

## Two-, Four-, & Eight-Way Isolated Power Dividers Wilkinson

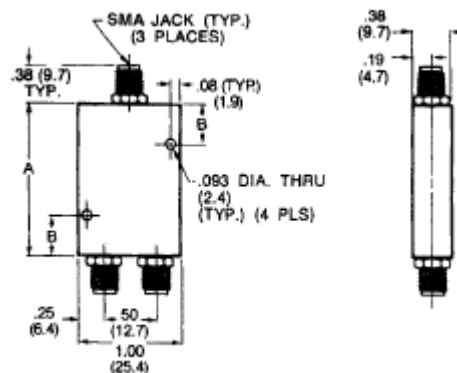
Rev. V4

### Features

- Excellent Amplitude and Phase Balance
- High Isolation between Output Ports
- Low VSWR, Small Size and Light Weight
- Octave and Multi-Octave Frequency Coverage
- Power: 10 Watts Input Maximum with Matched Terminations

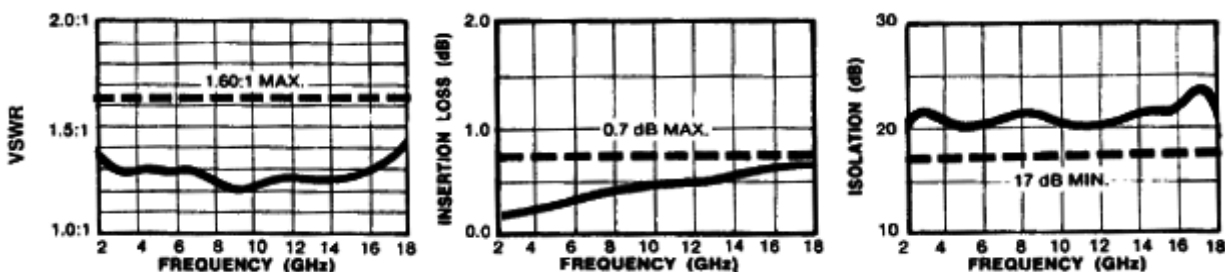
### Description and Applications

This series of two-way, in-phase stripline power dividers demonstrates excellent performance as well as small size and light weight. These octave and multi-octave power dividers have high isolation, low VSWR and excellent amplitude and phase balance.



Note: All dimensions are  $\pm .020$ , except mounting hole diameters ( $\pm .005$ ) and mounting hole location ( $\pm .010$ ).

### Typical Performance Part No. 2089-6208-00



### Two-Way Isolated Power Divider Specifications

| Part #       | Frequency Range (GHz) | VSWR (max.) | Isolation dB (min.) | Insertion Loss dB (max.) | Output Unbalance |              | Input Power* (watts) (max.) | Size Inches (mm) |            | Weight |    |
|--------------|-----------------------|-------------|---------------------|--------------------------|------------------|--------------|-----------------------------|------------------|------------|--------|----|
|              |                       |             |                     |                          | Amp. (dB)        | Phase (deg.) |                             | A                | B          | oz.    | g  |
| 2089-6201-00 | 1.0-2.0               | 1.25        | 20                  | 0.25                     | 0.2              | 4.0          | 2.0                         | 2.0 (50.8)       | 0.5 (12.7) | 1.5    | 43 |
| 2089-6202-00 | 2.0-4.0               | 1.35        | 20                  | 0.25                     | 0.2              | 4.0          | 2.0                         | 2.0 (50.8)       | 0.5 (12.7) | 1.5    | 43 |
| 2089-6203-00 | 4.0-8.0               | 1.35        | 20                  | 0.3                      | 0.2              | 6.0          | 2.0                         | 1.38 (35)        | 0.4 (10.2) | 1.2    | 35 |
| 2089-6204-00 | 8.0-12.4              | 1.60        | 20                  | 0.4                      | 0.25             | 6.0          | 2.0                         | 1.38 (35)        | 0.4 (10.2) | 1.2    | 35 |
| 2089-6205-00 | 12.4-18.0             | 1.70        | 17                  | 0.6                      | 0.25             | 6.0          | 3.0                         | 1.38 (35)        | 0.4 (10.2) | 1.2    | 35 |
| 2089-6206-00 | 0.5-2.0               | 1.30        | 20                  | 0.4                      | 0.2              | 4.0          | 4.0                         | 2.8 (71.2)       | 1.4 (35.6) | 2.0    | 57 |
| 2089-6207-00 | 2.0-8.0               | 1.50        | 18                  | 0.4                      | 0.25             | 8.0          | 4.0                         | 2.25 (57.2)      | 0.5 (12.7) | 1.3    | 37 |
| 2089-6208-00 | 2.0-18.0              | 1.60        | 17                  | 1.0                      | 0.25             | 8.0          | 10.0                        | 2.25 (57.2)      | 0.5 (12.7) | 1.3    | 37 |
| 2089-6209-00 | 4.0-18.0              | 1.60        | 17                  | 0.6                      | 0.25             | 8.0          | 4.0                         | 1.63 (41.4)      | 0.5 (12.7) | 1.3    | 37 |
| 2089-6210-00 | 7.0-18.0              | 1.70        | 17                  | 0.6                      | 0.25             | 8.0          | 3.0                         | 1.38 (35)        | 0.4 (10.2) | 1.2    | 35 |

\* Maximum input power with output loads of VSWR  $\leq 2.0:1$ . Derate to 10% of listed value when arbitrarily terminated.

