

Ultra-Small Ceramic Power Splitter/Combiner

SCN-2-15+ SCN-2-15

2 Way-0° 50Ω

1100 to 1450 MHz



CASE STYLE: FV1206-1
PRICE: \$ 2.50 ea. QTY (10-49)
\$ 0.99 ea. QTY (100)

Maximum Ratings

| | |
|-----------------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 20W* max. |

*derate linearly to 6W at 100°C ambient.

Pin Connections

| | |
|----------|----------------------------|
| SUM PORT | 2 |
| PORT 1 | 6 |
| PORT 2 | 4 |
| GROUND | 1,3,5 |
| PORT 1-2 | resistor external 100 OHMS |

Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.4 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- excellent phase unbalance, 1.5 deg. typ.
- high isolation, 25 dB typ.
- excellent power handling, 20W as splitter
- small size, 0.12"X0.06"X0.035"
- ESD non-sensitive
- temperature stable LTCC technology
- wrap around terminations for excellent solderability
- low cost
- patent pending

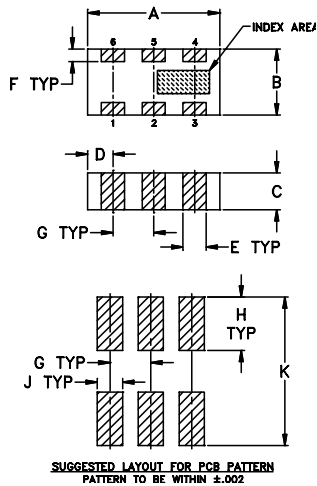
Applications

- satellite distribution
- GPS

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

See our web site for RoHS Compliance methodologies and qualifications.

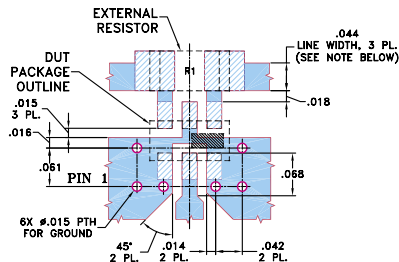
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | wt |
|------|------|------|------|------|------|------|------|------|------|-------|
| .126 | .063 | .037 | .024 | .022 | .012 | .039 | .042 | .024 | .123 | grams |
| 3.20 | 1.60 | 0.94 | 0.61 | 0.56 | 0.30 | 0.99 | 1.07 | 0.61 | 3.12 | .020 |

Demo Board MCL P/N: TB-252 Suggested PCB Layout (PL-129)



- NOTE:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

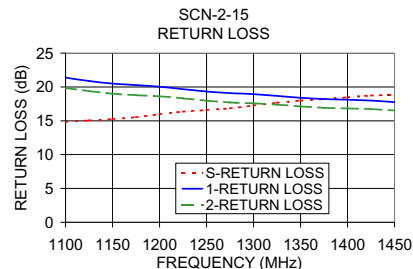
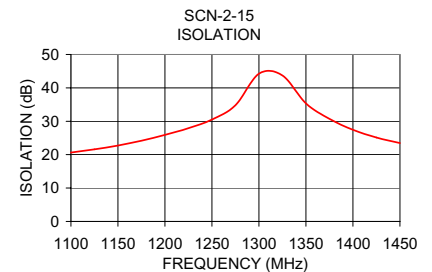
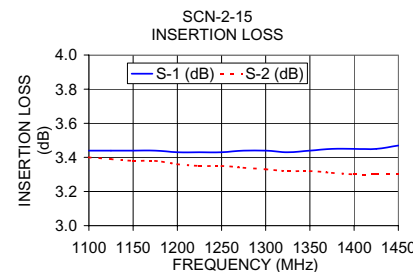
- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Splitter Electrical Specifications

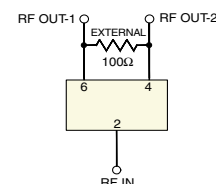
| MODEL NO. | FREQUENCY (MHz) | INSERTION LOSS (dB) | | ISOLATION (dB) | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) | | RETURN LOSS (dB) | | | |
|-------------|------------------------|---------------------|-----------|----------------|---------------------------|--------------------------|-----------|------------------|------------|-------------|------|
| | | ABOVE 3.0 dB | Typ. Max. | | | Typ. Min. | Typ. Max. | Typ. Max. | INPUT Typ. | OUTPUT Typ. | |
| SCN-2-15(+) | 1100-1450 1200-1375 | 0.5 | 0.8 | 23 | 17 | 1.5 | 3.0 | 0.25 | 0.4 | 15 | 17.5 |
| | | 0.4 | 0.7 | | | 25 | 20 | 1.5 | 3.0 | 0.2 | 0.3 |

Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | Return Loss (dB) | | |
|-----------------|---------------------|------|--------------------------|----------------|------------------------|------------------|-------|-------|
| | S-1 | S-2 | | | | S | 1 | 2 |
| 1100 | 3.44 | 3.40 | 0.04 | 20.64 | 0.93 | 14.81 | 21.38 | 19.84 |
| 1125 | 3.44 | 3.39 | 0.05 | 21.59 | 0.94 | 15.05 | 20.89 | 19.39 |
| 1150 | 3.44 | 3.38 | 0.06 | 22.71 | 0.95 | 15.24 | 20.50 | 19.00 |
| 1175 | 3.44 | 3.38 | 0.06 | 24.17 | 0.97 | 15.54 | 20.27 | 18.79 |
| 1200 | 3.43 | 3.36 | 0.07 | 25.92 | 1.01 | 15.97 | 20.03 | 18.62 |
| 1225 | 3.43 | 3.35 | 0.08 | 27.91 | 1.02 | 16.34 | 19.67 | 18.31 |
| 1250 | 3.43 | 3.35 | 0.08 | 30.52 | 1.05 | 16.58 | 19.32 | 17.96 |
| 1275 | 3.44 | 3.34 | 0.10 | 34.80 | 1.07 | 16.85 | 19.09 | 17.72 |
| 1300 | 3.44 | 3.33 | 0.11 | 44.22 | 1.10 | 17.25 | 18.93 | 17.59 |
| 1325 | 3.43 | 3.32 | 0.11 | 43.71 | 1.11 | 17.66 | 18.69 | 17.39 |
| 1350 | 3.44 | 3.32 | 0.12 | 35.34 | 1.15 | 17.98 | 18.41 | 17.12 |
| 1375 | 3.45 | 3.31 | 0.14 | 30.72 | 1.17 | 18.20 | 18.21 | 16.91 |
| 1400 | 3.45 | 3.30 | 0.15 | 27.43 | 1.18 | 18.46 | 18.11 | 16.83 |
| 1425 | 3.45 | 3.30 | 0.15 | 25.13 | 1.20 | 18.73 | 17.98 | 16.74 |
| 1450 | 3.47 | 3.30 | 0.17 | 23.47 | 1.25 | 18.83 | 17.75 | 16.53 |



electrical schematic



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