NON-CATALOG

Surface Mount

Power Splitter/Combiner

SBA-2-22

2 Way-0° 50Ω 2000 to 2600 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.

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

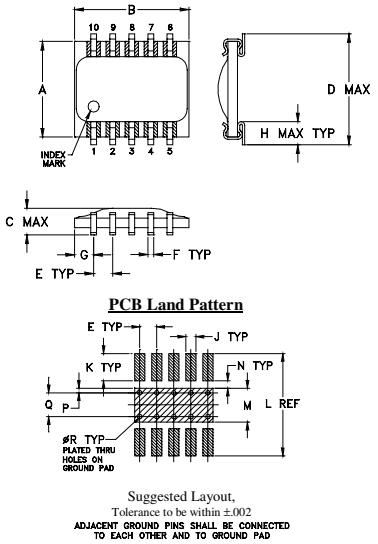
Features

- low profile, 0.07" height
- low insertion loss, 0.8 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.
- solder plated leads for excellent solderability and strain relief
- aqueous washable
- protected by U.S Patent, 5,534,830

Applications

- PCS

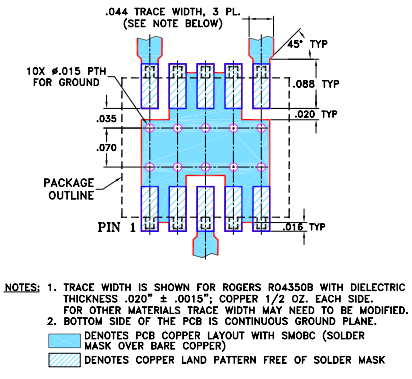
Outline Drawing



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

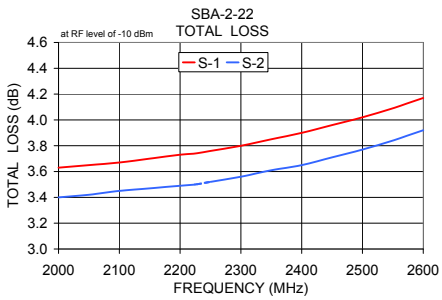
Electrical Specifications

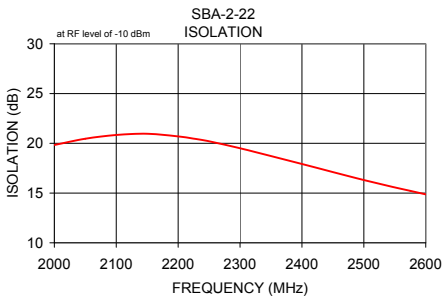
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.
2000-2600	18	10	0.8	1.6	10	0.8

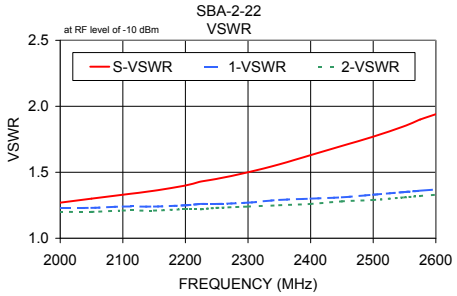
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2000.00	3.63	3.40	0.23	19.83	1.68	1.27	1.23	1.20
2050.00	3.65	3.42	0.23	20.46	1.76	1.30	1.23	1.20
2100.00	3.67	3.45	0.23	20.84	1.80	1.33	1.24	1.21
2150.00	3.70	3.47	0.23	20.96	1.76	1.36	1.24	1.21
2200.00	3.73	3.49	0.24	20.69	1.79	1.40	1.25	1.22
2225.00	3.74	3.50	0.24	20.47	1.83	1.43	1.26	1.22
2250.00	3.76	3.52	0.24	20.20	1.85	1.45	1.26	1.23
2300.00	3.80	3.56	0.24	19.50	1.90	1.50	1.27	1.24
2350.00	3.85	3.61	0.24	18.72	1.95	1.56	1.29	1.25
2400.00	3.90	3.65	0.25	17.92	1.99	1.63	1.30	1.26
2450.00	3.96	3.71	0.25	17.11	2.05	1.70	1.31	1.28
2500.00	4.02	3.77	0.25	16.31	2.12	1.77	1.33	1.29
2550.00	4.09	3.84	0.25	15.57	2.17	1.85	1.35	1.31
2575.00	4.13	3.88	0.25	15.22	2.22	1.90	1.36	1.32
2600.00	4.17	3.92	0.24	14.87	2.26	1.94	1.37	1.33

