

Surface Mount Power Splitter/Combiner

BP4C1+

4 Way-0° 50Ω 750 to 1200 MHz



Generic photo used for illustration purposes only

CASE STYLE: XX211

Maximum Ratings

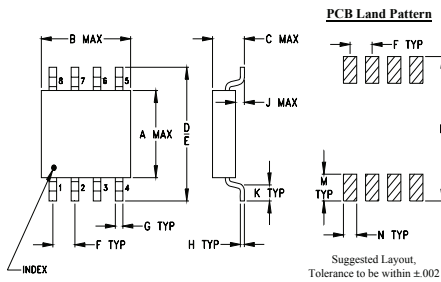
Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
Power Input (as a splitter)	1.5W max.
Internal Dissipation	0.375W max.

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	3,6,7

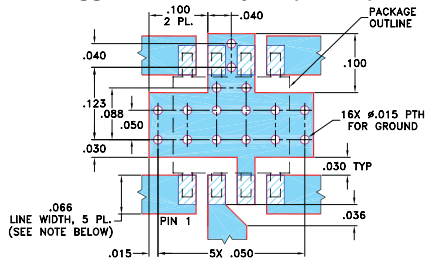
Outline Drawing



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.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"). Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

Features

- excellent isolation, 20 dB typ.
- excellent output VSWR, 1.25:1 typ.
- good power handling, 1.5W as splitter
- aqueous washable

Applications

- cellular
- communications systems
- instrumentation

Electrical Specifications

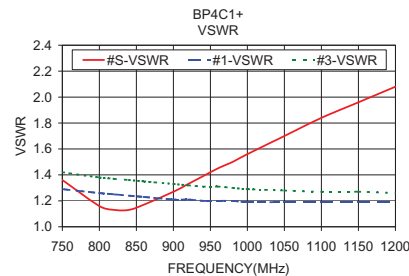
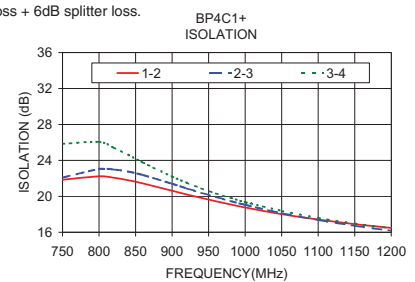
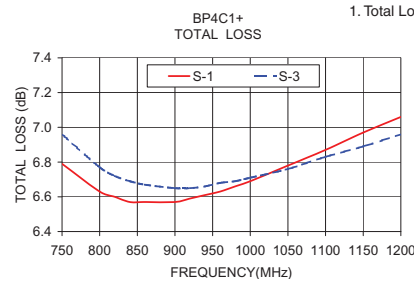
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6 dB*		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
	Typ.	Min.	Typ.	Max.			Port S	Ports 1,2,3,4
f _L -f _U					Max.	Max.		
750-1200	20	13	0.7	1.4	14	0.6	1.5	1.25

* 1.7 dB over 750-800 MHz.

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						
750.00	6.79	6.98	6.96	6.98	0.19	21.85	22.09	25.85	1.62	1.36	1.29	1.42	1.42	1.34
800.00	6.63	6.79	6.77	6.79	0.16	22.23	23.04	26.06	2.29	1.16	1.26	1.39	1.38	1.31
820.00	6.60	6.74	6.72	6.75	0.15	22.07	22.99	25.42	2.57	1.13	1.25	1.37	1.37	1.29
840.00	6.57	6.71	6.69	6.72	0.14	21.79	22.75	24.62	2.97	1.13	1.24	1.36	1.36	1.28
860.00	6.57	6.69	6.67	6.70	0.14	21.44	22.38	23.77	3.38	1.17	1.23	1.35	1.35	1.27
900.00	6.57	6.68	6.65	6.69	0.12	20.62	21.40	22.20	4.16	1.27	1.21	1.33	1.33	1.25
920.00	6.59	6.68	6.65	6.70	0.11	20.21	20.89	21.52	4.54	1.33	1.21	1.33	1.32	1.24
940.00	6.61	6.69	6.66	6.71	0.10	19.82	20.39	20.89	4.93	1.39	1.20	1.32	1.31	1.24
960.00	6.63	6.70	6.68	6.72	0.09	19.45	19.93	20.33	5.31	1.45	1.20	1.31	1.31	1.23
980.00	6.66	6.72	6.69	6.74	0.08	19.10	19.48	19.83	5.68	1.50	1.20	1.31	1.30	1.23
1000.00	6.69	6.74	6.71	6.76	0.07	18.76	19.06	19.36	6.05	1.56	1.19	1.30	1.29	1.22
1050.00	6.78	6.80	6.76	6.83	0.06	18.02	18.13	18.39	6.97	1.70	1.19	1.29	1.28	1.22
1100.00	6.87	6.86	6.83	6.90	0.07	17.42	17.37	17.61	7.87	1.84	1.19	1.28	1.27	1.22
1150.00	6.97	6.93	6.89	6.97	0.08	16.91	16.72	16.98	8.75	1.96	1.19	1.28	1.27	1.22
1200.00	7.06	7.00	6.96	7.05	0.11	16.49	16.17	16.44	9.62	2.08	1.19	1.28	1.26	1.22

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)