

Surface Mount Power Splitter/Combiner

SCA-3-11+

3 Way-0° 50Ω 100 to 940 MHz



CASE STYLE: DZ943

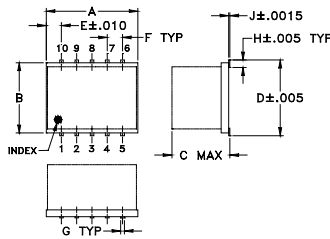
Maximum Ratings

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.	

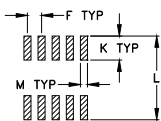
Pin Connections

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

Outline Drawing



PCB Land Pattern

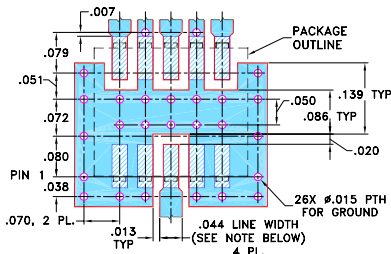


Suggested Layout,
Tolerance to be within ±.002

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

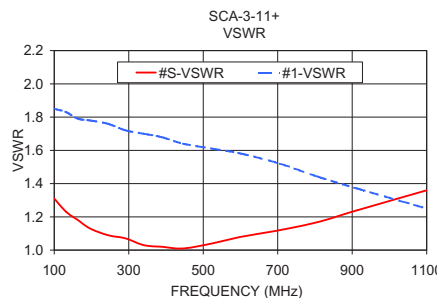
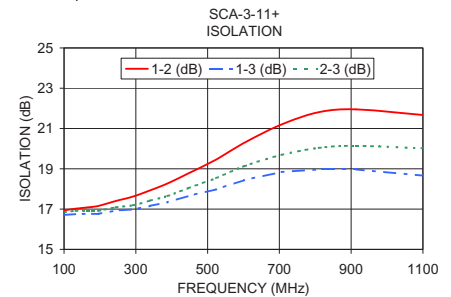
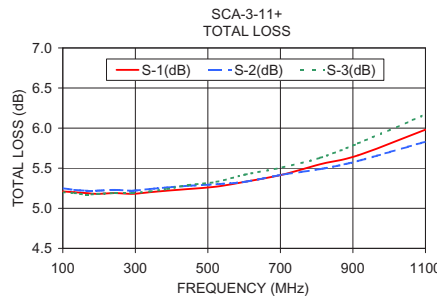
Electrical Specifications