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







electrical schematic

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.
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2 Way-0° Power Splitter/Combiner SBA-2-22

Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10dBm @Temperature = +25°C

FREQ. (MHz)	TOTAL LOSS[1] (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)	VSWR (:1)		
	S-1	S-2			1-2	S	1	2
550	3.67	3.60	0.07	0.61	5.03	1.86	1.70	1.68
600	3.68	3.60	0.08	0.65	5.26	1.85	1.67	1.65
700	3.68	3.58	0.10	0.62	5.74	1.82	1.61	1.59
800	3.67	3.55	0.12	0.54	6.29	1.78	1.56	1.53
900	3.67	3.53	0.14	0.44	6.90	1.75	1.51	1.47
1000	3.65	3.51	0.14	0.37	7.53	1.71	1.46	1.42
1100	3.64	3.49	0.15	0.29	8.24	1.67	1.42	1.37
1200	3.63	3.48	0.15	0.20	8.99	1.63	1.38	1.33
1300	3.62	3.45	0.17	0.18	9.82	1.59	1.34	1.29
1400	3.60	3.43	0.17	0.04	10.69	1.54	1.31	1.26
1500	3.59	3.42	0.17	0.02	11.65	1.49	1.28	1.23
1600	3.58	3.40	0.18	0.14	12.67	1.45	1.26	1.20
1700	3.56	3.39	0.17	0.25	13.77	1.40	1.24	1.18
1800	3.55	3.39	0.16	0.29	14.98	1.36	1.22	1.16
1900	3.55	3.38	0.17	0.35	16.30	1.32	1.20	1.15
2000	3.54	3.38	0.16	0.40	17.70	1.29	1.19	1.13
2025	3.55	3.39	0.16	0.43	18.06	1.28	1.18	1.13
2050	3.54	3.39	0.15	0.43	18.43	1.27	1.18	1.13
2075	3.55	3.39	0.16	0.47	18.77	1.27	1.18	1.12
2100	3.55	3.39	0.16	0.45	19.12	1.26	1.17	1.12
2125	3.55	3.39	0.16	0.50	19.47	1.26	1.17	1.12
2150	3.54	3.39	0.15	0.49	19.82	1.26	1.16	1.12
2175	3.55	3.39	0.16	0.54	20.13	1.25	1.16	1.11
2200	3.55	3.40	0.15	0.56	20.43	1.25	1.16	1.11
2225	3.56	3.41	0.15	0.57	20.69	1.25	1.15	1.11
2250	3.56	3.41	0.15	0.60	20.89	1.25	1.15	1.10
2275	3.56	3.41	0.15	0.60	21.09	1.25	1.15	1.10
2300	3.56	3.41	0.15	0.63	21.24	1.25	1.14	1.10
2325	3.56	3.42	0.14	0.66	21.33	1.26	1.14	1.09
2350	3.57	3.42	0.15	0.66	21.35	1.26	1.14	1.09
2375	3.58	3.44	0.14	0.68	21.29	1.26	1.13	1.09
2400	3.58	3.44	0.14	0.73	21.20	1.27	1.13	1.09
2425	3.59	3.44	0.15	0.72	21.04	1.28	1.13	1.08
2450	3.59	3.45	0.14	0.76	20.88	1.28	1.13	1.08
2475	3.60	3.46	0.14	0.76	20.59	1.29	1.12	1.08
2500	3.60	3.47	0.13	0.80	20.32	1.30	1.12	1.08
2525	3.61	3.47	0.14	0.78	19.99	1.31	1.12	1.07
2550	3.62	3.49	0.13	0.85	19.65	1.32	1.12	1.07
2575	3.63	3.50	0.13	0.85	19.26	1.33	1.12	1.07
2600	3.64	3.51	0.13	0.84	18.88	1.34	1.11	1.07
2700	3.68	3.55	0.13	0.94	17.34	1.40	1.11	1.07
2800	3.75	3.63	0.12	1.05	15.80	1.48	1.11	1.07
2900	3.82	3.71	0.11	1.14	14.39	1.57	1.11	1.08
3000	3.92	3.81	0.11	1.22	13.05	1.68	1.12	1.10
3100	4.05	3.95	0.09	1.36	11.86	1.82	1.15	1.13
3200	4.21	4.13	0.08	1.40	10.77	2.00	1.20	1.18
3300	4.43	4.36	0.07	1.50	9.82	2.23	1.27	1.25
3400	4.72	4.66	0.05	1.59	8.98	2.52	1.36	1.35
3500	5.09	5.05	0.04	1.65	8.30	2.91	1.48	1.48
3600	5.55	5.53	0.02	1.78	7.75	3.43	1.63	1.64

