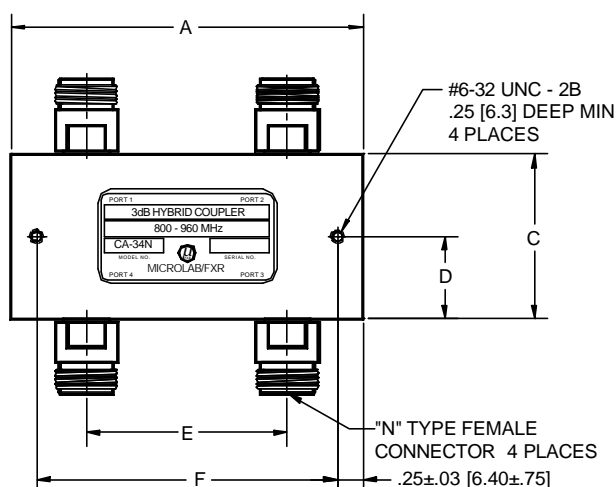


Dual Band version CA-44N

The CA-34N, -44N and -54N Hybrid Couplers have been designed to meet the special needs of the wireless market. They are most commonly used to combine two wireless carriers to a single antenna feed or distribution cable. This requires the termination of one output port in  $50\Omega$  and results in a 3 dB loss in each signal. In situations where two similar feeds are required, for say an in-building application, both outputs may be used, eliminating the need for a termination and the 3 dB loss.

Special attention has been directed in these versions to maximize isolation in the wireless bands and minimize passive intermodulation (PIM). Mechanically they are designed moisture sealed to IP65 for outside applications, and have connectors spaced to allow controlled wrench tightening of connectors. Similar models are available with DIN connectors, see specification CA-34/44/54D. (1/01)

| Model series | Frequency Range, MHz | Input Isolation | VSWR Max. | Max. Power Avg. | Coupling:              | 3 dB nominal          |
|--------------|----------------------|-----------------|-----------|-----------------|------------------------|-----------------------|
| CA-34N       | 800 - 960            | > 35 dB         | 1.10:1    | 200W            | Frequency Sensitivity: | $\pm 0.25$ dB         |
| CA-44N       | 800 – 2,200          | > 30 dB         | 1.20:1    | 120W            | Dissipative Loss:      | 0.2 dB max.           |
| CA-54N       | 1,710 – 2,200        | > 30 dB         | 1.15:1    | 200W            | Impedance:             | $50\Omega$ nominal    |
|              |                      |                 |           |                 | Peak Power Rating:     | 1.5 kW peak           |
|              |                      |                 |           |                 | Temperature Range:     | -55°C to +125°C       |
|              |                      |                 |           |                 | PIM (Intermodulation): | -140 dBc (+43 dBm x2) |
|              |                      |                 |           |                 | Connectors:            | Silver plate          |



| Dimensions in Inches (mm) |           |            |           |
|---------------------------|-----------|------------|-----------|
|                           | -34N      | -44N       | -54N      |
| A                         | 3.50 (89) | 5.50 (140) | 3.50 (89) |
| B                         | 3.15 (80) | 3.22 (82)  | 3.55 (90) |
| C                         | 1.65 (42) | 1.72 (44)  | 2.05 (52) |
| D                         | 0.83 (21) | 0.86 (22)  | 1.03 (26) |
| E                         | 2.00 (51) | 3.75 (95)  | 2.00 (51) |
| F                         | 3.00 (76) | 4.45 (113) | 3.00 (76) |