

Surface Mount Power Splitter/Combiner

SBB-2-18+ SBB-2-18

2 Way-0° 50Ω 1425 to 1800 MHz



CASE STYLE: SM31

+RoHS Compliant

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

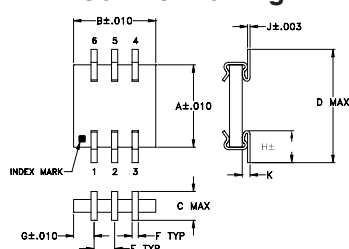
Maximum Ratings

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.	

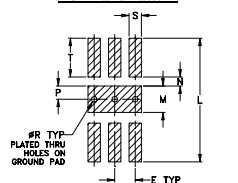
Pin Connections

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

Outline Drawing



PCB Land Pattern

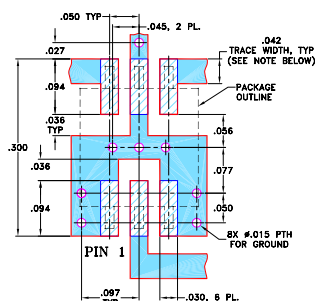


Suggested Layout,
Tolerance to be within ±002
ADJACENT GROUND PINS SHALL BE CONNECTED
TO EACH OTHER AND TO GROUND PAD

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	—	0.36	0.76	2.39	grams	0.1

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



- NOTES: 1. 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.
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

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

Features

- very stable performance over temp. range
- excellent insertion loss, 0.6 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

- GPS
- aeronautical

Electrical Specifications

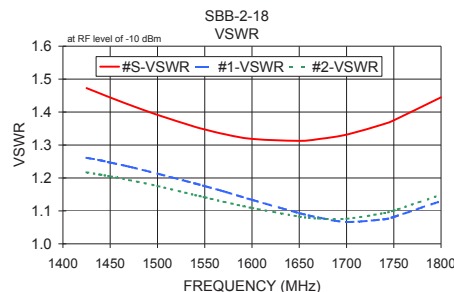
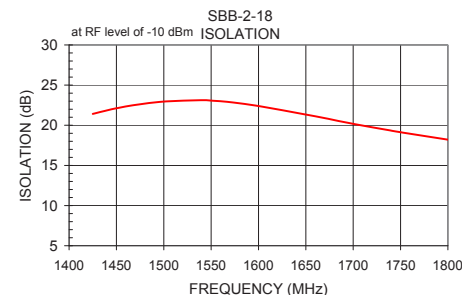
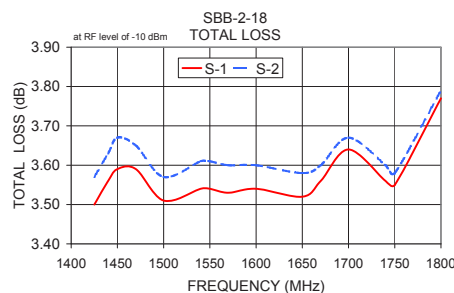
FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS ¹ (dB) ABOVE 3.0 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ. Min	Typ. Max.	Max.	Max.
1425-1800	22 16	0.6 1.2	4.0	0.3

1. Includes test fixture losses

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1 S-2						
1425.00	3.50 3.57	0.07	21.42	1.06	1.47	1.26	1.22
1440.00	3.56 3.63	0.07	21.85	1.09	1.46	1.25	1.21
1450.00	3.59 3.67	0.08	22.12	1.11	1.44	1.25	1.20
1470.00	3.59 3.65	0.07	22.53	1.13	1.42	1.23	1.19
1500.00	3.51 3.57	0.07	22.95	1.13	1.39	1.21	1.18
1540.00	3.54 3.61	0.07	23.12	1.21	1.35	1.18	1.15
1550.00	3.54 3.61	0.07	23.07	1.19	1.35	1.18	1.14
1570.00	3.53 3.60	0.06	22.88	1.26	1.33	1.16	1.13
1600.00	3.54 3.60	0.06	22.39	1.27	1.32	1.13	1.11
1650.00	3.52 3.58	0.06	21.33	1.38	1.31	1.09	1.08
1670.00	3.56 3.60	0.05	20.89	1.39	1.32	1.08	1.08
1700.00	3.64 3.67	0.04	20.18	1.44	1.33	1.07	1.08
1740.00	3.56 3.60	0.04	19.33	1.54	1.36	1.07	1.09
1750.00	3.55 3.58	0.03	19.13	1.51	1.38	1.08	1.10
1800.00	3.77 3.79	0.02	18.21	1.65	1.44	1.13	1.15

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



electrical schematic



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