

Surface Mount

Power Splitter/Combiner

4 Way-0° 50Ω

810 to 960 MHz

BP4C+



CASE STYLE: XX211

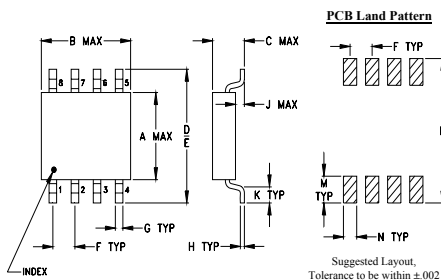
Maximum Ratings

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

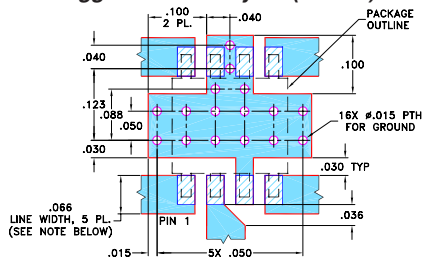
Outline Drawing



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

Features

- excellent isolation, 22 dB typ.
- excellent output VSWR, 1.25:1 typ.
- excellent amplitude unbalance, 0.15 dB typ.
- aqueous washable
- excellent power handling, 1.5W

Applications

- cellular
- communications systems
- instrumentation

Electrical Specifications

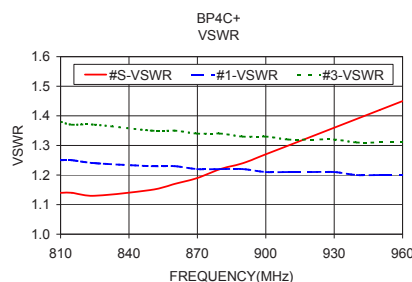
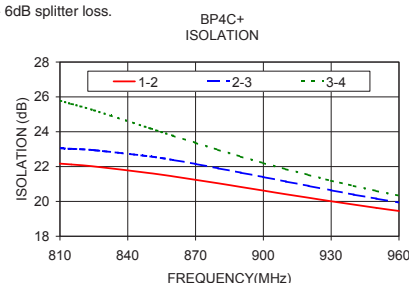
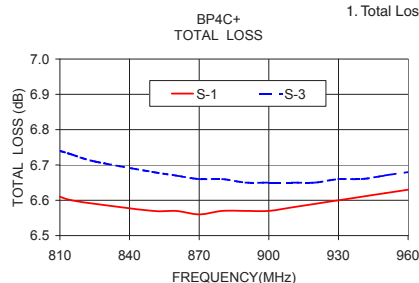
FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 6 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.	Port S Ports 1,2,3,4
810-960	22 18*	0.7 1.6	8	0.6	1.35 1.25

*17 dB min. above 900 MHz.

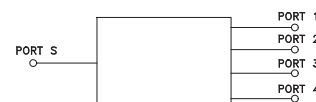
Typical Performance Data

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						
810.00	6.61	6.76	6.74	6.77	0.16	22.17	23.05	25.78	2.43	1.14	1.25	1.38	1.38	1.30
815.00	6.60	6.75	6.73	6.76	0.16	22.12	23.02	25.60	2.50	1.14	1.25	1.38	1.37	1.30
825.00	6.59	6.73	6.71	6.74	0.15	22.01	22.94	25.23	2.66	1.13	1.24	1.37	1.37	1.29
850.00	6.57	6.70	6.68	6.71	0.14	21.62	22.58	24.19	3.17	1.15	1.23	1.36	1.35	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
870.00	6.56	6.68	6.66	6.70	0.13	21.24	22.15	23.36	3.57	1.19	1.22	1.35	1.34	1.27
880.00	6.57	6.68	6.66	6.69	0.13	21.04	21.90	22.96	3.77	1.22	1.22	1.34	1.34	1.26
890.00	6.57	6.68	6.65	6.69	0.12	20.83	21.65	22.57	3.97	1.24	1.22	1.34	1.33	1.26
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
910.00	6.58	6.68	6.65	6.69	0.11	20.41	21.14	21.85	4.35	1.30	1.21	1.33	1.32	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
930.00	6.60	6.69	6.66	6.70	0.10	20.01	20.64	21.19	4.73	1.36	1.21	1.32	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
950.00	6.62	6.70	6.67	6.71	0.09	19.63	20.16	20.60	5.13	1.42	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

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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' 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



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. C
M151107
ED-12348C/7+
BP4C+
RS/TD/CP/AM
150619