

Surface Mount

Power Splitter/Combiner

WP4W+

4 Way-0° 50Ω 3300 to 3800 MHz

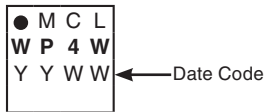
Maximum Ratings

| | |
|---|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -65°C to 150°C |
| Power Input (as a splitter) | 1.5W max. |
| Internal Dissipation | 0.375W max. |
| Permanent damage may occur if any of these limits are exceeded. | |

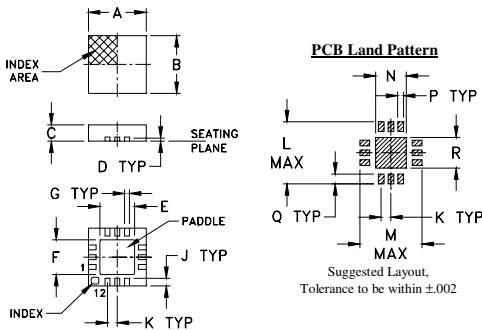
Pad Connections

| | |
|----------|------------------------|
| SUM PORT | 2 |
| PORT 1 | 12 |
| PORT 2 | 10 |
| PORT 3 | 6 |
| PORT 4 | 4 |
| GROUND | 1,3,5,7,8,9,11, paddle |

Product Marking



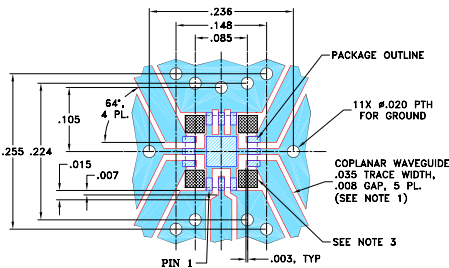
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | | | |
|------|------|------|------|------|------|------|-----|-------|
| A | B | C | D | E | F | G | H | J |
| .118 | .118 | .035 | .008 | .057 | .057 | .009 | --- | .016 |
| 3.00 | 3.00 | 0.89 | 0.20 | 1.45 | 1.45 | 0.23 | --- | 0.41 |
| K | L | M | N | P | Q | R | | wt |
| .020 | .127 | .127 | .049 | .010 | .020 | .049 | | grams |
| 0.51 | 3.23 | 3.23 | 1.24 | 0.25 | 0.51 | 1.24 | | 0.02 |

Demo Board MCL P/N: TB-395+ Suggested PCB Layout (PL-259)



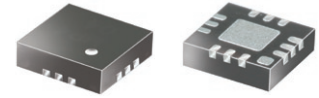
- NOTES:
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 - SIGNAL TRACES ARE NOT ALLOWED INSIDE HATCHED AREAS (APPROX. .030 X .030) AT 4 PLACES AS SHOWN.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- excellent isolation, 26 dB typ.
- good phase unbalance, 2 deg. typ.
- good amplitude unbalance, 0.15 dB typ.
- small size, .118" x .118" x .035"
- high ESD level
- aqueous washable

Applications

- WIMAX



CASE STYLE: DQ1225
PRICE: \$1.39 ea. QTY. (25)

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

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

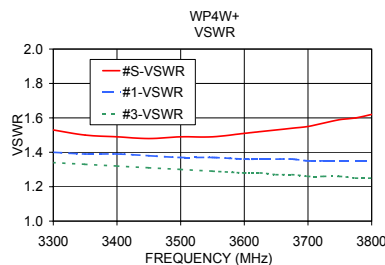
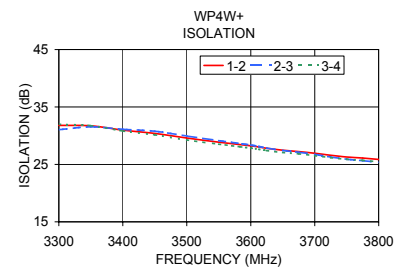
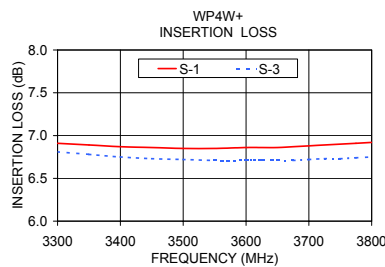
Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION (dB) | | INSERTION LOSS* (dB) ABOVE 6.0 dB | | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) | VSWR (:1) Typ. | |
|-------------------|----------------|------|-----------------------------------|------|---------------------------|--------------------------|----------------|---------------|
| | Typ. | Min. | Typ. | Max. | | | Port S | Ports 1,2,3,4 |
| 3300-3800 | 26 | 18 | 0.8 | 1.4 | 8 | 0.4 | 1.5 | 1.3 |

*Includes test fixture loss, 0.27 dB typ.

