

Surface Mount Power Splitter/Combiner

SCA-3-11+

3 Way-0° 50Ω 100 to 940 MHz



CASE STYLE: DZ943

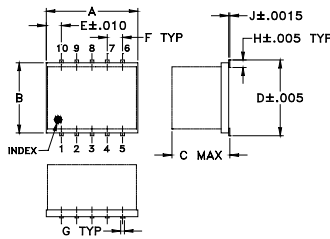
Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.25W max.
Permanent damage may occur if any of these limits are exceeded.	

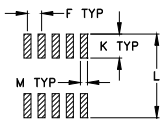
Pin Connections

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

Outline Drawing



PCB Land Pattern



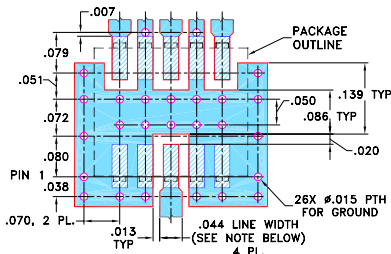
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.30	.250	.190	.266	.050	.050	.012
7.62	6.35	4.83	6.76	1.27	1.27	0.30
H	J	K	L	M	wt	
.029	.004	.085	.296	.030	grams	
0.74	0.10	2.16	7.52	0.76	0.5	

Demo Board MCL P/N: TB-246

Suggested PCB Layout (PL-144)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015", 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-Circuit's applicable established test performance criteria and measurement instructions.
C. 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

Features

- wideband, 100 to 940 MHz
- good input port matching VSWR, 1.10 typ.
- small surface mount package
- protected by U.S. Patent 6,965,280

Applications

- cellular
- ISM
- PCS
- land mobile

+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"	10, 20, 50, 100, 200
13"	500, 1000

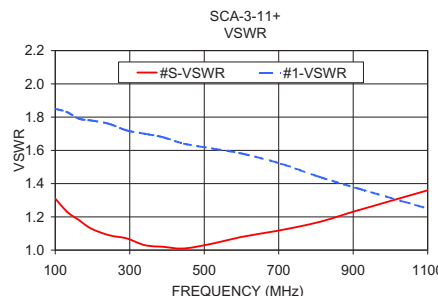
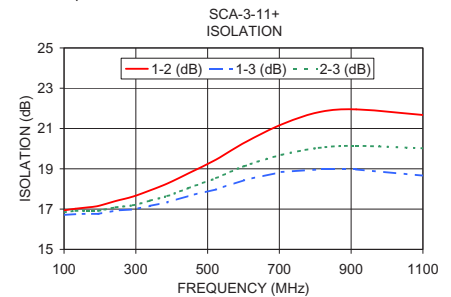
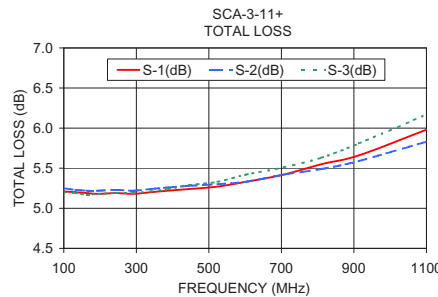
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_c - f_u$	Typ.	Min.	Typ.	Max.	Max.	Max.
100-940	20	14	0.7	1.5	7.0	0.7

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
100.00	5.21	5.25	5.20	0.05	16.94	16.71	16.84	0.44	1.31	1.85	1.88	1.86
132.00	5.20	5.23	5.19	0.04	17.02	16.75	16.91	0.50	1.23	1.83	1.86	1.84
164.00	5.19	5.22	5.17	0.05	17.08	16.77	16.91	0.62	1.18	1.79	1.83	1.80
196.00	5.18	5.22	5.18	0.04	17.16	16.76	16.92	0.71	1.13	1.78	1.81	1.80
244.00	5.19	5.23	5.19	0.04	17.40	16.93	17.09	0.92	1.09	1.76	1.80	1.77
292.00	5.18	5.22	5.19	0.04	17.62	16.98	17.19	1.04	1.07	1.72	1.77	1.75
340.00	5.20	5.24	5.21	0.04	17.93	17.16	17.42	1.38	1.03	1.70	1.76	1.72
388.00	5.22	5.26	5.24	0.04	18.27	17.34	17.65	1.45	1.02	1.68	1.73	1.71
446.00	5.24	5.28	5.29	0.05	18.77	17.65	18.04	1.70	1.01	1.64	1.72	1.68
524.00	5.27	5.30	5.33	0.06	19.46	17.98	18.54	1.89	1.04	1.61	1.70	1.63
602.00	5.33	5.33	5.42	0.09	20.29	18.44	19.13	2.07	1.08	1.58	1.66	1.59
706.00	5.42	5.42	5.51	0.09	21.20	18.84	19.69	2.46	1.12	1.52	1.61	1.53
810.00	5.55	5.49	5.63	0.14	21.81	18.97	20.04	3.09	1.17	1.44	1.54	1.47
914.00	5.66	5.59	5.81	0.22	21.95	18.97	20.14	3.32	1.24	1.37	1.47	1.39
1100.00	5.98	5.83	6.17	0.33	21.67	18.66	20.02	3.83	1.36	1.25	1.32	1.24

1. Total Loss = Insertion Loss + 4.8dB splitter loss.



electrical schematic

