

Surface Mount

Power Splitter/Combiner

4 Way-0° 50Ω 1500 to 2500 MHz

BP4P1+



CASE STYLE: XX211

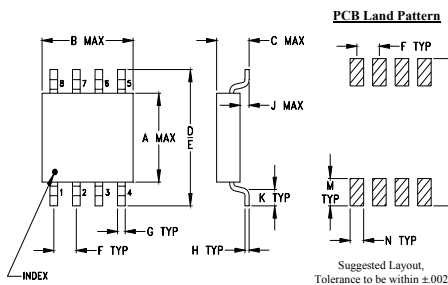
Maximum Ratings

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	3,6,7

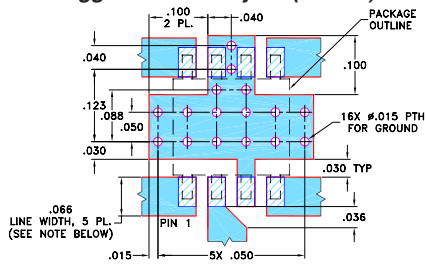
Outline Drawing



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 $0.030" \pm 0.002"$; 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, 0.8 dB typ.
- excellent output VSWR, 1.25:1 typ.
- aqueous washable
- excellent power handling, 1.5W

Applications

- PCS/DCS
- GSM
- WCDMA

Electrical Specifications

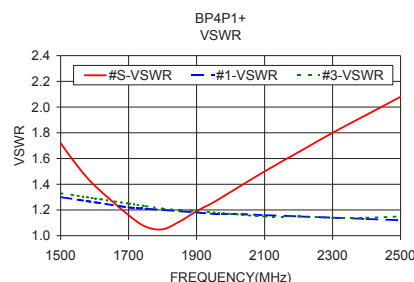
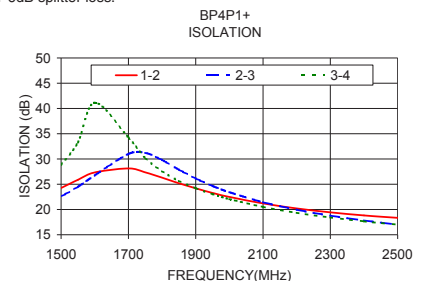
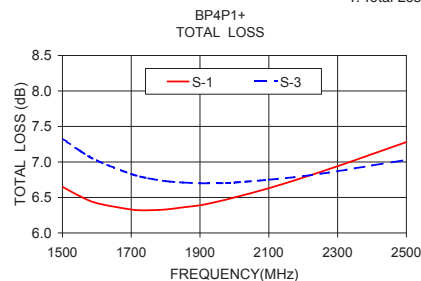
FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 6 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE ^Δ (dB)	VSWR (:1) Typ.
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.	Port S Ports 1,2,3,4
1500-2500	21 15	0.8 1.6	25	0.8	1.6 1.25

^Δ Measurements relative to port 2.

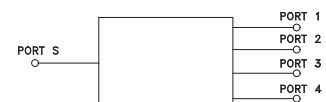
Typical Performance Data

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						
1500.00	6.65	7.15	7.33	7.29	0.69	24.25	22.57	28.84	2.37	1.72	1.30	1.36	1.33	1.40
1550.00	6.52	6.97	7.16	7.12	0.64	25.88	24.50	33.27	3.35	1.54	1.28	1.34	1.31	1.37
1600.00	6.42	6.83	7.02	6.99	0.59	27.33	26.75	41.16	4.36	1.39	1.26	1.32	1.29	1.34
1700.00	6.33	6.65	6.83	6.83	0.50	28.13	31.00	34.24	6.30	1.16	1.22	1.29	1.25	1.30
1750.00	6.32	6.60	6.77	6.79	0.47	27.35	31.21	30.19	7.24	1.07	1.21	1.27	1.23	1.28
1800.00	6.33	6.56	6.73	6.76	0.43	26.31	29.80	27.58	8.19	1.05	1.20	1.26	1.21	1.26
1850.00	6.36	6.54	6.71	6.76	0.40	25.20	27.88	25.67	9.12	1.11	1.19	1.25	1.20	1.24
1900.00	6.39	6.53	6.70	6.76	0.36	24.20	26.14	24.21	10.04	1.19	1.18	1.24	1.19	1.23
1950.00	6.44	6.53	6.70	6.77	0.33	23.27	24.66	23.03	10.95	1.26	1.17	1.23	1.18	1.22
2000.00	6.50	6.55	6.71	6.79	0.30	22.49	23.42	22.06	11.89	1.34	1.17	1.22	1.17	1.20
2100.00	6.63	6.59	6.75	6.86	0.27	21.20	21.44	20.52	13.70	1.50	1.16	1.20	1.15	1.18
2200.00	6.78	6.65	6.80	6.94	0.29	20.21	19.96	19.35	15.49	1.65	1.15	1.19	1.15	1.17
2300.00	6.94	6.72	6.87	7.04	0.32	19.44	18.78	18.42	17.28	1.80	1.14	1.19	1.14	1.15
2400.00	7.11	6.81	6.95	7.14	0.34	18.83	17.82	17.65	19.06	1.94	1.13	1.19	1.14	1.14
2500.00	7.28	6.90	7.03	7.25	0.38	18.35	17.00	16.99	20.86	2.08	1.12	1.19	1.15	1.12

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)

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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