



# DO-IT-YOURSELF

## POWER SPLITTERS



### Typical Performance Data For TCP-2-10

| Frequency (MHz) | Insertion Loss (dB) |      | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (dB) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|---------------------|------|--------------------------|----------------|----------------------|--------|--------|--------|
|                 | S-1                 | S-2  |                          |                |                      |        |        |        |
| 5.00            | 3.10                | 3.33 | 0.23                     | 30.15          | 0.98                 | 1.05   | 1.28   | 1.17   |
| 7.00            | 3.10                | 3.30 | 0.20                     | 31.40          | 0.82                 | 1.04   | 1.23   | 1.15   |
| 10.00           | 3.10                | 3.29 | 0.19                     | 32.26          | 0.60                 | 1.04   | 1.20   | 1.14   |
| 100.00          | 3.16                | 3.30 | 0.14                     | 30.00          | 0.15                 | 1.06   | 1.10   | 1.12   |
| 190.00          | 3.20                | 3.34 | 0.14                     | 27.03          | 0.45                 | 1.09   | 1.09   | 1.12   |
| 370.00          | 3.26                | 3.40 | 0.13                     | 23.32          | 0.88                 | 1.14   | 1.06   | 1.10   |
| 550.00          | 3.36                | 3.46 | 0.10                     | 21.68          | 1.23                 | 1.15   | 1.05   | 1.06   |
| 730.00          | 3.43                | 3.49 | 0.06                     | 21.37          | 1.41                 | 1.11   | 1.04   | 1.02   |
| 910.00          | 3.54                | 3.55 | 0.01                     | 23.06          | 1.63                 | 1.05   | 1.11   | 1.08   |
| 1000.00         | 3.66                | 3.65 | 0.01                     | 25.28          | 1.74                 | 1.07   | 1.17   | 1.14   |

### Typical Performance Data For TCP-2-10-75

| Frequency (MHz) | Insertion Loss (dB) |      | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|---------------------|------|--------------------------|----------------|------------------------|--------|--------|--------|
|                 | S-1                 | S-2  |                          |                |                        |        |        |        |
| 5.00            | 3.13                | 3.50 | 0.37                     | 24.98          | 0.43                   | 1.04   | 1.17   | 1.38   |
| 10.00           | 3.12                | 3.38 | 0.26                     | 27.65          | 0.22                   | 1.02   | 1.15   | 1.26   |
| 100.00          | 3.16                | 3.38 | 0.22                     | 28.67          | 0.07                   | 1.04   | 1.14   | 1.20   |
| 300.00          | 3.25                | 3.38 | 0.14                     | 27.92          | 0.24                   | 1.14   | 1.20   | 1.18   |
| 500.00          | 3.32                | 3.27 | 0.04                     | 29.42          | 0.56                   | 1.20   | 1.20   | 1.16   |
| 700.00          | 3.41                | 3.27 | 0.14                     | 29.83          | 0.68                   | 1.22   | 1.30   | 1.19   |
| 800.00          | 3.46                | 3.32 | 0.15                     | 27.04          | 0.70                   | 1.22   | 1.31   | 1.22   |
| 900.00          | 3.54                | 3.40 | 0.14                     | 24.10          | 0.66                   | 1.21   | 1.30   | 1.23   |
| 950.00          | 3.63                | 3.46 | 0.16                     | 22.90          | 0.63                   | 1.21   | 1.32   | 1.23   |
| 1000.00         | 3.64                | 3.52 | 0.11                     | 21.81          | 0.56                   | 1.20   | 1.35   | 1.23   |