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

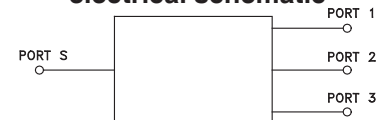
Typical Performance Data

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



3 Way-0° Power Splitter/Combiner

SCA-3-11+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C

FREQ. (MHz)	TOTAL LOSS ¹ (dB)			AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)			VSWR (:1)			
	S-1	S-2	S-3			1-2	1-3	2-3	S	1	2	3
20	6.93	6.98	6.96	0.05	0.22	16.28	16.33	16.42	3.70	2.71	2.71	2.69
50	5.50	5.52	5.51	0.02	0.12	16.16	16.04	16.27	1.79	2.11	2.11	2.09
60	5.41	5.43	5.42	0.03	0.13	16.17	16.03	16.28	1.63	2.06	2.06	2.04
70	5.34	5.37	5.36	0.03	0.16	16.18	16.03	16.28	1.53	2.02	2.03	2.01
80	5.30	5.34	5.32	0.03	0.18	16.19	16.03	16.29	1.46	2.00	2.00	1.98
90	5.28	5.31	5.29	0.03	0.19	16.20	16.03	16.29	1.41	1.98	1.99	1.97
100	5.26	5.29	5.27	0.03	0.20	16.22	16.03	16.31	1.36	1.96	1.97	1.95
110	5.24	5.27	5.26	0.03	0.25	16.24	16.04	16.33	1.33	1.95	1.96	1.94
120	5.23	5.26	5.24	0.04	0.23	16.25	16.04	16.35	1.30	1.94	1.95	1.93
130	5.21	5.25	5.24	0.04	0.25	16.28	16.04	16.36	1.28	1.93	1.94	1.92
140	5.21	5.24	5.23	0.03	0.30	16.30	16.05	16.38	1.26	1.92	1.93	1.91
150	5.20	5.24	5.22	0.04	0.34	16.32	16.06	16.40	1.24	1.92	1.92	1.91
200	5.18	5.23	5.21	0.04	0.49	16.46	16.11	16.52	1.17	1.88	1.88	1.87
225	5.18	5.23	5.21	0.04	0.59	16.54	16.16	16.61	1.15	1.87	1.86	1.85
250	5.18	5.22	5.21	0.04	0.62	16.65	16.22	16.71	1.14	1.86	1.84	1.84
275	5.18	5.22	5.21	0.04	0.72	16.74	16.27	16.79	1.12	1.84	1.83	1.82
300	5.18	5.22	5.22	0.04	0.81	16.83	16.30	16.87	1.11	1.83	1.81	1.80
325	5.19	5.22	5.22	0.03	0.87	16.94	16.36	16.97	1.10	1.82	1.79	1.79
350	5.19	5.22	5.23	0.04	0.98	17.07	16.43	17.08	1.10	1.81	1.77	1.77
375	5.20	5.22	5.25	0.05	1.02	17.17	16.48	17.18	1.10	1.80	1.75	1.76
400	5.21	5.23	5.26	0.05	1.10	17.29	16.54	17.30	1.10	1.78	1.73	1.74
425	5.22	5.23	5.27	0.05	1.19	17.41	16.60	17.41	1.10	1.77	1.71	1.73
450	5.23	5.24	5.28	0.05	1.26	17.53	16.67	17.52	1.10	1.76	1.69	1.71
475	5.25	5.24	5.30	0.06	1.34	17.65	16.72	17.63	1.11	1.75	1.67	1.69
500	5.26	5.25	5.32	0.08	1.38	17.75	16.77	17.73	1.12	1.74	1.65	1.68
525	5.28	5.26	5.34	0.08	1.44	17.86	16.81	17.83	1.13	1.72	1.64	1.66
550	5.30	5.27	5.37	0.10	1.48	17.95	16.84	17.92	1.15	1.71	1.62	1.64
600	5.34	5.30	5.42	0.12	1.62	18.12	16.89	18.07	1.18	1.69	1.58	1.61
625	5.37	5.32	5.45	0.13	1.66	18.19	16.91	18.14	1.19	1.67	1.56	1.59
650	5.39	5.33	5.48	0.15	1.71	18.23	16.90	18.17	1.21	1.66	1.54	1.58
675	5.42	5.35	5.51	0.16	1.73	18.27	16.88	18.20	1.23	1.64	1.52	1.56
700	5.45	5.37	5.55	0.18	1.79	18.27	16.84	18.20	1.25	1.63	1.49	1.54
725	5.48	5.39	5.59	0.19	1.83	18.27	16.80	18.19	1.27	1.61	1.47	1.52
750	5.51	5.42	5.62	0.21	1.86	18.25	16.75	18.17	1.29	1.60	1.45	1.50
775	5.54	5.45	5.67	0.22	1.89	18.22	16.70	18.14	1.31	1.58	1.43	1.48
800	5.58	5.47	5.71	0.24	1.91	18.19	16.64	18.10	1.33	1.56	1.41	1.46
825	5.62	5.50	5.76	0.26	1.94	18.13	16.56	18.04	1.35	1.54	1.39	1.45
850	5.66	5.53	5.80	0.27	1.98	18.08	16.49	17.99	1.38	1.53	1.37	1.43
875	5.70	5.57	5.85	0.29	2.02	18.00	16.40	17.91	1.40	1.51	1.35	1.41
900	5.74	5.60	5.90	0.30	2.03	17.94	16.32	17.85	1.42	1.49	1.33	1.40
925	5.78	5.63	5.96	0.33	2.04	17.86	16.23	17.78	1.44	1.48	1.31	1.38
940	5.81	5.65	5.99	0.33	2.07	17.82	16.19	17.75	1.45	1.46	1.29	1.37
950	5.83	5.66	6.01	0.35	2.06	17.81	16.16	17.73	1.46	1.46	1.29	1.37
975	5.87	5.70	6.07	0.36	2.10	17.74	16.08	17.67	1.48	1.44	1.27	1.35
1000	5.92	5.74	6.12	0.38	2.13	17.68	16.01	17.62	1.49	1.42	1.25	1.34
1025	5.97	5.77	6.18	0.41	2.13	17.64	15.95	17.58	1.51	1.41	1.23	1.32
1050	6.02	5.81	6.24	0.43	2.14	17.60	15.90	17.55	1.52	1.39	1.22	1.31
1100	6.11	5.88	6.35	0.47	2.14	17.58	15.81	17.53	1.54	1.36	1.19	1.28
1200	6.31	6.02	6.60	0.58	2.10	17.75	15.79	17.71	1.54	1.30	1.15	1.23
1300	6.51	6.16	6.87	0.71	1.92	18.34	16.05	18.28	1.46	1.26	1.12	1.20
1400	6.77	6.34	7.22	0.87	1.55	19.49	16.63	19.33	1.34	1.24	1.11	1.18
1500	7.22	6.69	7.76	1.07	0.89	21.20	17.55	20.79	1.30	1.25	1.13	1.19
1600	8.04	7.36	8.70	1.33	0.59	22.28	18.37	21.59	1.58	1.29	1.17	1.21
1700	9.41	8.54	10.21	1.67	1.92	20.80	18.21	20.35	2.17	1.33	1.25	1.24

