

Surface Mount Power Splitter/Combiner

4 Way-0° 50Ω 2100 to 2500 MHz

BP4U+



Generic photo used for illustration purposes only

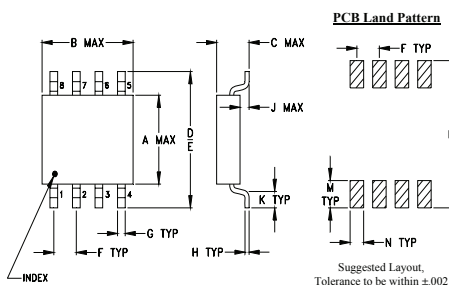
Maximum Ratings

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	3,6,7

Outline Drawing



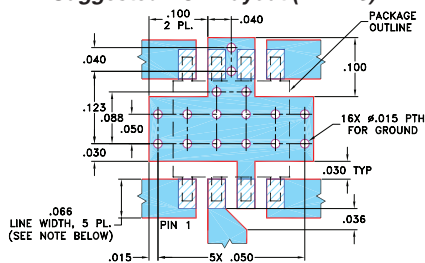
PCB Land Pattern

Suggested Layout,
Tolerance to be within ±0.002

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

Features

- low insertion loss, 0.7 dB typ
- excellent isolation, 23 dB typ.
- excellent VSWR, 1.15:1 typ.
- umplitude unbalance, 0.6 dB typ.
- aqueous washable
- excellent power handling, 1.5W

Applications

- bluetooth
- IEEE 802.11b, g

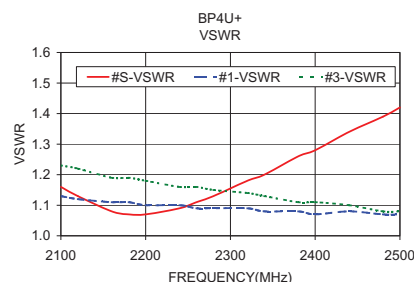
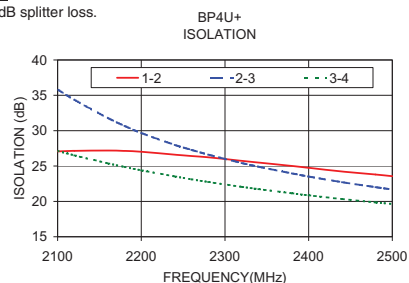
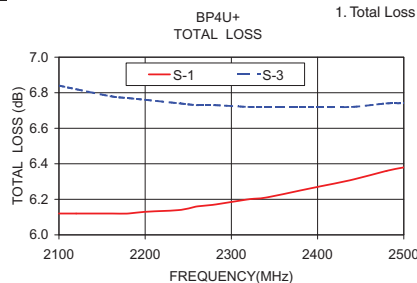
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 6 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (1) Typ.
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.	Ports S Ports 1,2,3,4
2100-2500	23 17	0.7 1.2	20	1.1	1.15 1.15

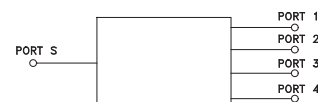
Typical Performance Data

Freq. (MHz)	Total Loss ¹ (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							
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
2120.00	6.12 6.76 6.82 6.80	0.70	27.15 34.37 26.51	8.47	1.13	1.12	1.23	1.22	1.29
2160.00	6.12 6.73 6.78 6.78	0.66	27.19 31.79 25.38	9.15	1.08	1.11	1.21	1.19	1.27
2180.00	6.12 6.72 6.77 6.78	0.65	27.14 30.68 24.87	9.52	1.07	1.11	1.21	1.19	1.27
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
2240.00	6.14 6.69 6.74 6.76	0.62	26.61 27.99 23.53	10.62	1.09	1.10	1.18	1.16	1.24
2260.00	6.16 6.68 6.73 6.76	0.61	26.42 27.29 23.12	11.00	1.11	1.09	1.18	1.16	1.24
2280.00	6.17 6.67 6.73 6.76	0.60	26.23 26.62 22.75	11.37	1.13	1.09	1.17	1.15	1.23
2320.00	6.20 6.67 6.72 6.77	0.57	25.74 25.43 22.06	12.10	1.18	1.09	1.15	1.14	1.22
2340.00	6.21 6.67 6.72 6.77	0.56	25.49 24.91 21.74	12.46	1.20	1.08	1.15	1.13	1.21
2380.00	6.25 6.67 6.72 6.78	0.54	25.01 23.96 21.14	13.17	1.26	1.08	1.13	1.11	1.20
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
2440.00	6.31 6.68 6.72 6.82	0.51	24.23 22.72 20.34	14.30	1.34	1.08	1.12	1.10	1.19
2480.00	6.36 6.70 6.74 6.84	0.48	23.80 22.02 19.86	15.02	1.39	1.07	1.11	1.08	1.17
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

1. Total Loss = Insertion Loss + 6dB splitter loss.



electrical schematic



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.
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