

# Surface Mount Power Splitter/Combiner

## SBB-2-10+ SBB-2-10

2 Way-0° 50Ω 800 to 1000 MHz

### Maximum Ratings

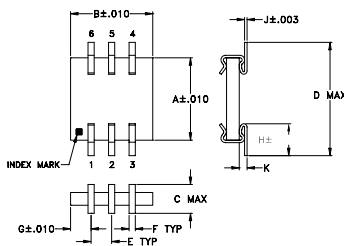
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.25W max.

Permanent damage may occur if any of these limits are exceeded.

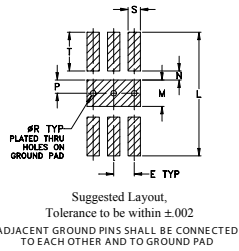
### Pin Connections

SUMPORT	2
PORT 1	6
PORT 2	4
GROUND	1,3,5

### Outline Drawing



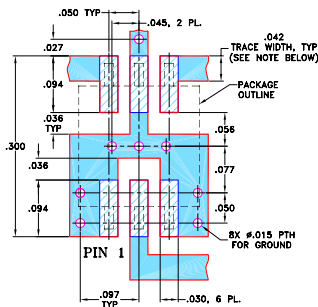
### PCB Land Pattern



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K
.200	.200	.070	.275	.050	.015	.050	.085	.006	.019
5.08	5.08	1.78	6.99	1.27	0.38	1.27	2.16	0.15	0.48
L	M	N	P	Q	R	S	T	wt	
.300	.064	.022	.032	-.014	.030	.094		grams	
7.62	1.63	0.56	0.81	-.36	0.76	2.39		0.1	

### Demo Board MCL P/N: TB-156 Suggested PCB Layout (PL-003)



- NOTES:
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - 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

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- very stable performance over temp. range
- excellent insertion loss, 0.6 dB typ.
- excellent isolation, 24 dB typ.
- solder plated leads for excellent solderability and strain relief
- small size, 0.2"X0.275"X0.07"
- very low cost
- aqueous washable
- protected by U.S Patent, 6,819,202

### Applications

- cellular/TDMA/CDMA
- ISM

### Electrical Specifications

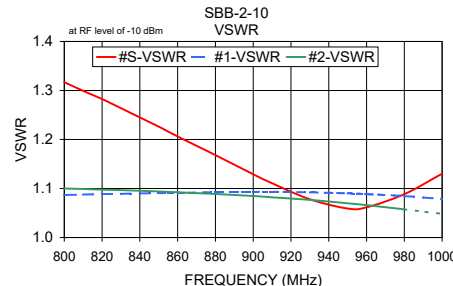
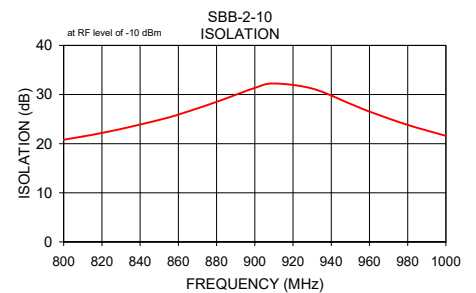
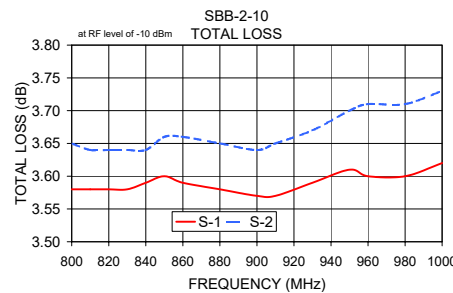
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS <sup>1</sup> (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
f <sub>L</sub> -f <sub>U</sub>	24	15	0.6	1.2	3.0	0.3
800-1000						

1. Includes test fixture losses

### Typical Performance Data

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						
800.00	3.58	3.65	0.07	20.80	0.05	1.32	1.09	1.10
810.00	3.58	3.64	0.06	21.46	0.05	1.30	1.09	1.10
820.00	3.58	3.64	0.06	22.19	0.09	1.28	1.09	1.10
830.00	3.58	3.64	0.06	22.99	0.07	1.26	1.09	1.10
840.00	3.59	3.64	0.05	23.89	0.05	1.25	1.09	1.10
850.00	3.60	3.66	0.06	24.83	0.05	1.23	1.09	1.09
860.00	3.59	3.66	0.07	25.92	0.02	1.21	1.09	1.09
880.00	3.58	3.65	0.07	28.51	0.04	1.17	1.09	1.09
900.00	3.57	3.64	0.08	31.35	0.08	1.13	1.09	1.08
910.00	3.57	3.65	0.08	32.24	0.09	1.11	1.09	1.08
930.00	3.59	3.67	0.07	31.22	0.02	1.08	1.09	1.08
950.00	3.61	3.70	0.09	28.11	0.01	1.06	1.09	1.07
960.00	3.60	3.71	0.11	26.53	0.06	1.06	1.09	1.07
980.00	3.60	3.71	0.11	23.82	0.00	1.09	1.08	1.06

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



### electrical schematic



Generic photo used for illustration purposes only

CASE STYLE: SM31

### +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
13"	500, 1000

