

# POWER DIVIDERS

## 0° : 4-WAY

### SURFACE-MOUNT MODELS

129

159

219

233

| FREQUENCY RANGE<br>(MHz) | ISOLATION (dB) |               |               | INSERTION LOSS (dB) |               |               | PHASE UNBALANCE (Degrees) |               |               | AMPLITUDE UNBALANCE (dB) |               |               | PACKAGE | PIN-OUT<br>(See Below) | MODEL              |
|--------------------------|----------------|---------------|---------------|---------------------|---------------|---------------|---------------------------|---------------|---------------|--------------------------|---------------|---------------|---------|------------------------|--------------------|
|                          | LB<br>TYP/MIN  | MB<br>TYP/MIN | UB<br>TYP/MIN | LB<br>TYP/MAX       | MB<br>TYP/MAX | UB<br>TYP/MAX | LB<br>TYP/MAX             | MB<br>TYP/MAX | UB<br>TYP/MAX | LB<br>TYP/MAX            | MB<br>TYP/MAX | UB<br>TYP/MAX |         |                        |                    |
| 1 - 100                  | 23/20          | --/--         | 25/20         | 0.7/1.0             | --/--         | 0.5/1.0       | 1/3                       | --/--         | 2.0/3.0       | 0.3/0.4                  | --/--         | 0.3/0.4       | 159     | 1                      | SDL-140            |
| 20 - 400                 | 25/18          | --/--         | 20/17         | 1.0/1.3             | --/--         | 1.4/1.8       | 1/3                       | --/--         | 3.0/5.0       | 0.3/0.4                  | --/--         | 0.5/0.75      | 159     | 1                      | SDL-120            |
| 700 - 900                | --/--          | --/--         | 25/23         | --/--               | --/--         | 1.0/1.4       | --/--                     | --/--         | 4.0/6.0       | --/--                    | --/--         | 0.6/0.8       | 129     | 2                      | SPD-C6 $\dagger$   |
| 1700 - 2000              | --/--          | --/--         | 22/16         | --/--               | --/--         | 0.5/0.8       | --/--                     | --/--         | 5.0/7.0       | --/--                    | --/--         | 0.3/0.5       | 233     | 4                      | M4D1720            |
| 1900-2200                | --/--          | --/--         | 25/20         | --/--               | --/--         | 0.7/1.2       | --/--                     | --/--         | 3.0/5.0       | --/--                    | --/--         | 0.3/0.5       | 219     | 4                      | DSS-1900 $\dagger$ |
| 2100-2400                | --/--          | --/--         | 23/20         | --/--               | --/--         | 1.0/1.2       | --/--                     | --/--         | 3.0/5.0       | --/--                    | --/--         | 0.3/0.5       | 219     | 4                      | DSS-2100 $\dagger$ |

### New! SYNSTRIP<sup>®</sup> SURFACE MOUNT

246

| FREQUENCY RANGE<br>(MHz) | ISOLATION (dB)<br>Full Band<br>TYP/MIN | INSERTION LOSS (dB)<br>Full Band<br>TYP/MAX | PHASE UNBALANCE (Degrees)<br>Full Band<br>TYP/MAX | AMPLITUDE UNBALANCE (dB)<br>Full band<br>TYP/MAX | VSWR<br>TYP/MAX | PACKAGE | PIN-OUT<br>(See Below) | MODEL    |
|--------------------------|----------------------------------------|---------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------|---------|------------------------|----------|
| 1500 - 2500              | 23/16                                  | 0.3/0.5                                     | 3.0/4.0                                           | ±0.2/0.4                                         | 1.3/1.4:1       | 246     | 4                      | S4D1525* |
| 2000 - 2800              | 23/16                                  | 0.5/0.8                                     | 3.0/5.0                                           | ±0.3/0.5                                         | 1.3/1.4:1       | 246     | 4                      | S4D2028* |