## Two-, Four-, & Eight-Way Isolated Power Dividers Wilkinson

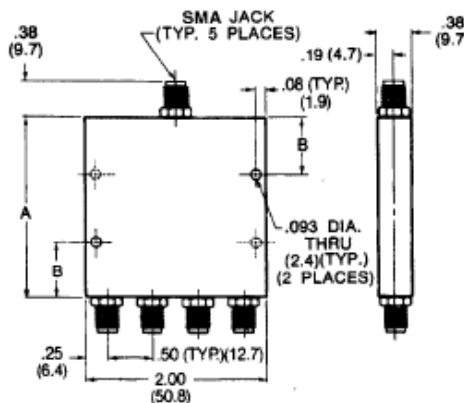
Rev. V4

### Features

- Octave and Multi-Octave Frequency Coverage
- Low Insertion Loss
- Excellent Phase Balance
- High Isolation between Output Ports
- Low VSWR
- Power: 20 Watts Maximum

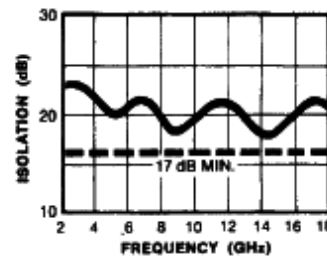
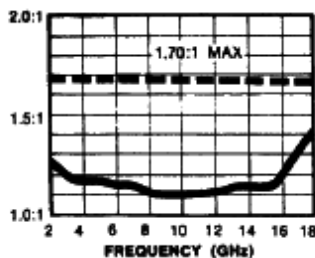
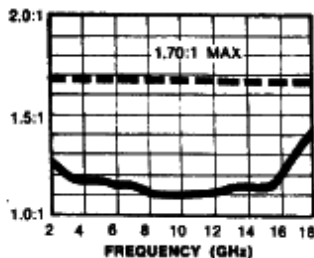
### Description and Applications

These four-way in-phase power dividers combine excellent strip transmission line design techniques with small size and light weight and still achieve superb performance over wide multi-octave frequency ranges as well as over single octave bandwidths. These units may be used in reverse to combine in-phase signals applied to them. They can be custom designed to your particular application.



Note: All dimensions are  $\pm .020$ , except mounting hole diameters ( $\pm .005$ ) and mounting hole location ( $\pm .010$ ).

### Typical Performance Part No. 2089-6408-00



### Four-Way Isolated Power Divider Specifications

| Part #         | Frequency Range (GHz) | VSWR (max.) | Isolation dB (min.) | Insertion Loss dB (max.) | Output Unbalance |              | Input Power* (watts) (max.) | Size, Inches (mm) |             | Weight |     |
|----------------|-----------------------|-------------|---------------------|--------------------------|------------------|--------------|-----------------------------|-------------------|-------------|--------|-----|
|                |                       |             |                     |                          | Amp. (dB)        | Phase (deg.) |                             | A                 | B           | oz.    | g   |
| 2089-6401-00** | 1.0-2.0               | 1.35        | 20                  | 0.50                     | 0.40             | 6            | 4.0                         | 3.0 (76.2)        | 0.63 (15.9) | 4.0    | 115 |
| 2089-6402-00   | 2.0-4.0               | 1.35        | 20                  | 0.50                     | 0.40             | 6            | 4.0                         | 2.0 (50.8)        |             | 2.8    | 80  |
| 2089-6403-00   | 4.0-8.0               | 1.50        | 20                  | 0.50                     | 0.40             | 8            | 4.0                         | 2.0 (50.8)        |             | 2.8    | 80  |
| 2089-6404-00   | 8.0-12.4              | 1.70        | 18                  | 0.75                     | 0.50             | 8            | 4.0                         | 2.0 (50.8)        |             | 2.8    | 80  |
| 2089-6405-00   | 12.4-18.0             | 1.70        | 15                  | 1.20                     | 0.50             | 8            | 6.0                         | 2.0 (50.8)        |             | 2.8    | 80  |
| 2089-6406-00   | 0.5-2.0               | 1.45        | 20                  | 0.70                     | 0.40             | 6            | 4.0                         | 2.92 (74.2)       |             | 4.0    | 115 |
| 2089-6408-00   | 2.0-18.0              | 1.70        | 17                  | 1.80                     | 0.50             | 12           | 20.0                        | 3.0 (76.2)        |             | 4.0    | 115 |
| 2089-6409-00   | 4.0-18.0              | 1.70        | 15                  | 1.20                     | 0.50             | 12           | 8.0                         | 2.0 (50.8)        |             | 2.8    | 80  |
| 2089-6410-00   | 7.0-18.0              | 1.60        | 15                  | 1.20                     | 0.50             | 12           | 6.0                         | 2.0 (50.8)        |             | 2.8    | 80  |

\* Maximum input power with output loads of VSWR  $\leq 2.0:1$ . Derate to 10% of listed value when arbitrarily terminated.

