

Surface Mount

# Power Splitter/Combiner

2 Way-0° 50Ω 1400 to 2350 MHz

BP2P1+



Generic photo used for illustration purposes only

CASE STYLE: XX211

**+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

## 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, 0.5 dB typ.
- high isolation, 20 dB typ.
- good output VSWR, 1.35:1 typ.
- excellent power handling, 1.5W
- excellent repeatability
- low profile
- aqueous washable

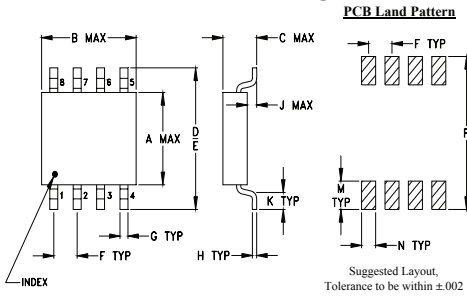
## Applications

- PCS/DCS
- GSM
- WCDMA

## 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 <sub>L</sub> -f <sub>U</sub>					Max.	Max.		
1400-2350	20	10	0.5	1.3	4.0	0.3	1.55	1.35

## Outline Drawing



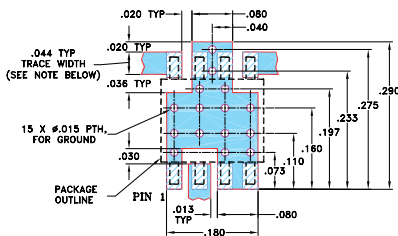
## Outline Dimensions (inch/mm)

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-37 Suggested PCB Layout (PL-053)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B 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

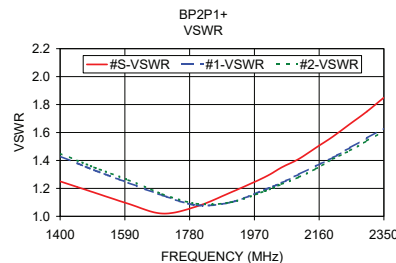
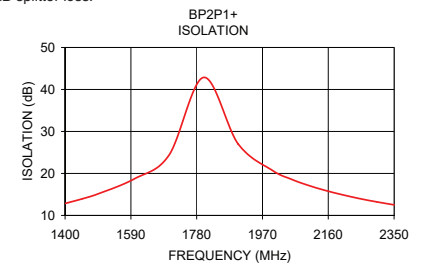
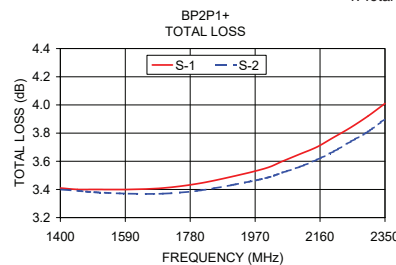
## Notes

- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

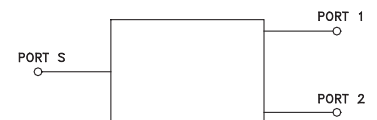
## Typical Performance Data at 25°C

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						
1400.00	3.41	3.40	0.01	12.85	0.10	1.25	1.43	1.45
1450.00	3.40	3.39	0.01	13.97	0.10	1.21	1.38	1.40
1500.00	3.40	3.38	0.02	15.28	0.08	1.17	1.33	1.35
1600.00	3.40	3.37	0.03	18.71	0.03	1.09	1.24	1.26
1700.00	3.41	3.37	0.04	24.36	0.00	1.02	1.15	1.16
1800.00	3.44	3.39	0.05	42.86	0.05	1.07	1.08	1.09
1900.00	3.49	3.43	0.06	27.01	0.10	1.17	1.10	1.10
2000.00	3.55	3.48	0.07	20.65	0.16	1.28	1.19	1.18
2050.00	3.60	3.52	0.08	18.73	0.20	1.35	1.24	1.23
2100.00	3.65	3.56	0.08	17.22	0.22	1.41	1.30	1.28
2150.00	3.70	3.61	0.09	15.98	0.29	1.49	1.36	1.34
2200.00	3.77	3.67	0.10	14.94	0.33	1.57	1.42	1.41
2250.00	3.84	3.74	0.10	14.02	0.39	1.66	1.49	1.47
2300.00	3.92	3.81	0.11	13.23	0.44	1.75	1.56	1.54
2350.00	4.01	3.90	0.12	12.53	0.49	1.85	1.63	1.61

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



## electrical schematic



## 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)

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