### THROUGH HOLE MOUNT (8 Pin-Relay Header)

| FREQUENCY RANGE<br>(MHz) | ISOLATION (dB) |               |               | INSERTION LOSS (dB) |               |               | PHASE UNBALANCE (Degrees) |           |           | AMPLITUDE UNBALANCE (dB) |           |           | PACKAGE | PIN-OUT<br>(See Below) | MODEL             |
|--------------------------|----------------|---------------|---------------|---------------------|---------------|---------------|---------------------------|-----------|-----------|--------------------------|-----------|-----------|---------|------------------------|-------------------|
|                          | LB<br>TYP/MIN  | MB<br>TYP/MIN | UB<br>TYP/MIN | LB<br>TYP/MAX       | MB<br>TYP/MAX | UB<br>TYP/MAX | LB<br>MAX                 | MB<br>MAX | UB<br>MAX | LB<br>MAX                | MB<br>MAX | UB<br>MAX |         |                        |                   |
| 0.01-40                  | 35/20          | 32/25         | 25/20         | 0.4/0.8             | 0.3/0.5       | 0.5/1.0       | 3                         | 3         | 4         | 0.2                      | .15       | 0.2       | 102     | 3                      | DSP-206           |
| 0.1-200                  | 33/20          | 30/20         | 27/20         | 0.4/0.6             | 0.5/.75       | 0.7/1.0       | 4                         | 6         | 8         | 0.15                     | 0.2       | .25       | 102     | 3                      | DSP-2D2           |
| 0.25-250                 | 33/20          | 30/20         | 27/20         | 0.4/0.7             | 0.5/.75       | 0.7/1.2       | 4                         | 6         | 8         | 0.15                     | 0.2       | .25       | 102     | 3                      | DSP-2F2           |
| 1-200                    | 30/20          | 25/20         | 25/20         | 0.4/0.7             | 0.5/0.9       | 0.7/1.2       | 4                         | 6         | 10        | 0.15                     | 0.2       | 0.3       | 102     | 3                      | DSP-2E2 ■         |
| 1-250                    | 33/20          | 30/20         | 27/20         | 0.4/0.7             | 0.5/.75       | 0.7/1.2       | 3                         | 3         | 4         | 0.25                     | 0.2       | 0.3       | 102     | 3                      | DSP-204           |
| 1-500                    | 25/20          | 27/20         | 25/20         | 0.6/1.2             | 0.8/1.5       | 1.4/2.2       | 4                         | 4         | 6         | 0.5                      | 0.4       | 0.5       | 102     | 3                      | DSP-207           |
| 10-1000                  | 25/20          | 24/20         | 24/20         | 1.2/1.7             | 1.2/1.9       | 1.6/2.3       | 5                         | 7         | 10        | 0.2                      | 0.5       | 0.8       | 102     | 3                      | DSP-2E4 ■         |
| 1900-2130                | --/--          | --/--         | 25/20         | --/--               | --/--         | 1.8/2.4       | -                         | -         | 6         | -                        | -         | 0.7       | 102     | 3                      | DSP-247 $\dagger$ |

Power Rating (All Models) = 1 Watt, max

\* Power rating = 5 watts with mismatch of 1.2:1 or less

■ 75 Ohm Model

 $\dagger$  (UB) - Denotes full bandwidth specification

For pin location and package outline drawings, see back pages.

PIN-OUT TABLE

|    | INPUT | OUTPUT  | CASE GROUND |
|----|-------|---------|-------------|
| #1 | 5     | 1,3,4,6 | 2           |
| #2 | 2     | 1,3,4,6 | All other   |
| #3 | 4     | 1,2,7,8 | All other   |
| #4 | 1     | 2,3,4,5 | All other   |