[1] Total Loss = Insertion Loss+ 3 dB Splitter Loss

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2 Way-0° Power Splitter/Combiner SBA-2-22

Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10dBm @Temperature = -40°C

FREQ. (MHz)	TOTAL LOSS[1] (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)	VSWR (:1)		
	S-1	S-2			1-2	S	1	2
550	3.56	3.50	0.06	0.44	4.94	1.87	1.72	1.72
600	3.58	3.50	0.08	0.58	5.16	1.87	1.69	1.68
700	3.58	3.45	0.13	0.33	5.63	1.84	1.63	1.60
800	3.57	3.43	0.14	0.07	6.16	1.81	1.57	1.54
900	3.52	3.38	0.14	0.04	6.74	1.77	1.53	1.48
1000	3.50	3.37	0.13	0.09	7.34	1.74	1.48	1.44
1100	3.50	3.35	0.15	0.14	8.03	1.70	1.43	1.38
1200	3.48	3.31	0.17	0.00	8.77	1.65	1.39	1.33
1300	3.45	3.27	0.18	0.22	9.59	1.60	1.34	1.28
1400	3.43	3.25	0.18	0.64	10.46	1.56	1.29	1.24
1500	3.40	3.22	0.18	0.65	11.41	1.51	1.26	1.21
1600	3.37	3.19	0.18	0.72	12.46	1.46	1.24	1.19
1700	3.35	3.17	0.18	0.77	13.67	1.41	1.23	1.18
1800	3.32	3.16	0.16	0.84	14.95	1.37	1.22	1.18
1900	3.32	3.15	0.17	1.10	16.35	1.34	1.22	1.18
2000	3.31	3.15	0.16	1.13	17.76	1.32	1.22	1.18
2025	3.32	3.16	0.16	1.14	17.95	1.33	1.22	1.19
2050	3.31	3.15	0.16	1.19	18.25	1.33	1.22	1.18
2075	3.31	3.15	0.16	1.20	18.56	1.32	1.22	1.17
2100	3.31	3.15	0.16	1.16	18.97	1.31	1.21	1.17
2125	3.31	3.16	0.15	1.24	19.17	1.32	1.21	1.18
2150	3.31	3.17	0.14	1.29	19.38	1.33	1.21	1.17
2175	3.32	3.17	0.15	1.33	19.55	1.32	1.21	1.17
2200	3.32	3.17	0.15	1.37	19.85	1.32	1.21	1.16
2225	3.32	3.18	0.14	1.41	19.95	1.33	1.21	1.16
2250	3.32	3.18	0.14	1.47	20.02	1.34	1.20	1.16
2275	3.33	3.19	0.14	1.44	20.01	1.33	1.20	1.15
2300	3.32	3.19	0.13	1.45	20.16	1.34	1.20	1.15
2325	3.33	3.19	0.14	1.43	20.17	1.34	1.20	1.14
2350	3.33	3.19	0.14	1.44	20.11	1.35	1.19	1.14
2375	3.33	3.20	0.13	1.46	19.94	1.36	1.19	1.13
2400	3.33	3.20	0.13	1.48	19.88	1.36	1.19	1.12
2425	3.34	3.20	0.14	1.51	19.79	1.35	1.18	1.11
2450	3.33	3.20	0.13	1.52	19.78	1.34	1.17	1.10
2475	3.34	3.20	0.14	1.55	19.60	1.35	1.16	1.10
2500	3.34	3.20	0.14	1.65	19.43	1.35	1.16	1.09
2525	3.35	3.21	0.14	1.64	19.21	1.36	1.15	1.09
2550	3.34	3.21	0.13	1.73	19.06	1.35	1.15	1.07
2575	3.34	3.21	0.13	1.72	18.90	1.35	1.13	1.06
2600	3.35	3.22	0.13	1.74	18.64	1.35	1.13	1.05
2700	3.35	3.22	0.13	1.78	17.59	1.36	1.09	1.03
2800	3.37	3.25	0.12	1.94	16.33	1.40	1.07	1.03
2900	3.40	3.31	0.09	1.99	14.99	1.46	1.06	1.05
3000	3.46	3.38	0.08	2.02	13.52	1.55	1.06	1.07
3100	3.58	3.50	0.07	2.04	12.08	1.71	1.08	1.11
3200	3.76	3.69	0.07	2.07	10.71	1.94	1.14	1.16
3300	4.01	3.94	0.07	2.10	9.60	2.23	1.23	1.26
3400	4.38	4.30	0.08	2.21	8.64	2.67	1.37	1.39
3500	4.85	4.77	0.07	2.26	7.87	3.27	1.52	1.55
3600	5.43	5.34	0.09	2.63	7.35	4.02	1.74	1.74

