



**THE DATASHEET OF
BP4U1+**



Surface Mount Power Splitter/Combiner

BP4U1+

4 Way-0° 50Ω

1850 to 3000 MHz



Generic photo used for illustration purposes only

CASE STYLE: XX211

Maximum Ratings

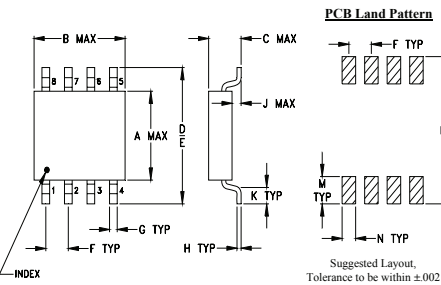
Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
Power Input (as a splitter)	1.5W max.
Internal Dissipation	0.375W max.

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

Pin Connections

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

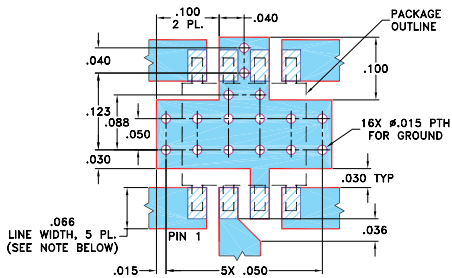
Outline Drawing



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-231 Suggested PCB Layout (PL-113)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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

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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Features

- wide bandwidth, 1850-3000 MHz
- excellent output VSWR, 1.2:1 typ.
- excellent power handling, 1.5W
- aqueous washable

Applications

- blue tooth
- IEEE 802.11b, g

Electrical Specifications

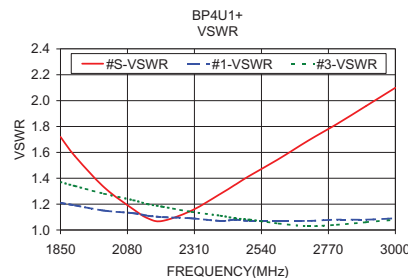
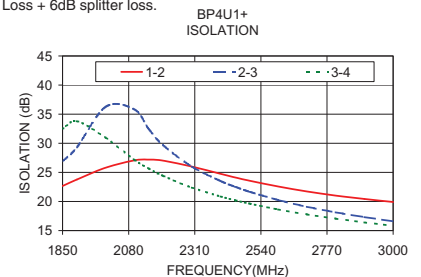
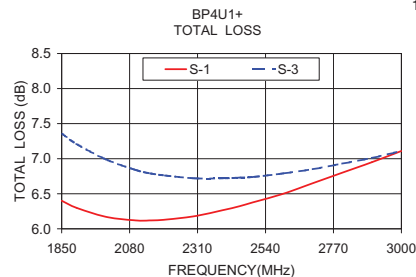
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
	Typ.	Min.	Typ.	Max.			Port S	Ports 1,2,3,4
f_L - f_U					Max.	Max.		
1850-3000	23	15*	0.7	1.7	28	1.3	1.5	1.2

*13 dB above 2600 MHz

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR				
	S-1	S-2	S-3	S-4		1-2	2-3	3-4		S	1	2	3	4
1850.00	6.40	7.28	7.36	7.25	0.96	22.67	26.87	32.49	3.18	1.72	1.21	1.37	1.37	1.43
1900.00	6.30	7.13	7.21	7.12	0.91	23.77	29.31	33.79	4.19	1.57	1.19	1.35	1.34	1.40
2000.00	6.17	6.92	6.99	6.93	0.82	25.80	36.26	30.96	6.17	1.33	1.15	1.29	1.28	1.34
2100.00	6.12	6.78	6.84	6.82	0.72	27.06	35.82	27.14	8.09	1.16	1.13	1.24	1.23	1.30
2150.00	6.12	6.73	6.79	6.79	0.68	27.19	32.42	25.65	9.00	1.09	1.11	1.22	1.20	1.28
2200.00	6.13	6.70	6.76	6.77	0.64	27.02	29.67	24.40	9.88	1.07	1.10	1.20	1.18	1.26
2300.00	6.18	6.67	6.72	6.76	0.58	26.00	26.00	22.39	11.73	1.15	1.09	1.16	1.14	1.23
2400.00	6.27	6.67	6.72	6.79	0.53	24.75	23.51	20.86	13.53	1.28	1.07	1.13	1.11	1.20
2450.00	6.32	6.69	6.73	6.82	0.50	24.13	22.54	20.22	14.49	1.35	1.08	1.11	1.09	1.19
2500.00	6.38	6.70	6.74	6.85	0.47	23.57	21.69	19.64	15.39	1.42	1.07	1.10	1.08	1.17
2600.00	6.50	6.75	6.79	6.93	0.42	22.58	20.26	18.63	17.09	1.55	1.07	1.08	1.05	1.15
2700.00	6.65	6.82	6.85	7.02	0.37	21.72	19.10	17.78	18.77	1.69	1.07	1.06	1.03	1.12
2800.00	6.80	6.89	6.93	7.12	0.33	21.01	18.14	17.05	20.44	1.82	1.08	1.06	1.04	1.11
2900.00	6.95	6.97	7.01	7.22	0.28	20.43	17.32	16.40	22.00	1.96	1.08	1.07	1.06	1.09
3000.00	7.11	7.07	7.11	7.35	0.28	19.91	16.58	15.83	23.61	2.10	1.09	1.09	1.08	1.07

1. Total Loss = Insertion Loss + 6dB 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)



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