¹ Total Loss = Insertion Loss+ 4.8dB Splitter Loss



3 Way-0° Power Splitter/Combiner

SCA-3-11+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = -45°C

FREQ. (MHz)	TOTAL LOSS ¹ (dB)			AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)			VSWR (:1)			
	S-1	S-2	S-3			1-2	1-3	2-3	S	1	2	3
20	7.01	7.06	7.05	0.05	0.21	18.67	18.84	18.76	3.72	2.82	2.80	2.80
50	5.54	5.56	5.57	0.03	0.26	17.90	17.84	17.97	1.81	1.94	1.94	1.95
60	5.44	5.46	5.47	0.03	0.35	17.86	17.78	17.93	1.66	1.88	1.88	1.88
70	5.38	5.40	5.40	0.02	0.41	17.85	17.74	17.90	1.55	1.84	1.84	1.83
80	5.34	5.36	5.35	0.02	0.45	17.85	17.72	17.88	1.48	1.82	1.82	1.80
90	5.31	5.33	5.30	0.02	0.45	17.85	17.70	17.87	1.42	1.81	1.81	1.78
100	5.28	5.30	5.28	0.02	0.44	17.84	17.68	17.87	1.38	1.80	1.80	1.76
110	5.26	5.29	5.25	0.04	0.43	17.83	17.65	17.86	1.34	1.78	1.79	1.75
120	5.24	5.27	5.24	0.04	0.45	17.82	17.63	17.85	1.31	1.76	1.78	1.74
130	5.22	5.26	5.24	0.04	0.51	17.82	17.62	17.85	1.29	1.74	1.76	1.73
140	5.21	5.25	5.23	0.04	0.54	17.80	17.60	17.85	1.27	1.73	1.75	1.72
150	5.21	5.25	5.23	0.04	0.61	17.79	17.58	17.84	1.26	1.73	1.74	1.72
200	5.19	5.23	5.20	0.03	0.85	17.78	17.49	17.79	1.21	1.73	1.73	1.69
225	5.18	5.22	5.21	0.05	0.87	17.75	17.44	17.78	1.19	1.71	1.71	1.69
250	5.17	5.21	5.22	0.05	1.16	17.73	17.40	17.78	1.18	1.69	1.69	1.69
275	5.17	5.20	5.22	0.05	1.38	17.74	17.38	17.78	1.17	1.69	1.67	1.68
300	5.17	5.19	5.21	0.05	1.47	17.77	17.36	17.79	1.15	1.70	1.67	1.67
325	5.16	5.20	5.22	0.06	1.62	17.82	17.36	17.84	1.13	1.69	1.66	1.66
350	5.16	5.19	5.23	0.07	1.79	17.90	17.40	17.93	1.12	1.67	1.64	1.65
375	5.16	5.19	5.24	0.07	2.02	17.98	17.44	18.00	1.12	1.67	1.63	1.64
400	5.17	5.19	5.23	0.06	2.18	18.09	17.50	18.10	1.11	1.67	1.63	1.63
425	5.17	5.20	5.24	0.07	2.26	18.20	17.55	18.21	1.11	1.66	1.63	1.62
450	5.17	5.20	5.25	0.08	2.38	18.30	17.59	18.30	1.11	1.65	1.61	1.61
475	5.19	5.20	5.27	0.08	2.53	18.38	17.63	18.37	1.11	1.65	1.59	1.59
500	5.20	5.20	5.28	0.08	2.64	18.45	17.66	18.44	1.12	1.64	1.57	1.58
525	5.21	5.21	5.30	0.09	2.76	18.54	17.69	18.52	1.13	1.64	1.56	1.56
550	5.23	5.22	5.32	0.10	2.91	18.60	17.71	18.58	1.14	1.63	1.54	1.55
600	5.26	5.24	5.36	0.12	3.10	18.70	17.71	18.67	1.17	1.60	1.51	1.52
625	5.28	5.25	5.39	0.13	3.21	18.76	17.73	18.72	1.18	1.59	1.49	1.51
650	5.29	5.26	5.42	0.15	3.36	18.78	17.71	18.73	1.20	1.58	1.47	1.49
675	5.32	5.28	5.44	0.16	3.48	18.80	17.68	18.74	1.21	1.56	1.45	1.47
700	5.34	5.30	5.48	0.18	3.58	18.77	17.63	18.72	1.24	1.55	1.43	1.45
725	5.37	5.32	5.51	0.19	3.78	18.74	17.57	18.67	1.26	1.54	1.41	1.44
750	5.40	5.34	5.55	0.21	3.90	18.68	17.49	18.61	1.28	1.52	1.39	1.42
775	5.43	5.37	5.59	0.23	3.98	18.59	17.39	18.52	1.31	1.51	1.37	1.41
800	5.46	5.40	5.64	0.24	4.08	18.50	17.29	18.44	1.33	1.49	1.35	1.39
825	5.49	5.43	5.68	0.26	4.19	18.39	17.16	18.32	1.35	1.47	1.33	1.38
850	5.53	5.45	5.73	0.28	4.32	18.30	17.06	18.24	1.38	1.46	1.31	1.36
875	5.57	5.47	5.77	0.30	4.41	18.18	16.94	18.12	1.40	1.45	1.29	1.35
900	5.59	5.50	5.81	0.31	4.54	18.10	16.84	18.05	1.42	1.44	1.28	1.33
925	5.63	5.53	5.87	0.34	4.63	17.99	16.73	17.95	1.44	1.42	1.26	1.32
940	5.65	5.55	5.89	0.35	4.71	17.96	16.67	17.92	1.45	1.40	1.25	1.31
950	5.66	5.55	5.92	0.36	4.80	17.93	16.64	17.89	1.46	1.40	1.24	1.30
975	5.71	5.59	5.97	0.38	4.90	17.84	16.54	17.81	1.48	1.38	1.22	1.29
1000	5.75	5.62	6.03	0.41	5.05	17.78	16.46	17.76	1.50	1.37	1.21	1.28
1025	5.79	5.66	6.08	0.42	5.21	17.72	16.37	17.69	1.52	1.36	1.19	1.26
1050	5.83	5.69	6.14	0.44	5.33	17.68	16.31	17.64	1.53	1.34	1.17	1.25
1100	5.93	5.76	6.26	0.50	5.52	17.61	16.18	17.58	1.56	1.31	1.14	1.23
1200	6.10	5.89	6.50	0.61	6.18	17.72	16.11	17.67	1.57	1.26	1.11	1.19
1300	6.28	6.02	6.77	0.75	6.77	18.23	16.32	18.15	1.51	1.22	1.09	1.16
1400	6.51	6.19	7.12	0.93	7.68	19.24	16.82	19.01	1.39	1.19	1.08	1.14
1500	6.92	6.51	7.65	1.14	8.86	20.73	17.63	20.21	1.33	1.21	1.11	1.15
1600	7.69	7.15	8.56	1.41	10.24	21.43	18.24	20.68	1.55	1.25	1.15	1.17
1700	9.02	8.31	10.06	1.75	12.06	19.80	17.80	19.43	2.14	1.31	1.23	1.20

