

Surface Mount

Power Splitter/Combiner

SBA-2-20+
SBA-2-20

2 Way-0° 50Ω 1800 to 2200 MHz



CASE STYLE: SM2

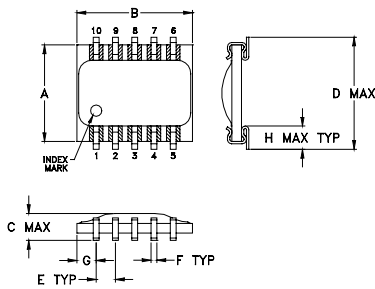
Maximum Ratings

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.

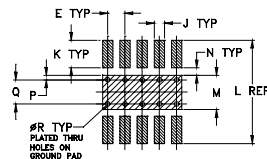
Pin Connections

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

Outline Drawing



PCB Land Pattern

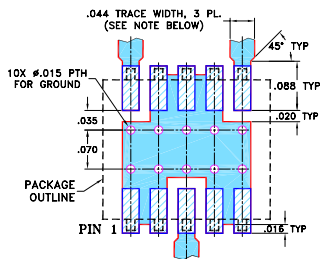


Suggested Layout,
Tolerance to be within ±0.02
ADJACENT GROUND PINS SHALL BE CONNECTED
TO EACH OTHER AND TO GROUND PAD

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H		
.250	.300	.095	.290	.050	.015	.050	.060		
6.35	7.62	2.41	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

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

- low profile, 0.07" height
- low insertion loss, 0.5 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- solder plated leads for excellent solderability and strain relief
- aqueous washable
- protected by U.S Patent, 5,534,830

Applications

- PCS

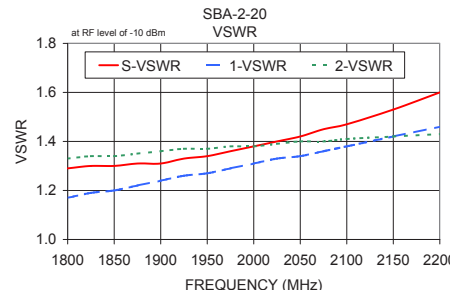
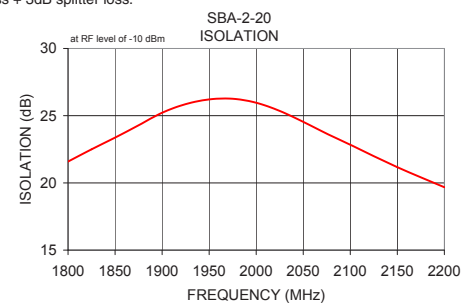
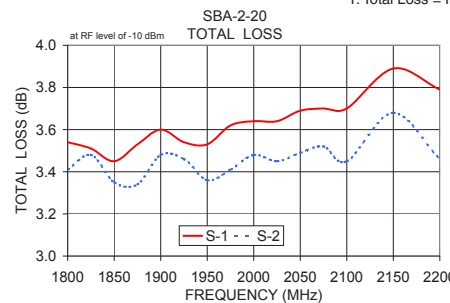
Electrical Specifications

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						
1800-2200	22	13	0.5	1.1	7.0	0.7

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						
1800	3.54	3.41	0.13	21.59	5.50	1.29	1.17	1.33
1825	3.51	3.48	0.03	22.50	5.17	1.30	1.19	1.34
1850	3.45	3.35	0.10	23.37	4.49	1.30	1.20	1.34
1875	3.53	3.34	0.19	24.29	4.93	1.31	1.22	1.35
1900	3.60	3.48	0.12	25.22	5.42	1.31	1.24	1.36
1925	3.54	3.46	0.08	25.86	4.91	1.33	1.26	1.37
1950	3.53	3.36	0.17	26.21	4.69	1.34	1.27	1.37
1975	3.62	3.41	0.20	26.26	5.10	1.36	1.29	1.38
2000	3.64	3.48	0.16	25.96	5.21	1.38	1.31	1.38
2025	3.64	3.45	0.18	25.35	5.04	1.40	1.33	1.39
2050	3.69	3.49	0.20	24.54	5.25	1.42	1.34	1.40
2075	3.70	3.52	0.18	23.66	5.15	1.45	1.36	1.40
2100	3.70	3.45	0.25	22.84	4.94	1.47	1.38	1.41
2150	3.89	3.68	0.21	21.17	6.05	1.53	1.42	1.42
2200	3.79	3.46	0.33	19.68	4.90	1.60	1.46	1.43

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



electrical schematic

