Surface Mount

Power Splitter/Combiner

SBB-2-10+
SBB-2-10

2 Way-0° 50Ω 800 to 1000 MHz

CASE STYLE: SM31
PRICE: $4.95 ea. QTY. (10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Maximum Ratings

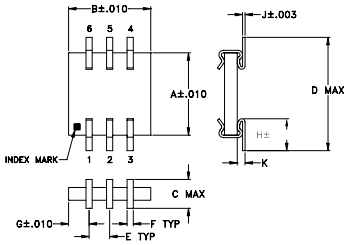
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.25W max.

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

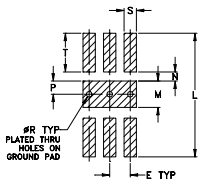
Pin Connections

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

Outline Drawing



PCB Land Pattern



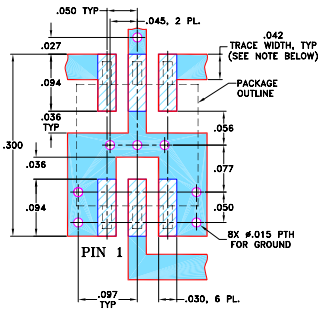
Suggested Layout,
Tolerance to be within ±.002
ADJACENT GROUND PINS SHALL BE CONNECTED TO EACH OTHER AND TO GROUND PAD

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

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[1] (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min	Typ.	Max.	Max.	Max.
800-1000	24	15	0.6	1.2	3.0	0.3

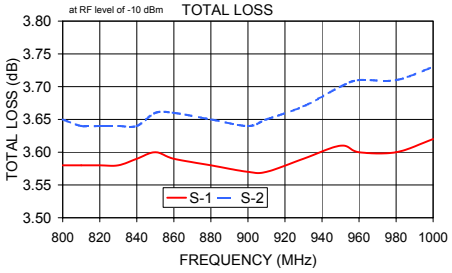
1. Includes test fixture losses

Typical Performance Data

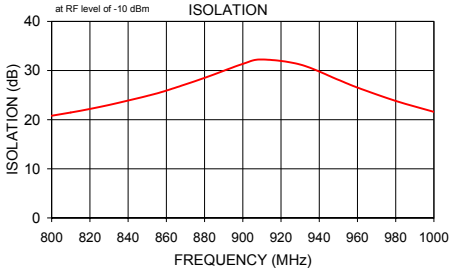
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
800.00	3.58	3.65	0.07	20.80	0.05	1.32	1.09	1.10
810.00	3.58	3.64	0.06	21.46	0.05	1.30	1.09	1.10
820.00	3.58	3.64	0.06	22.19	0.09	1.28	1.09	1.10
830.00	3.58	3.64	0.06	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.

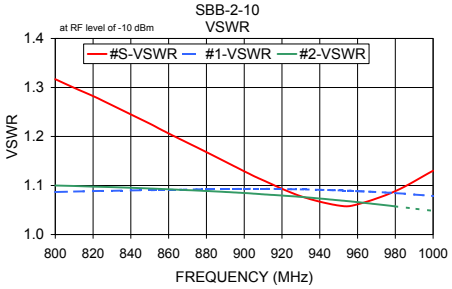
SBB-2-10
TOTAL LOSS
at RF level of -10 dBm



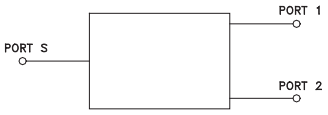
SBB-2-10
ISOLATION
at RF level of -10 dBm



SBB-2-10
VSWR
at RF level of -10 dBm



electrical schematic



REV. F
M127604
EDB-991204
SBB-2-10
BECELL/WZ/CP/AM
100611