¹ Total Loss = Insertion Loss+ 4.8dB Splitter Loss



3 Way-0° Power Splitter/Combiner

SCA-3-11+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +85°C

FREQ. (MHz)	TOTAL LOSS ¹ (dB)			AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)			VSWR (:1)			
	S-1	S-2	S-3			1-2	1-3	2-3	S	1	2	3
20	6.90	6.94	6.90	0.05	0.19	15.87	15.77	15.93	3.68	3.02	3.03	2.98
50	5.51	5.53	5.47	0.07	0.56	15.28	15.07	15.29	1.78	2.36	2.37	2.31
60	5.41	5.44	5.38	0.07	0.78	15.23	15.02	15.25	1.62	2.30	2.31	2.25
70	5.34	5.38	5.33	0.05	0.93	15.20	14.98	15.23	1.52	2.24	2.26	2.22
80	5.29	5.34	5.30	0.05	0.98	15.17	14.96	15.22	1.44	2.20	2.22	2.19
90	5.27	5.31	5.29	0.04	1.00	15.15	14.94	15.21	1.40	2.16	2.18	2.17
100	5.24	5.28	5.28	0.04	0.99	15.14	14.94	15.22	1.36	2.14	2.16	2.16
110	5.23	5.27	5.27	0.03	1.01	15.15	14.94	15.23	1.33	2.12	2.13	2.15
120	5.23	5.26	5.26	0.03	0.95	15.17	14.94	15.24	1.30	2.12	2.12	2.14
130	5.22	5.25	5.24	0.03	0.95	15.20	14.96	15.26	1.27	2.12	2.12	2.12
140	5.22	5.24	5.23	0.03	1.02	15.24	14.97	15.29	1.25	2.12	2.11	2.11
150	5.21	5.25	5.22	0.04	1.14	15.27	14.98	15.32	1.23	2.11	2.11	2.10
200	5.17	5.23	5.22	0.06	1.67	15.42	15.05	15.49	1.15	2.03	2.04	2.05
225	5.18	5.22	5.22	0.04	1.78	15.55	15.15	15.61	1.13	2.02	2.01	2.03
250	5.19	5.22	5.21	0.03	1.83	15.71	15.24	15.74	1.11	2.02	1.99	2.00
275	5.19	5.23	5.21	0.05	2.14	15.86	15.32	15.88	1.09	1.99	1.98	1.98
300	5.18	5.23	5.22	0.05	2.45	15.98	15.38	16.00	1.08	1.96	1.95	1.95
325	5.20	5.23	5.23	0.03	2.64	16.12	15.47	16.12	1.08	1.95	1.91	1.93
350	5.22	5.23	5.23	0.02	2.79	16.28	15.56	16.26	1.08	1.95	1.89	1.91
375	5.23	5.23	5.25	0.02	3.01	16.42	15.62	16.38	1.08	1.93	1.87	1.89
400	5.23	5.24	5.26	0.03	3.25	16.55	15.69	16.52	1.08	1.91	1.85	1.86
425	5.25	5.25	5.28	0.03	3.51	16.69	15.76	16.64	1.09	1.89	1.82	1.84
450	5.27	5.25	5.30	0.05	3.71	16.83	15.83	16.76	1.10	1.88	1.79	1.82
475	5.29	5.25	5.32	0.06	3.89	16.96	15.88	16.88	1.11	1.87	1.77	1.80
500	5.30	5.26	5.34	0.08	4.05	17.08	15.94	17.00	1.12	1.85	1.75	1.78
525	5.32	5.28	5.37	0.09	4.22	17.20	15.99	17.12	1.13	1.82	1.72	1.76
550	5.35	5.29	5.40	0.11	4.39	17.32	16.04	17.23	1.15	1.81	1.69	1.74
600	5.39	5.33	5.46	0.13	4.75	17.54	16.11	17.42	1.18	1.77	1.65	1.70
625	5.42	5.35	5.49	0.15	4.89	17.63	16.15	17.51	1.20	1.75	1.62	1.68
650	5.45	5.37	5.53	0.16	5.07	17.70	16.15	17.56	1.22	1.73	1.60	1.66
675	5.48	5.39	5.56	0.17	5.20	17.76	16.15	17.61	1.23	1.71	1.57	1.64
700	5.52	5.41	5.60	0.19	5.33	17.79	16.14	17.64	1.26	1.69	1.55	1.62
725	5.55	5.44	5.64	0.20	5.45	17.82	16.12	17.65	1.27	1.68	1.53	1.60
750	5.59	5.47	5.68	0.21	5.59	17.84	16.10	17.66	1.30	1.65	1.50	1.57
775	5.63	5.50	5.73	0.23	5.75	17.82	16.07	17.65	1.32	1.63	1.48	1.56
800	5.67	5.53	5.77	0.24	5.91	17.83	16.04	17.65	1.34	1.62	1.46	1.53
825	5.71	5.56	5.82	0.25	6.05	17.79	15.98	17.61	1.36	1.60	1.44	1.52
850	5.75	5.59	5.86	0.27	6.25	17.78	15.95	17.60	1.38	1.58	1.42	1.50
875	5.80	5.63	5.91	0.28	6.40	17.72	15.88	17.55	1.40	1.56	1.40	1.48
900	5.84	5.66	5.96	0.30	6.56	17.70	15.83	17.54	1.42	1.54	1.38	1.46
925	5.88	5.69	6.01	0.32	6.70	17.64	15.77	17.50	1.44	1.53	1.36	1.45
940	5.91	5.71	6.04	0.33	6.75	17.63	15.74	17.49	1.45	1.52	1.35	1.44
950	5.92	5.72	6.06	0.34	6.78	17.63	15.73	17.48	1.45	1.51	1.34	1.43
975	5.98	5.76	6.12	0.35	6.95	17.59	15.68	17.45	1.47	1.49	1.32	1.42
1000	6.02	5.80	6.17	0.37	7.12	17.57	15.64	17.45	1.48	1.48	1.30	1.40
1025	6.08	5.84	6.23	0.39	7.19	17.56	15.61	17.43	1.49	1.46	1.29	1.39
1050	6.13	5.88	6.28	0.40	7.35	17.55	15.59	17.44	1.50	1.44	1.27	1.37
1100	6.22	5.95	6.39	0.44	7.56	17.58	15.54	17.48	1.51	1.41	1.24	1.34
1200	6.42	6.08	6.62	0.54	8.02	17.84	15.61	17.75	1.49	1.35	1.20	1.30
1300	6.63	6.23	6.89	0.66	8.58	18.48	15.92	18.42	1.40	1.31	1.17	1.26
1400	6.90	6.43	7.23	0.80	9.14	19.69	16.53	19.56	1.29	1.29	1.15	1.23
1500	7.37	6.79	7.78	0.99	9.54	21.55	17.51	21.27	1.29	1.29	1.16	1.23
1600	8.19	7.47	8.71	1.24	9.73	23.14	18.55	22.55	1.59	1.31	1.19	1.25
1700	9.51	8.62	10.19	1.57	9.59	22.07	18.82	21.58	2.18	1.35	1.26	1.27

