

Surface Mount Power Splitter/Combiner

SBA-2-14+ SBA-2-14

2 Way-0° 50Ω 1200 to 1600 MHz



Maximum Ratings

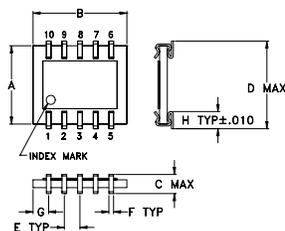
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	2W max.
Internal Dissipation	0.125W max.

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

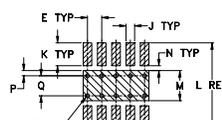
Pin Connections

SUM PORT	3
PORT 1	10
PORT 2	6
GROUND	1,2,4,5,7,8,9

Outline Drawing



PCB Land Pattern

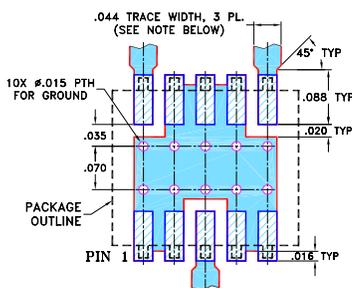


Suggested Layout,
Tolerance to be within ±0.02
ADJACENT GROUND PINS SHALL BE CONNECTED
TO EACH OTHER AND TO GROUND PAD

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H		
.250	.300	.070	.290	.050	.015	.050	.060		
6.35	7.62	1.78	7.37	1.27	0.38	1.27	1.52		
J	K	L	M	N	P	Q	R	wt	
.030	.080	.300	.100	.020	.015	.070	.014	grams	
0.76	2.03	7.62	2.54	0.51	0.38	1.78	0.36	0.3	

Demo Board MCL P/N: TB-95 Suggested PCB Layout (PL-070)



- 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

- low insertion loss, 0.6 dB typ.
- minimal temperature variation
- very low amplitude unbalance, 0.25 dB typ.
- solder plated leads for excellent solderability and strain relief
- aqueous washable
- protected by U.S. Patent, 5,534,830

Applications

- GPS

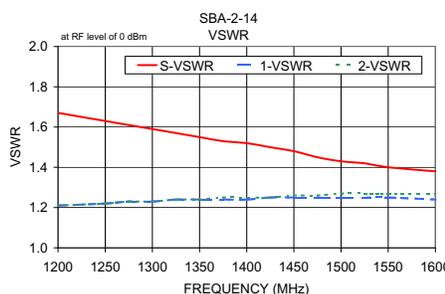
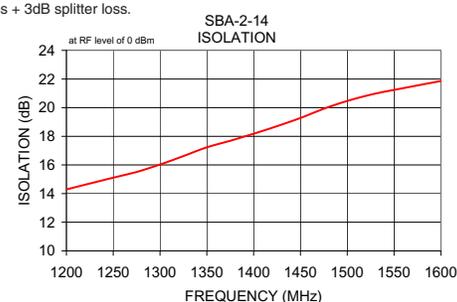
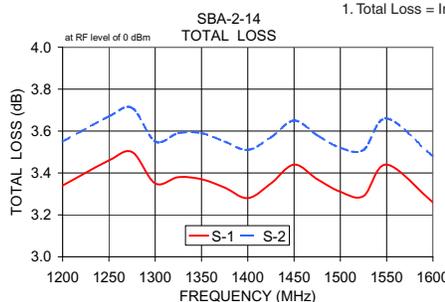
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min	Typ.	Max.	Max.	Max.
f_L - f_U						
1200-1600	16	10	0.6	1.0	5.0	0.5

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						
1200	3.34	3.55	0.20	14.29	2.17	1.67	1.21	1.21
1250	3.46	3.67	0.21	15.11	2.19	1.63	1.22	1.22
1275	3.50	3.71	0.21	15.51	2.33	1.61	1.23	1.23
1300	3.35	3.55	0.21	16.03	2.48	1.59	1.23	1.23
1325	3.38	3.59	0.20	16.62	2.47	1.57	1.24	1.24
1350	3.37	3.59	0.21	17.23	2.33	1.55	1.24	1.24
1375	3.33	3.55	0.22	17.69	2.46	1.53	1.24	1.25
1400	3.28	3.51	0.23	18.18	2.69	1.52	1.24	1.25
1425	3.35	3.57	0.22	18.71	2.71	1.50	1.25	1.25
1450	3.44	3.65	0.21	19.28	2.78	1.48	1.25	1.26
1475	3.37	3.58	0.21	19.93	2.73	1.45	1.25	1.26
1500	3.31	3.52	0.22	20.47	2.84	1.43	1.25	1.27
1525	3.29	3.51	0.22	20.91	2.92	1.42	1.25	1.27
1550	3.44	3.66	0.22	21.24	3.01	1.40	1.25	1.27
1600	3.26	3.48	0.22	21.86	3.13	1.38	1.24	1.27

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



electrical schematic



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