LB = LF to 10 LF  
MB = 10 LF to HF/2  
UB = HF/2 to HF

# POWER DIVIDERS

## 0° : 4-WAY

### THROUGH HOLE MOUNT (TO-8)



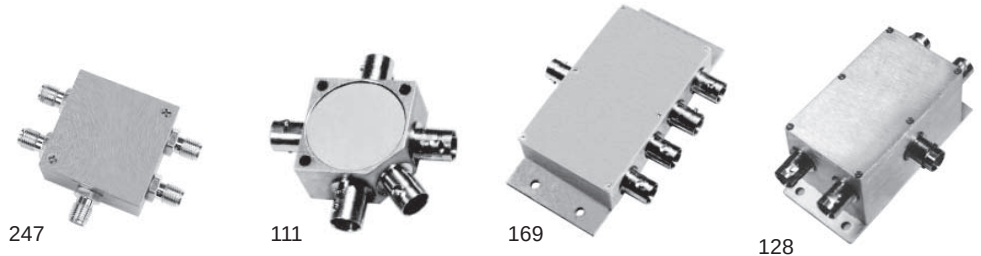
| FREQUENCY RANGE<br>(MHz) | ISOLATION (dB) |            |            | INSERTION LOSS (dB) |            |            | PHASE UNBALANCE (Degrees) |        |        | AMPLITUDE UNBALANCE (dB) |        |        | PACKAGE | PIN-OUT (See Below) | MODEL   |
|--------------------------|----------------|------------|------------|---------------------|------------|------------|---------------------------|--------|--------|--------------------------|--------|--------|---------|---------------------|---------|
|                          | LB TYP/MIN     | MB TYP/MIN | UB TYP/MIN | LB TYP/MAX          | MB TYP/MAX | UB TYP/MAX | LB MAX                    | MB MAX | UB MAX | LB MAX                   | MB MAX | UB MAX |         |                     |         |
| 0.01-40                  | 35/20          | 32/25      | 25/20      | 0.4/0.8             | 0.3/0.5    | 0.5/1.0    | 3                         | 3      | 4      | 0.2                      | 0.15   | 0.2    | 123     | 3                   | DSP-506 |
| 1-250                    | 33/20          | 30/20      | 27/20      | 0.4/0.7             | 0.5/.75    | 0.7/1.2    | 3                         | 3      | 4      | 0.25                     | 0.2    | 0.3    | 123     | 3                   | DSP-504 |
| 1-500                    | 25/20          | 27/20      | 25/20      | 0.6/1.2             | 0.8/1.5    | 1.4/2.2    | 4                         | 4      | 6      | 0.5                      | 0.4    | 0.5    | 123     | 3                   | DSP-507 |

### THROUGH HOLE MOUNT (16 Pin-Header)



| FREQUENCY RANGE<br>(MHz) | ISOLATION (dB) |            |            | INSERTION LOSS (dB) |            |            | PHASE UNBALANCE (Degrees) |        |        | AMPLITUDE UNBALANCE (dB) |        |        | PACKAGE | PIN-OUT (See Below) | MODEL     |
|--------------------------|----------------|------------|------------|---------------------|------------|------------|---------------------------|--------|--------|--------------------------|--------|--------|---------|---------------------|-----------|
|                          | LB TYP/MIN     | MB TYP/MIN | UB TYP/MIN | LB TYP/MAX          | MB TYP/MAX | UB TYP/MAX | LB MAX                    | MB MAX | UB MAX | LB MAX                   | MB MAX | UB MAX |         |                     |           |
| 10-800                   | 30/20          | 33/20      | 25/18      | 0.4/0.7             | 0.7/0.9    | 1.3/1.6    | 5.0                       | 7.0    | 10     | 0.2                      | 0.4    | 0.8    | 124     | 1                   | DSP-9E4 ■ |
| 10-1000                  | 25/20          | 21/15      | 18/15      | 0.5/0.8             | 0.8/1.8    | 1.5/2.5    | 4.0                       | 6.0    | 10     | 0.2                      | 0.5    | 0.7    | 124     | 1                   | DSP-9D4   |
| 10-1000                  | 25/20          | 25/18      | 20/15      | 0.8/1.5             | 1.0/2.0    | 1.5/2.5    | 4.0                       | 6.0    | 10     | 0.4                      | 0.5    | 0.7    | 124     | 1                   | DSP-908   |