¹ Total Loss = Insertion Loss+ 4.8dB Splitter Loss

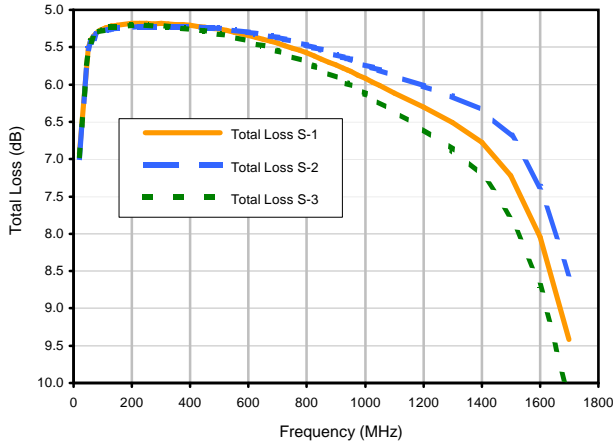


3 Way-0° Power Splitter/Combiner

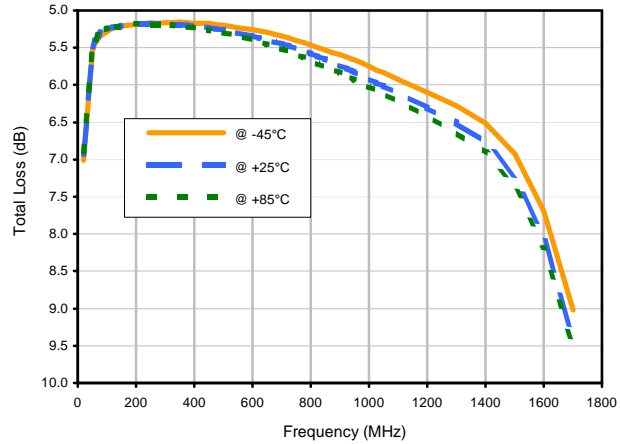
SCA-3-11+

Typical Performance Curves

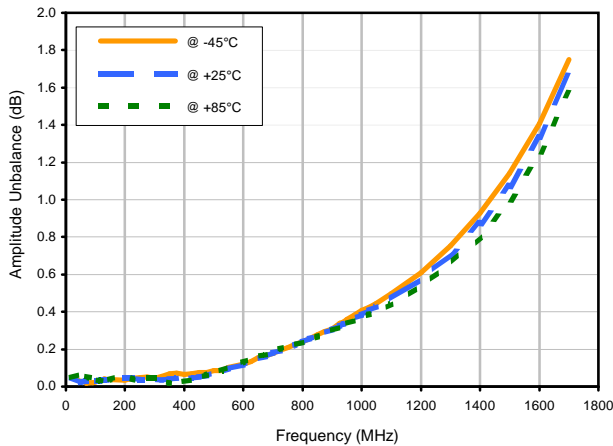
Total Loss



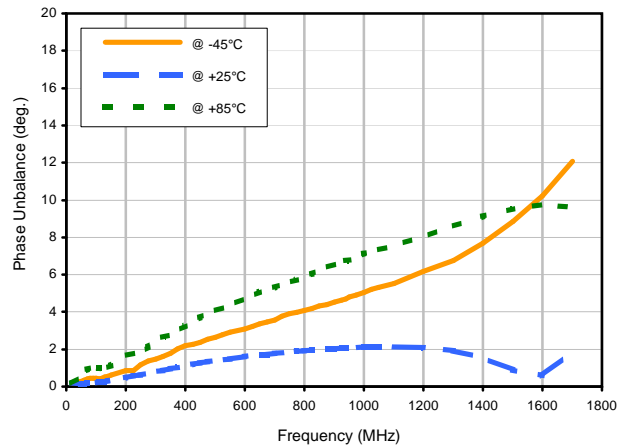
Total Loss S-1 vs. TEMPERATURE



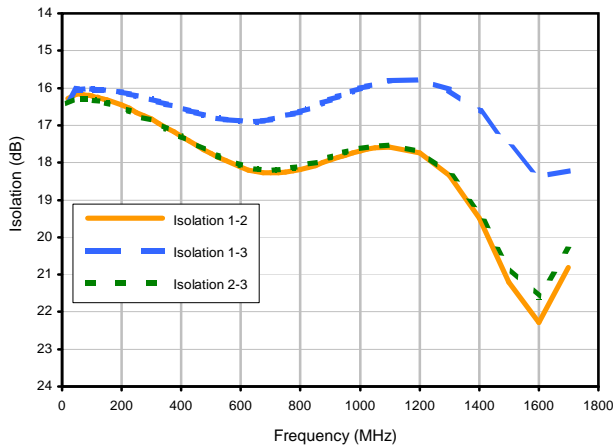
Amplitude Unbalance vs. TEMPERATURE



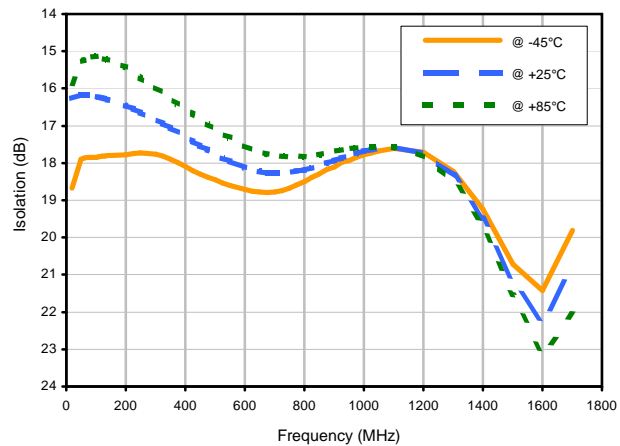
Phase Unbalance vs. TEMPERATURE



Isolation



Isolation 1-2 vs. TEMPERATURE



REV. X2
SCA-3-11+
100627
Page 1 of 2



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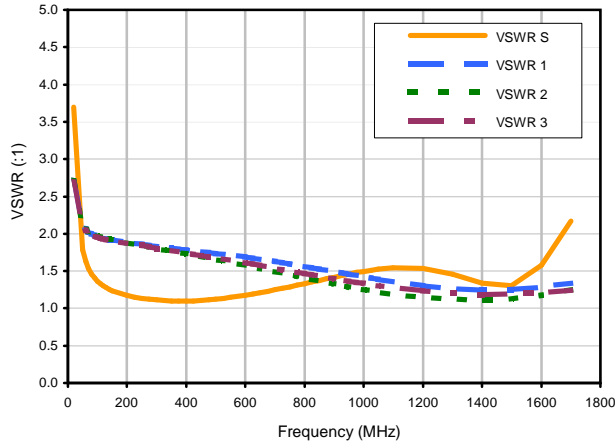


The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see

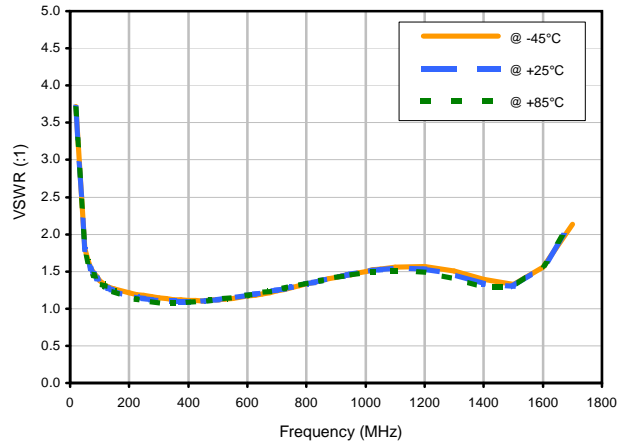


