

# Surface Mount Power Splitter/Combiner

4 Way-0° 50Ω 1710 to 1990 MHz

BP4P



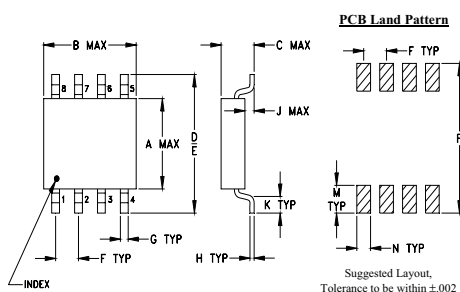
## Maximum Ratings

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.

## Pin Connections

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

## Outline Drawing



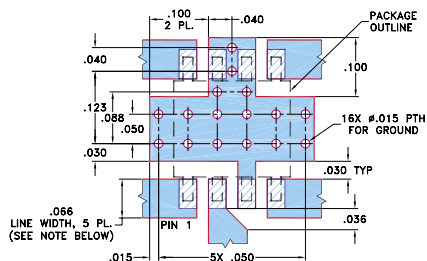
## Outline Dimensions (inch/mm)

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" ± 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.
- aqueous washable

## Applications

- PCS/DCS
- communications systems
- instrumentation

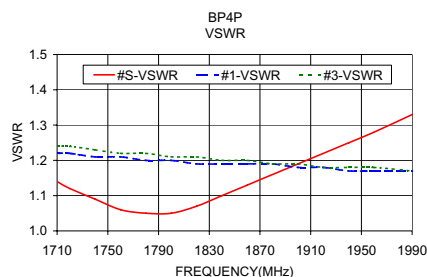
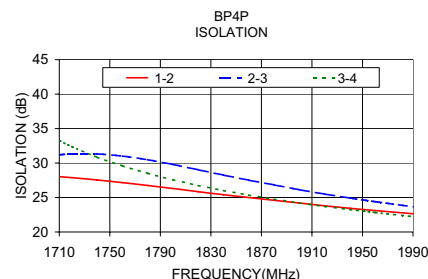
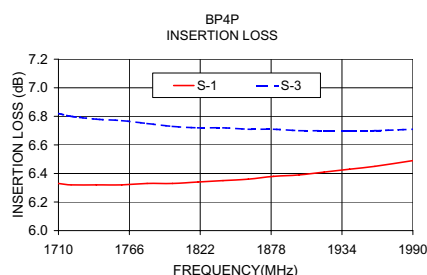
## Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 6.0 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE <sup>2</sup> (dB)	VSWR (:1) Typ.
$f_L$ - $f_U$	Typ. Min.	Typ. Max.	Max.	Max.	Ports S Ports 1,2,3,4
1710-1990	23 19 <sup>1</sup>	0.8 1.3	15	0.5	1.45 1.25

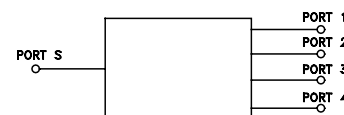
1. 18 dB min. above 1900 MHz.
2. Measurements relative to port 2.

## Typical Performance Data

Freq. (MHz)	Insertion Loss (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						
1710.00	6.33	6.64	6.82	6.82	0.50	28.02	31.20	33.25	6.48	1.14	1.22	1.28	1.24	1.29
1720.00	6.32	6.63	6.80	6.81	0.49	27.88	31.33	32.37	6.67	1.12	1.22	1.28	1.24	1.29
1740.00	6.32	6.61	6.78	6.80	0.48	27.54	31.32	30.86	7.05	1.09	1.21	1.27	1.23	1.28
1760.00	6.32	6.59	6.77	6.78	0.46	27.16	31.01	29.59	7.43	1.06	1.21	1.27	1.22	1.27
1780.00	6.33	6.57	6.75	6.77	0.45	26.75	30.48	28.51	7.82	1.05	1.20	1.26	1.22	1.26
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
1820.00	6.34	6.55	6.72	6.76	0.42	25.85	29.03	26.75	8.56	1.07	1.19	1.25	1.21	1.25
1840.00	6.35	6.54	6.72	6.76	0.41	25.41	28.25	26.01	8.93	1.10	1.19	1.25	1.20	1.24
1860.00	6.36	6.54	6.71	6.76	0.39	25.00	27.52	25.36	9.30	1.13	1.19	1.24	1.20	1.24
1880.00	6.38	6.54	6.71	6.76	0.38	24.59	26.83	24.76	9.67	1.16	1.19	1.24	1.19	1.23
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
1920.00	6.41	6.53	6.70	6.76	0.35	23.80	25.51	23.71	10.41	1.22	1.18	1.23	1.18	1.22
1940.00	6.43	6.53	6.70	6.77	0.34	23.43	24.93	23.25	10.77	1.25	1.17	1.23	1.18	1.22
1960.00	6.45	6.54	6.70	6.78	0.32	23.11	24.40	22.83	11.13	1.28	1.17	1.22	1.18	1.21
1990.00	6.49	6.54	6.71	6.79	0.30	22.65	23.66	22.24	11.70	1.33	1.17	1.22	1.17	1.21



## electrical schematic



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