### COAXIAL CONNECTOR



| FREQUENCY RANGE<br>(MHz) | ISOLATION (dB) |            |            | INSERTION LOSS (dB) |            |            | PHASE UNBALANCE (Degrees) |        |        | AMPLITUDE UNBALANCE (dB) |        |        | PACKAGE | PIN-OUT (See Below) | MODEL      |
|--------------------------|----------------|------------|------------|---------------------|------------|------------|---------------------------|--------|--------|--------------------------|--------|--------|---------|---------------------|------------|
|                          | LB TYP/MIN     | MB TYP/MIN | UB TYP/MIN | LB TYP/MAX          | MB TYP/MAX | UB TYP/MAX | LB MAX                    | MB MAX | UB MAX | LB MAX                   | MB MAX | UB MAX |         |                     |            |
| 0.01-40                  | 35/20          | 32/25      | 25/20      | 0.4/0.8             | 0.3/0.5    | 0.5/1.0    | 3.0                       | 3.0    | 4.0    | 0.2                      | 0.15   | 0.2    | 111     | 2                   | DSK-706*   |
| 1-200                    | 30/20          | 25/20      | 25/20      | 0.4/0.7             | 0.5/0.9    | 0.7/1.2    | 4.0                       | 6.0    | 10.0   | 0.15                     | 0.2    | 0.3    | 169     | 2                   | DSK-7E2B ■ |
| 1-250                    | 33/20          | 30/20      | 27/20      | 0.4/0.7             | 0.5/.75    | 0.7/1.2    | 3.0                       | 3.0    | 4.0    | .25                      | 0.2    | 0.3    | 111     | 2                   | DSK-704*   |
| 1-500                    | 25/20          | 25/20      | 23/20      | 0.8/1.2             | 0.6/1.2    | 1.0/1.5    | 4.0                       | 3.0    | 5.0    | 0.4                      | 0.3    | 0.4    | 111     | 2                   | DSK-707*   |
| 1-1000                   | 25/15          | 25/20      | 20/15      | 0.6/1.5             | 1.0/2.0    | 1.5/2.5    | 5.0                       | 6.0    | 8.0    | 0.5                      | 0.5    | 0.5    | 111     | 2                   | DSK-708*   |
| 5-2000                   | 25/20          | 20/15      | 20/15      | 1.3/1.8             | 1.0/2.3    | 2.5/2.8    | 2.0                       | 4.0    | 8.0    | 0.2                      | 0.4    | 0.6    | 247     | 2                   | DSK-745S   |
| 10-500                   | 33/25          | 30/25      | 28/25      | 0.5/0.7             | 0.7/.85    | .85/1.0    | 2.0                       | 4.0    | 6.0    | 0.2                      | 0.2    | 0.4    | 128     | 2                   | DSK-711S   |
| 20-1000                  | 30/25          | 30/23      | 25/20      | 0.6/1.2             | 0.8/1.3    | 1.0/1.5    | 3.0                       | 4.0    | 8.0    | 0.3                      | 0.4    | 0.5    | 128     | 2                   | DSK-713S   |
| 30-1000                  | 30/25          | 30/25      | 30/25      | 0.8/1.0             | 0.8/1.0    | 0.8/1.1    | 2.0                       | 3.5    | 8.0    | 0.3                      | 0.3    | 0.5    | 128     | 2                   | DSK-705S   |

Power Rating (All Models) = 1 Watt, max

\* Select female connector suffix: "B" = BNC, "S" = SMA, "N" = Type N, "T" = TNC

■ 75 Ohm Model

For pin location and package outline drawings, see back pages.

LB = LF to 10 LF  
MB = 10 LF to HF/2  
UB = HF/2 to HF

PIN-OUT TABLE

|    | INPUT | OUTPUT    | CASE GROUND |
|----|-------|-----------|-------------|
| #1 | 2     | 5,8,9,12  | All other   |
| #2 | 1     | 2,3,4,5   | All other   |
| #3 | 2     | 4,6,10,12 | All Other   |