Typical Performance Curves

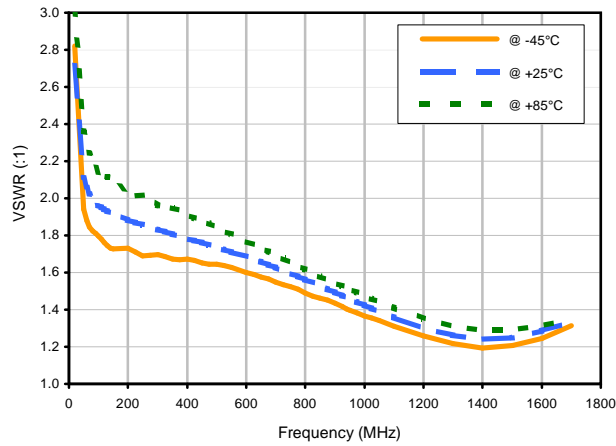
VSWR



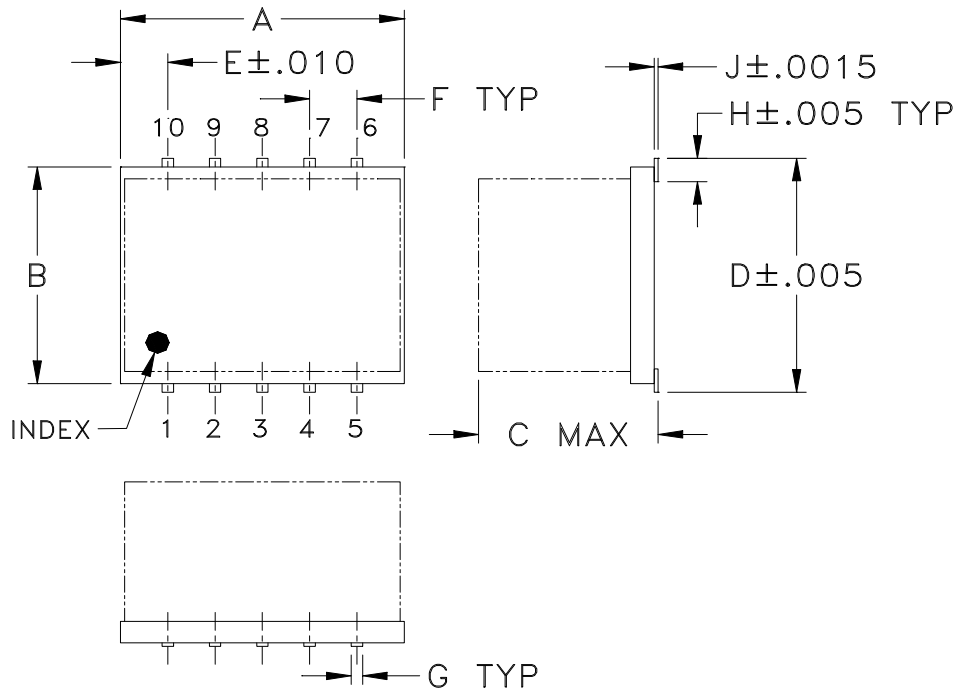
VSWR SUM vs. TEMPERATURE



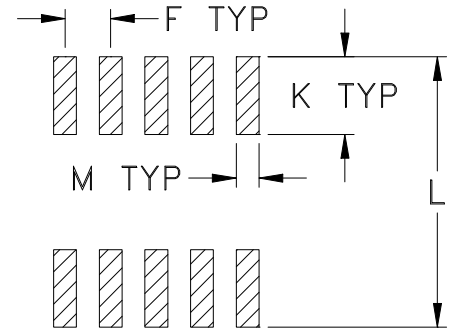
VSWR OUT1 vs. TEMPERATURE



Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm.002$

CASE#	A	B	C	D	E	F	G	H	J	K	L	M	WT. GRAMS
DZ943	.30 (7.62)	.250 (6.35)	.190 (4.83)	.266 (6.76)	.050 (1.27)	.050 (1.27)	.012 (0.30)	.029 (0.74)	.004 (0.10)	.085 (2.16)	.296 (7.52)	.030 (0.76)	0.5

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .01$; 3Pl. $\pm .005$

Notes:

- Case material: Plastic.
- Base: Ceramic.
- Termination finish:
 - For RoHS Case Styles: Tin plate. All models, (+) suffix.
 - For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.