Typical Performance Data

| Freq. (MHz) | Insertion Loss (dB) | | | | Amp. Unbal. (dB) | Isolation (dB) | | | Phase Unbal. (deg.) | VSWR S | VSWR 1 | VSWR 2 | VSWR 3 | VSWR 4 |
|-------------|---------------------|------|------|------|------------------|----------------|-------|-------|---------------------|--------|--------|--------|--------|--------|
| | S-1 | S-2 | S-3 | S-4 | | 1-2 | 2-3 | 3-4 | | | | | | |
| 3300.00 | 6.91 | 6.88 | 6.81 | 6.88 | 0.10 | 31.79 | 31.04 | 31.98 | 0.99 | 1.53 | 1.40 | 1.32 | 1.34 | 1.41 |
| 3350.00 | 6.89 | 6.85 | 6.78 | 6.86 | 0.11 | 31.72 | 31.54 | 31.75 | 1.00 | 1.50 | 1.39 | 1.31 | 1.33 | 1.40 |
| 3400.00 | 6.87 | 6.82 | 6.75 | 6.84 | 0.12 | 30.97 | 31.12 | 30.82 | 1.02 | 1.49 | 1.39 | 1.30 | 1.32 | 1.40 |
| 3450.00 | 6.86 | 6.80 | 6.73 | 6.83 | 0.13 | 30.39 | 30.78 | 30.15 | 1.19 | 1.48 | 1.38 | 1.29 | 1.31 | 1.39 |
| 3500.00 | 6.85 | 6.79 | 6.72 | 6.83 | 0.13 | 29.59 | 29.95 | 29.26 | 1.36 | 1.49 | 1.37 | 1.28 | 1.30 | 1.38 |
| 3550.00 | 6.85 | 6.77 | 6.71 | 6.83 | 0.14 | 28.87 | 29.14 | 28.52 | 1.57 | 1.49 | 1.37 | 1.27 | 1.29 | 1.38 |
| 3600.00 | 6.86 | 6.77 | 6.71 | 6.83 | 0.15 | 28.23 | 28.36 | 27.83 | 1.74 | 1.51 | 1.36 | 1.26 | 1.28 | 1.38 |
| 3625.00 | 6.86 | 6.77 | 6.71 | 6.84 | 0.15 | 27.81 | 27.84 | 27.41 | 1.83 | 1.52 | 1.36 | 1.26 | 1.28 | 1.37 |
| 3650.00 | 6.86 | 6.77 | 6.71 | 6.84 | 0.16 | 27.47 | 27.42 | 27.07 | 1.94 | 1.53 | 1.36 | 1.25 | 1.27 | 1.37 |
| 3675.00 | 6.87 | 6.77 | 6.71 | 6.85 | 0.16 | 27.23 | 27.11 | 26.84 | 2.02 | 1.54 | 1.36 | 1.25 | 1.27 | 1.37 |
| 3700.00 | 6.88 | 6.78 | 6.72 | 6.86 | 0.16 | 26.94 | 26.74 | 26.53 | 2.09 | 1.55 | 1.35 | 1.24 | 1.26 | 1.37 |
| 3725.00 | 6.89 | 6.78 | 6.73 | 6.87 | 0.16 | 26.59 | 26.29 | 26.18 | 2.18 | 1.57 | 1.35 | 1.24 | 1.26 | 1.37 |
| 3750.00 | 6.90 | 6.79 | 6.73 | 6.87 | 0.17 | 26.29 | 25.90 | 25.89 | 2.28 | 1.59 | 1.35 | 1.24 | 1.26 | 1.36 |
| 3775.00 | 6.91 | 6.79 | 6.74 | 6.88 | 0.17 | 26.11 | 25.65 | 25.71 | 2.39 | 1.60 | 1.35 | 1.23 | 1.25 | 1.36 |
| 3800.00 | 6.92 | 6.80 | 6.75 | 6.89 | 0.17 | 25.87 | 25.35 | 25.47 | 2.47 | 1.62 | 1.35 | 1.23 | 1.25 | 1.36 |



electrical schematic



ESD Rating

Human Body Model (HBM): Class 1A (250V to < 500V) in accordance with ANSI/ESD STM 5.1 - 2001
Machine Model (MM): Class M2 (100V to < 250V) in accordance with ANSI/ESD STM 5.2 - 1999

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

Rev. A
M112849
MP4-ED-12616A5_(13)
WP4W+
RS/CP/AM
071002