\*\* These units have four mounting holes symmetrically located as shown.

## Two-, Four-, & Eight-Way Isolated Power Dividers Wilkinson

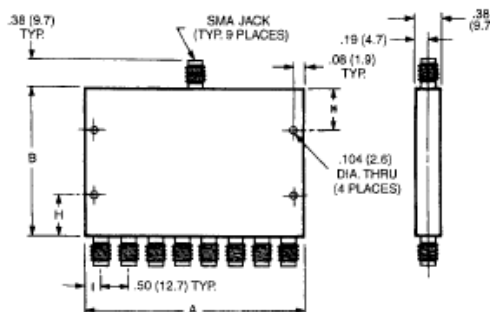
Rev. V4

### Features

- Octave and Multi-Octave Frequency Coverage
- Excellent Amplitude and Phase Balance
- Low Insertion Loss
- Low VSWR

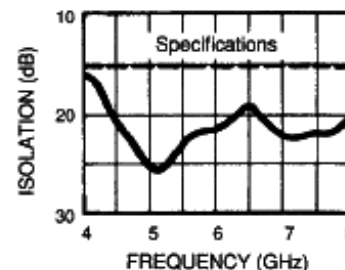
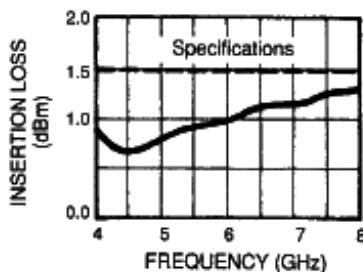
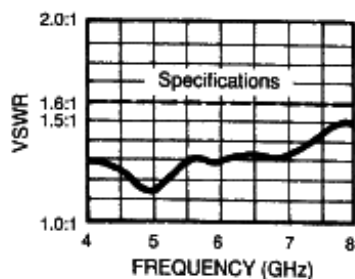
### Description and Applications

These eight-way in-phase power dividers combine reliable strip transmission line design techniques with small size and light weight to achieve excellent performance over octave and multi-octave frequency ranges. They may also be used to combine in-phase signals applied at the outputs. SMA female connectors are standard.



All dimensions are  $\pm .020$ , except mounting hole diameters ( $\pm .005$ ) and mounting hole location ( $\pm .010$ ).

### Typical Performance Part No. 2089-6803-00



### Eight-Way Isolated Power Divider Specifications

| Part #       | Frequency Range (GHz) | VSWR (max.) | Isolation dB (min.) | Insertion Loss dB (max.) | Output Unbalance |              | Input Power* (watts) (max.) | Size Inches |     |     |      | Weight (nom.) oz. |
|--------------|-----------------------|-------------|---------------------|--------------------------|------------------|--------------|-----------------------------|-------------|-----|-----|------|-------------------|
|              |                       |             |                     |                          | Amp. (dB)        | Phase (deg.) |                             | A           | B   | H   | I    |                   |
| 2089-6801-00 | 1.0-2.0               | 1.5:1       | 20                  | 1.0                      | 0.8              | 8            | 6.0                         | 4.5         | 5.0 | 1.0 | 0.50 | 15                |
| 2089-6803-00 | 4.0-8.0               | 1.6:1       | 15                  | 1.5                      | 0.8              | 16           | 6.0                         | 4.0         | 2.0 | 0.5 | 0.25 | 12                |
| 2089-6804-00 | 8.0-12.4              | 1.7:1       | 15                  | 1.7                      | 0.8              | 16           | 6.0                         | 4.0         | 2.0 | 0.5 | 0.25 | 12                |
| 2089-6805-00 | 12.4-18.0             | 1.7:1       | 15                  | 2.2                      | 0.8              | 24           | 10.0                        | 4.0         | 2.0 | 0.5 | 0.25 | 12                |
| 2089-6807-00 | 2.0-8.0               | 1.6:1       | 15                  | 2.0                      | 1.2              | 16           | 12.0                        | 4.0         | 2.0 | 0.5 | 0.25 | 12                |
| 2089-6808-00 | 2.0-18.0              | 1.8:1       | 15                  | 3.3                      | 1.8              | 24           | 30.0                        | 4.5         | 5.0 | 1.0 | 0.50 | 15                |
| 2089-6810-00 | 7.0-18.0              | 1.8:1       | 15                  | 2.5                      | 1.5              | 24           | 10.0                        | 4.0         | 2.0 | 0.5 | 0.25 | 12                |

\* Maximum input power with output loads of VSWR  $\leq 2.0:1$ . Derate to 10% of listed value when arbitrarily terminated.

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