

Surface Mount

# Power Splitter/Combiner

## BP2C1+

2 Way-0° 50Ω 650 to 1100 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	0.75W max.
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

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

### Features

- low insertion loss, 0.4 dB typ.
- high isolation, 20 dB typ.
- excellent output VSWR, 1.25:1 typ.
- excellent power handling, 1.5W
- excellent repeatability
- low profile
- aqueous washable

### Applications

- cellular
- GSM
- PDC
- CDMA

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

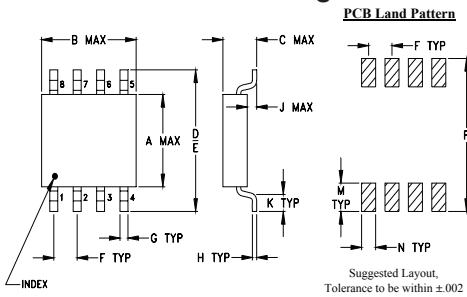
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000
13"	2000

### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)	
	Typ.	Min.	Typ.	Max.			S-Port Typ.	Output-Ports Typ.
$f_L$ - $f_U$					Max.	Max.		
650-1100	20	10	0.4	1.2	3.0	0.2	1.35	1.25

### 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

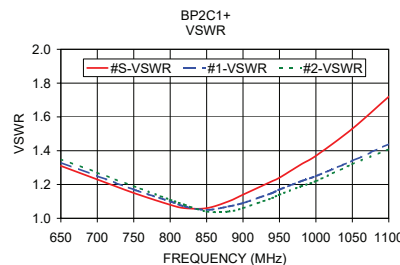
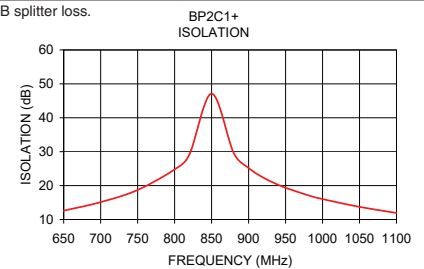
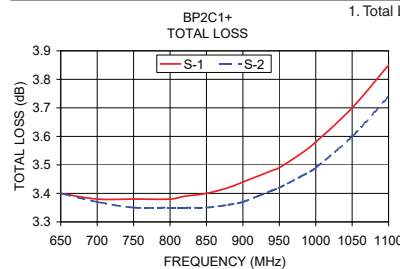
  

H	J	K	M	N	P	wt
.009	.025	.030	.050	.030	.270	grams
0.23	0.64	0.76	1.27	0.76	6.86	0.10

### Typical Performance Data at 25°C

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
650.00	3.40	3.40	0.00	12.60	0.51	1.31	1.33	1.35
700.00	3.38	3.37	0.01	15.11	0.51	1.23	1.25	1.27
750.00	3.38	3.35	0.02	18.71	0.53	1.15	1.17	1.19
800.00	3.38	3.35	0.03	24.78	0.57	1.08	1.10	1.11
820.00	3.39	3.35	0.04	29.19	0.58	1.06	1.07	1.08
850.00	3.40	3.35	0.05	47.12	0.60	1.06	1.05	1.04
880.00	3.42	3.36	0.06	29.54	0.62	1.10	1.07	1.04
900.00	3.44	3.37	0.06	25.19	0.62	1.14	1.09	1.06
920.00	3.46	3.39	0.07	22.35	0.63	1.18	1.12	1.09
940.00	3.48	3.41	0.07	20.24	0.65	1.22	1.15	1.12
950.00	3.49	3.42	0.07	19.36	0.66	1.24	1.17	1.14
980.00	3.54	3.46	0.08	17.19	0.68	1.32	1.22	1.19
1000.00	3.58	3.49	0.08	16.03	0.69	1.37	1.25	1.22
1050.00	3.70	3.60	0.10	13.71	0.71	1.53	1.34	1.32
1100.00	3.85	3.74	0.11	11.94	0.72	1.72	1.44	1.41

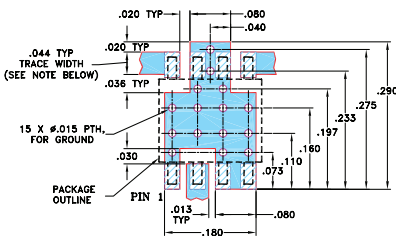
1. Total Loss = Insertion Loss + 3dB splitter loss.



### electrical schematic



### Demo Board MCL P/N: TB-37 Suggested PCB Layout (PL-053)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". 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

### ESD Rating

Human Body Model (HBM): Class 0 (<250V) in accordance with ANSI/ESD STM 5.1 - 2001  
Machine Model (MM): Class M1 (<100V) 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-Circuit's applicable established test performance criteria and measurement instructions.  
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