

Surface Mount

# Power Splitter/Combiner

BP2U1+

2 Way-0° 50Ω 1750 to 3000 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.

Permanent damage may occur if any of these limits are exceeded.

## Pin Connections

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

## Features

- wide bandwidth 1750-3000 MHz
- good isolation, 20 dB typ.
- good output VSWR, 1.40:1 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

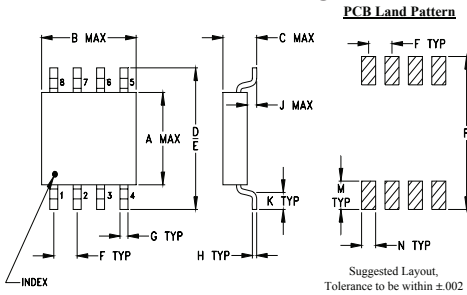
Available Tape and Reel at no extra cost

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.		
1750-3000	20	10	0.5	1.6	4.0	0.4	1.60	1.40

## Outline Drawing



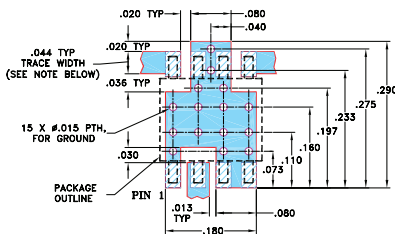
## Outline Dimensions (inch/mm)

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)



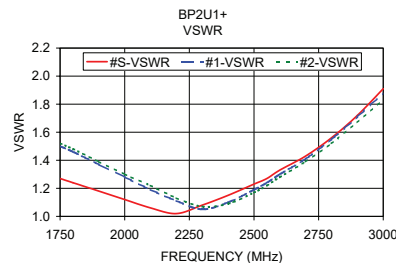
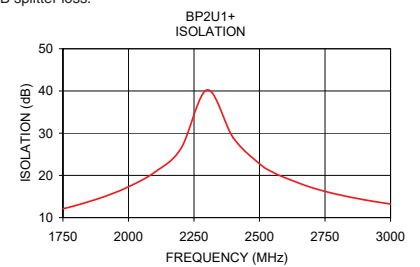
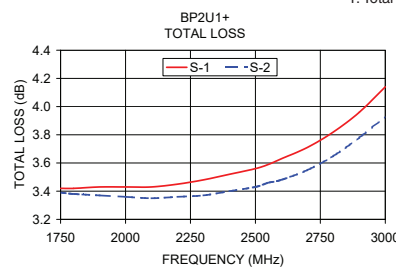
- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

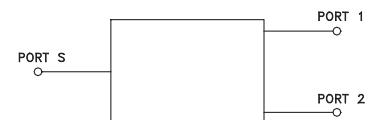
## Typical Performance Data at 25°C

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						
1750.00	3.42	3.39	0.04	12.10	0.48	1.27	1.50	1.52
1800.00	3.42	3.38	0.05	12.89	0.49	1.24	1.46	1.48
1900.00	3.43	3.37	0.06	14.80	0.43	1.18	1.37	1.39
2000.00	3.43	3.36	0.07	17.29	0.45	1.12	1.28	1.30
2100.00	3.43	3.35	0.08	20.75	0.41	1.06	1.19	1.22
2200.00	3.45	3.36	0.09	26.34	0.40	1.02	1.11	1.13
2300.00	3.48	3.37	0.10	40.24	0.32	1.08	1.05	1.07
2400.00	3.52	3.40	0.12	28.92	0.32	1.15	1.10	1.09
2500.00	3.56	3.43	0.13	22.75	0.23	1.23	1.19	1.17
2550.00	3.59	3.46	0.13	20.76	0.14	1.27	1.24	1.22
2600.00	3.63	3.48	0.14	19.38	0.16	1.33	1.30	1.28
2700.00	3.71	3.55	0.16	17.10	0.01	1.43	1.41	1.39
2800.00	3.82	3.65	0.18	15.46	0.01	1.56	1.55	1.52
2900.00	3.96	3.78	0.18	14.21	0.27	1.72	1.71	1.67
3000.00	4.14	3.93	0.21	13.20	0.39	1.91	1.88	1.83

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



## 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-Circuits' applicable established test performance criteria and measurement instructions.
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