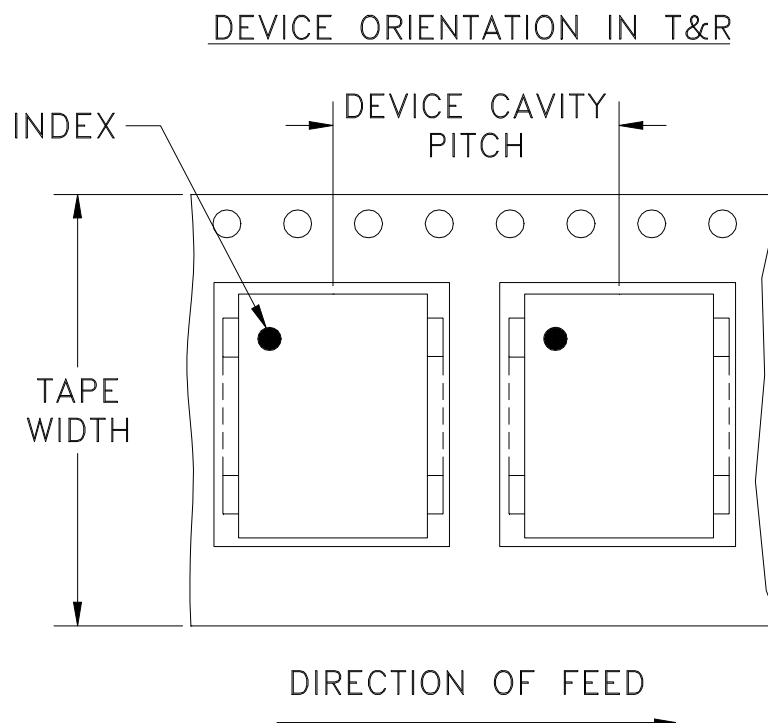
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Tape & Reel Packaging TR-F34



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel see note	
16	12	7	Small quantity standard (see note)	20
				50
				100
				200
		13	Standard	500
				1000

Note: Availability of small reel quantity varies by model.
Refer to pricing and availability on individual model dashboard.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



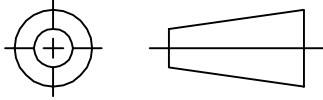
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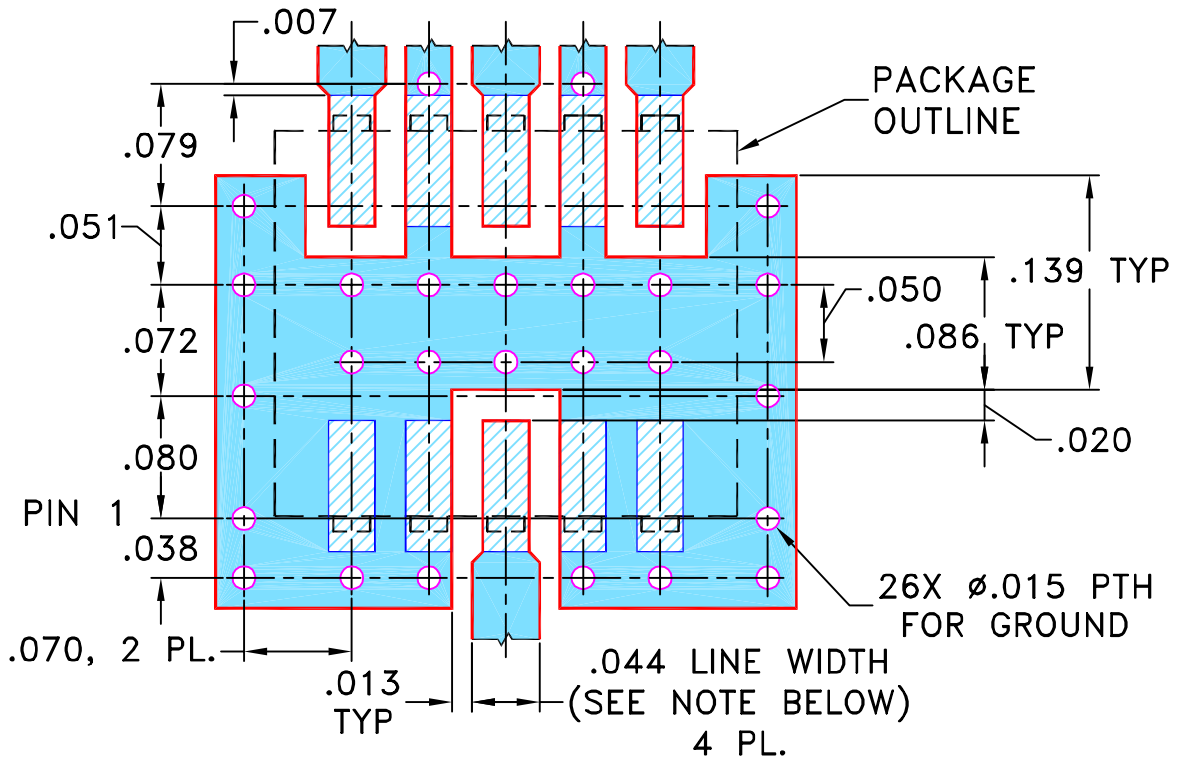
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M89258	NEW RELEASE	11/13/03	AV	LC
A	M102713	ADDED "...WITH SMOBC"	01/12/06	GF	IL

SUGGESTED MOUNTING CONFIGURATION
FOR DZ943 CASE STYLE, "pc" PIN CONNECTION.



- NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B 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

UNLESS OTHERWISE SPECIFIED	INITIALS	DATE
DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± .005 ANGLES ± FRACTIONS ±	DRAWN	AV 09/10/03
	CHECKED	IL 11/12/03
	APPROVED	LC 11/13/03

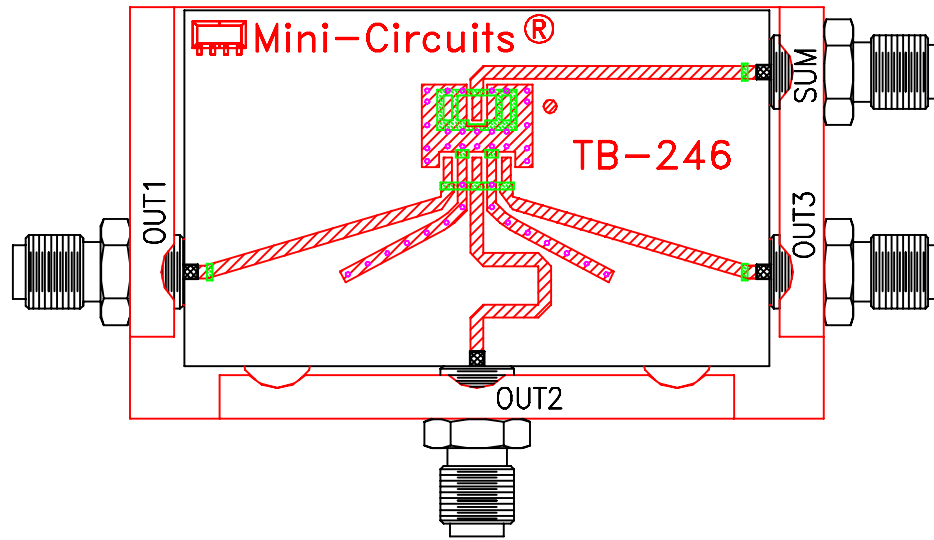
Mini-Circuits® 13 Neptune Avenue
Brooklyn NY 11235

PL, pc, DZ943, SCA-3, TB-246

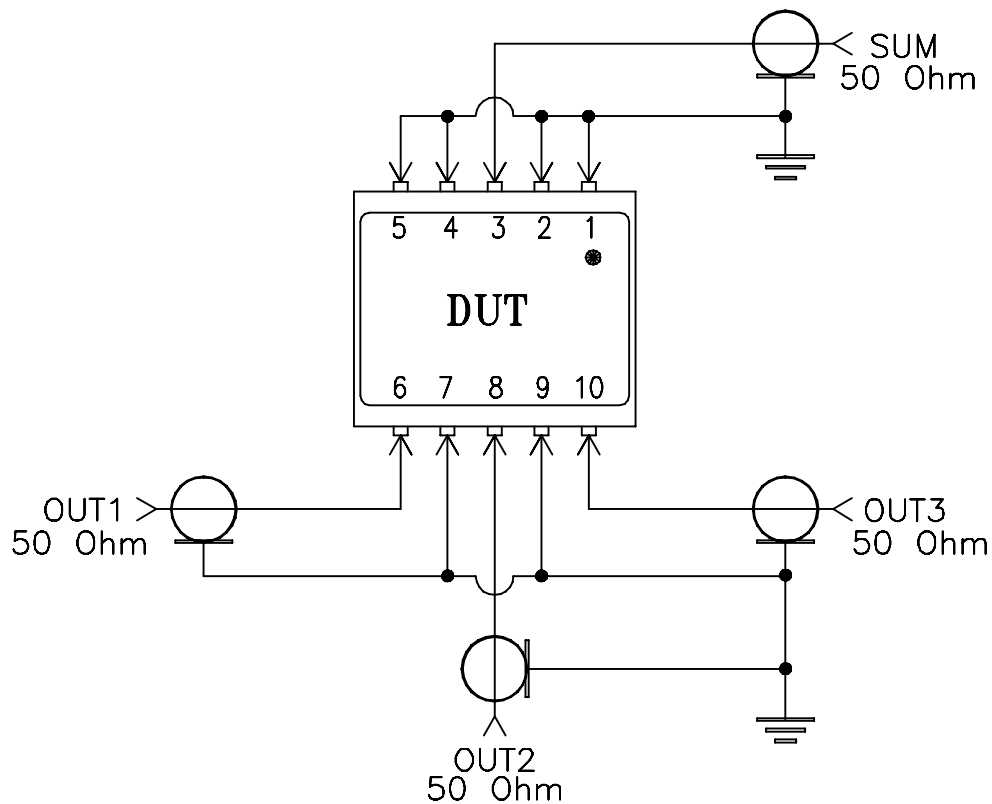
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SIZE A	CODE IDENT 15542	DRAWING NO: 98-PL-144	REV: A
FILE: 98PL144	SCALE: 8:1	SHEET: 1 OF 1	

Evaluation Board and Circuit




TB-246



Schematic Diagram

Notes:

1. SMA Female connectors.
2. PCB Material: Rogers RO4350 or equivalent,
Dielectric Constant=3.5, Thickness=.020 inch.

 Mini-Circuits®

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Autoclave	15 psig, 100% RH, 121°C, 96 hours	JESD22-A102-C, Condition C
Solderability	10X Magnification	J-STD-002, Para 4.2.5, Test S, 95% Coverage
Solder Reflow Heat	Sn-Pb Eutectic Process: 225°C peak Pb-Free Process: 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2; Figure 5-1
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215