

Surface Mount

# Power Splitter/Combiner

## BP2U+

2 Way-0° 50Ω 2100 to 2500 MHz



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

### 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 <sub>L</sub> -f <sub>U</sub>					Max.	Max.		
2100-2500	30	17.5	0.5	0.8	2.0	0.2	1.10	1.10

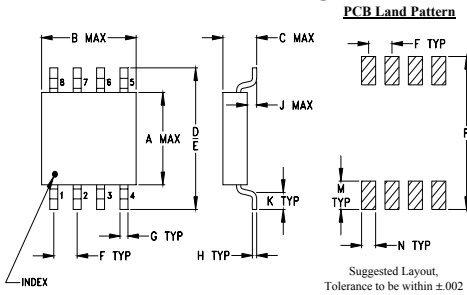
\*16.5 over 2100-2150 MHz

### Typical Performance Data at 25°C

Frequency (MHz)	Total Loss <sup>1</sup> (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



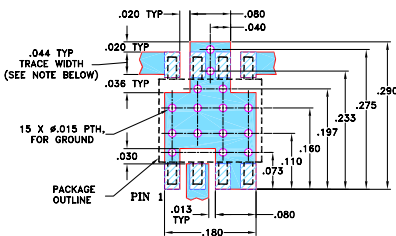
### Outline Dimensions (inch/mm)

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

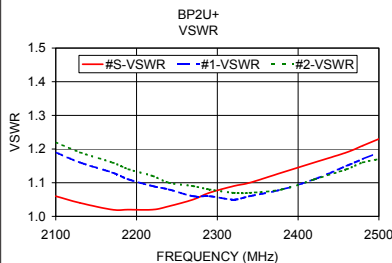
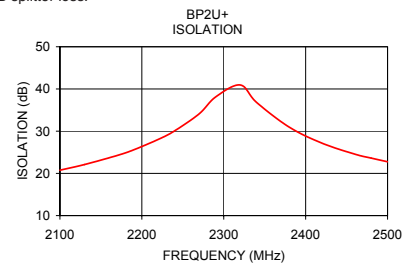
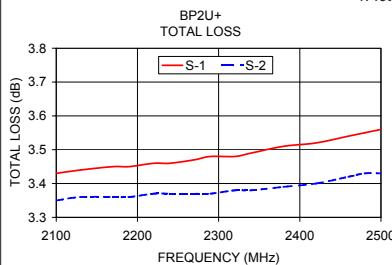
H	J	K	M	N	P	wt
.009	.025	.030	.050	.030	.270	grams
0.23	0.64	0.76	1.27	0.76	6.86	0.10

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

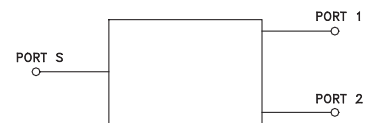


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- 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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