### Typical Performance Data For TCP-2-25

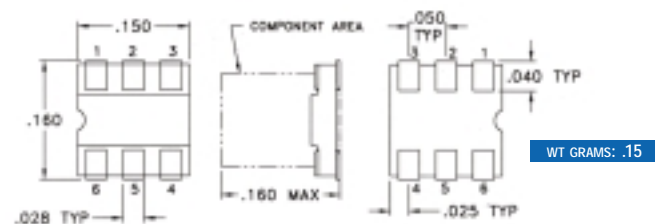
| Frequency (MHz) | Insertion Loss (dB) |      | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|---------------------|------|--------------------------|----------------|------------------------|--------|--------|--------|
|                 | S-1                 | S-2  |                          |                |                        |        |        |        |
| 200.00          | 3.56                | 3.54 | 0.01                     | 16.61          | 0.32                   | 1.96   | 1.54   | 1.53   |
| 346.67          | 3.59                | 3.56 | 0.03                     | 17.48          | 0.54                   | 1.94   | 1.55   | 1.54   |
| 640.00          | 3.70                | 3.61 | 0.08                     | 18.59          | 0.87                   | 1.90   | 1.62   | 1.68   |
| 1080.00         | 3.73                | 3.54 | 0.19                     | 20.91          | 1.22                   | 1.85   | 1.68   | 1.60   |
| 1373.33         | 3.78                | 3.52 | 0.26                     | 22.17          | 1.46                   | 1.77   | 1.73   | 1.62   |
| 1520.00         | 3.74                | 3.45 | 0.29                     | 22.38          | 1.52                   | 1.73   | 1.73   | 1.63   |
| 1813.33         | 3.75                | 3.39 | 0.35                     | 21.59          | 1.72                   | 1.57   | 1.77   | 1.63   |
| 2106.67         | 3.78                | 3.39 | 0.39                     | 19.71          | 1.96                   | 1.44   | 1.81   | 1.67   |
| 2400.00         | 3.78                | 3.38 | 0.40                     | 17.51          | 2.42                   | 1.23   | 1.90   | 1.75   |
| 2523.08         | 3.83                | 3.44 | 0.39                     | 16.64          | 2.60                   | 1.19   | 1.88   | 1.74   |

| PIN CONFIGURATIONS | TCP-2-10            | TCP-2-10-75 | TCP-2-25 |
|--------------------|---------------------|-------------|----------|
| SUM PORT           | 6                   | 6           | 6,5,2    |
| PORT 1             | 3                   | 3           | 3        |
| PORT 2             | 4                   | 4           | 4        |
| GROUND             | 1                   | 1           | 1        |
| SHORT              | 2,5                 | 2,5         | -        |
| RESISTOR:          | 100Ω 3,4            | 150Ω 3,4    | 475Ω 3,4 |
| CAPACITOR 1.5pF    | 2 To GND / 5 To GND | 5 To GND    | -        |

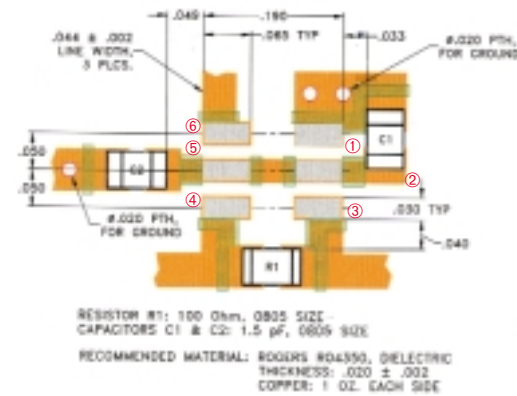
Operating Temperature: -20°C to 85°C, Storage Temperature: -55°C to 100°C

### CASE STYLE DRAWINGS & DIMENSIONS (INCH)

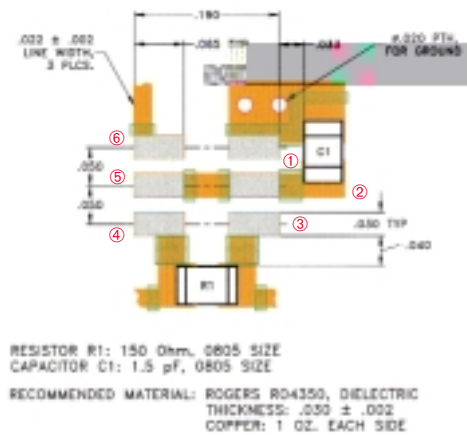
CASE STYLE DB714



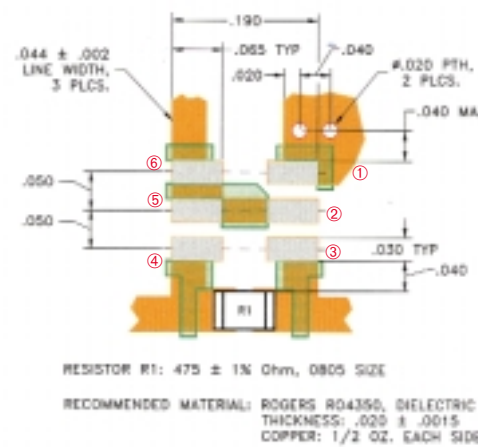
### SUGGESTED PCB LAYOUT FOR TCP-2-10



### SUGGESTED PCB LAYOUT FOR TCP-2-10-75



### SUGGESTED PCB LAYOUT FOR TCP-2-25



- DENOTES METALLIZATION
- DENOTES SOLDER MASK
- DENOTES METALLIZATION FOR DEVICE SOLDERING

Fig. 6

# POWER SPLITTERS



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