



THE DATASHEET OF BP2U+



Surface Mount

Power Splitter/Combiner

BP2U+

2 Way-0° 50Ω 2100 to 2500 MHz



Generic photo used for illustration purposes only

CASE STYLE: XX211

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 | 0.75W max. |

Pin Connections

| | |
|----------|-----------|
| SUM PORT | 2 |
| PORT 1 | 8 |
| PORT 2 | 5 |
| GROUND | 1,3,4,6,7 |

Features

- low insertion loss, 0.5 dB typ.
- good isolation, 30 dB typ.
- excellent VSWR, 1.10:1 typ.
- excellent power handling, 1.5W
- low profile
- aqueous washable

Applications

- blue tooth
- IEEE 802.11b, g

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost

| Reel Size | Devices/Reel |
|-----------|-----------------------------|
| 7" | 20, 50, 100, 200, 500, 1000 |
| 13" | 2000 |

Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION* (dB) | | INSERTION LOSS (dB) ABOVE 3.0 dB | | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) | VSWR (:1) | |
|-------------------|-----------------|------|----------------------------------|------|---------------------------|--------------------------|-------------|-------------------|
| | Typ. | Min. | Typ. | Max. | | | S-Port Typ. | Output-Ports Typ. |
| f_L - f_U | | | | | Max. | Max. | | |
| 2100-2500 | 30 | 17.5 | 0.5 | 0.8 | 2.0 | 0.2 | 1.10 | 1.10 |

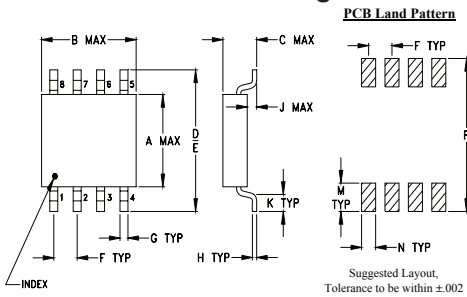
*16.5 over 2100-2150 MHz

Typical Performance Data at 25°C

| Frequency (MHz) | Total Loss ¹ (dB) | | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|------------------------------|------|--------------------------|----------------|------------------------|--------|--------|--------|
| | S-1 | S-2 | | | | | | |
| 2100.00 | 3.43 | 3.35 | 0.08 | 20.75 | 0.41 | 1.06 | 1.19 | 1.22 |
| 2130.00 | 3.44 | 3.36 | 0.08 | 22.09 | 0.40 | 1.04 | 1.16 | 1.19 |
| 2170.00 | 3.45 | 3.36 | 0.09 | 24.25 | 0.41 | 1.02 | 1.13 | 1.16 |
| 2190.00 | 3.45 | 3.36 | 0.09 | 25.58 | 0.41 | 1.02 | 1.11 | 1.14 |
| 2220.00 | 3.46 | 3.37 | 0.09 | 28.05 | 0.40 | 1.02 | 1.09 | 1.12 |
| 2240.00 | 3.46 | 3.37 | 0.10 | 30.06 | 0.39 | 1.03 | 1.08 | 1.10 |
| 2270.00 | 3.47 | 3.37 | 0.10 | 34.12 | 0.37 | 1.05 | 1.06 | 1.09 |
| 2290.00 | 3.48 | 3.37 | 0.10 | 38.10 | 0.34 | 1.07 | 1.06 | 1.08 |
| 2320.00 | 3.48 | 3.38 | 0.11 | 40.95 | 0.32 | 1.09 | 1.05 | 1.07 |
| 2340.00 | 3.49 | 3.38 | 0.11 | 36.83 | 0.32 | 1.10 | 1.06 | 1.07 |
| 2380.00 | 3.51 | 3.39 | 0.11 | 30.95 | 0.33 | 1.13 | 1.08 | 1.08 |
| 2420.00 | 3.52 | 3.40 | 0.12 | 27.16 | 0.31 | 1.16 | 1.11 | 1.11 |
| 2460.00 | 3.54 | 3.42 | 0.12 | 24.56 | 0.28 | 1.19 | 1.15 | 1.14 |
| 2480.00 | 3.55 | 3.43 | 0.13 | 23.63 | 0.27 | 1.21 | 1.17 | 1.16 |
| 2500.00 | 3.56 | 3.43 | 0.13 | 22.75 | 0.23 | 1.23 | 1.19 | 1.17 |

1. Total Loss = Insertion Loss + 3dB splitter loss.

Outline Drawing

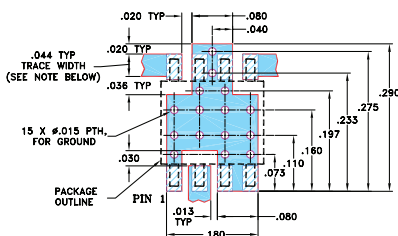


Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G |
|------|------|------|------|------|------|------|
| .163 | .210 | .077 | .250 | .220 | .050 | .017 |
| 4.14 | 5.33 | 1.96 | 6.35 | 5.59 | 1.27 | 0.43 |

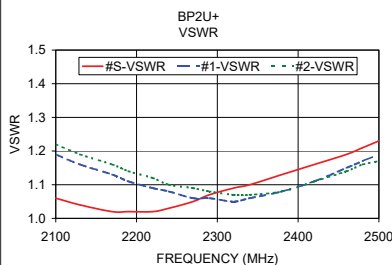
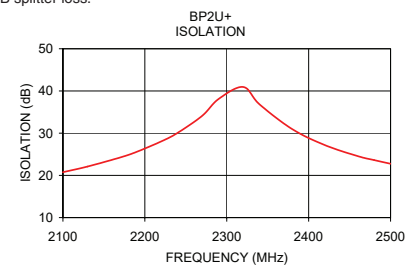
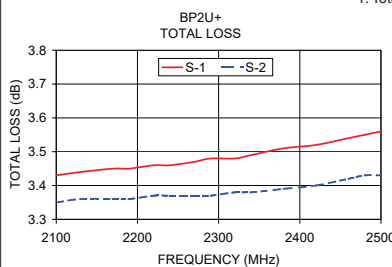
| H | J | K | M | N | P | wt |
|------|------|------|------|------|------|-------|
| .009 | .025 | .030 | .050 | .030 | .270 | grams |
| 0.23 | 0.64 | 0.76 | 1.27 | 0.76 | 6.86 | 0.10 |

Demo Board MCL P/N: TB-37 Suggested PCB Layout (PL-053)

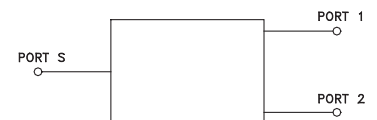


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK



electrical schematic



ESD Rating

Human Body Model (HBM): Class 1A (250 v to <500 v) in accordance with ANSI/ESD STM 5.1 - 2001
Machine Model (MM): Class M1 (<100 v) in accordance with ANSI/ESD STM 5.2 - 1999 (pass 50V)


Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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