[1] Total Loss = Insertion Loss+ 3 dB Splitter Loss

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2 Way-0° Power Splitter/Combiner SBA-2-22

Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10dBm @Temperature = +85°C

FREQ. (MHz)	TOTAL LOSS[1] (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)	VSWR (:1)		
	S-1	S-2			1-2	S	1	2
550	3.70	3.63	0.07	0.63	5.07	1.85	1.69	1.67
600	3.72	3.64	0.08	0.59	5.31	1.84	1.66	1.64
700	3.72	3.61	0.11	0.70	5.82	1.80	1.60	1.58
800	3.74	3.59	0.15	0.49	6.39	1.76	1.55	1.52
900	3.70	3.56	0.14	0.33	6.99	1.73	1.51	1.47
1000	3.70	3.56	0.14	0.52	7.64	1.69	1.46	1.42
1100	3.71	3.55	0.16	0.37	8.40	1.65	1.42	1.38
1200	3.70	3.54	0.16	0.34	9.16	1.61	1.39	1.35
1300	3.69	3.52	0.17	0.20	9.99	1.57	1.36	1.32
1400	3.68	3.51	0.17	0.16	10.86	1.53	1.33	1.29
1500	3.68	3.50	0.18	0.13	11.78	1.48	1.30	1.25
1600	3.67	3.48	0.19	0.19	12.74	1.44	1.27	1.22
1700	3.65	3.48	0.17	0.13	13.80	1.40	1.25	1.20
1800	3.64	3.48	0.16	0.21	14.91	1.36	1.23	1.17
1900	3.65	3.48	0.17	0.37	16.14	1.32	1.20	1.14
2000	3.64	3.47	0.17	0.43	17.50	1.28	1.17	1.11
2025	3.65	3.48	0.17	0.43	17.86	1.28	1.17	1.11
2050	3.64	3.47	0.17	0.51	18.23	1.26	1.16	1.10
2075	3.63	3.47	0.16	0.50	18.63	1.26	1.16	1.10
2100	3.63	3.47	0.16	0.48	19.01	1.25	1.15	1.09
2125	3.64	3.47	0.17	0.49	19.42	1.24	1.14	1.09
2150	3.64	3.48	0.16	0.58	19.83	1.23	1.14	1.08
2175	3.64	3.48	0.16	0.62	20.21	1.22	1.13	1.08
2200	3.64	3.49	0.15	0.71	20.61	1.21	1.13	1.07
2225	3.64	3.49	0.15	0.71	20.97	1.21	1.12	1.07
2250	3.65	3.50	0.15	0.78	21.31	1.20	1.12	1.07
2275	3.66	3.51	0.15	0.72	21.52	1.20	1.11	1.07
2300	3.65	3.51	0.14	0.72	21.88	1.20	1.10	1.06
2325	3.65	3.51	0.14	0.70	22.05	1.20	1.10	1.06
2350	3.66	3.51	0.15	0.68	22.23	1.20	1.10	1.05
2375	3.66	3.52	0.14	0.67	22.27	1.20	1.09	1.06
2400	3.67	3.53	0.14	0.68	22.28	1.20	1.09	1.05
2425	3.67	3.53	0.14	0.73	22.13	1.20	1.08	1.06
2450	3.68	3.55	0.13	0.77	21.93	1.21	1.08	1.05
2475	3.70	3.56	0.14	0.77	21.57	1.22	1.08	1.05
2500	3.70	3.57	0.13	0.82	21.22	1.23	1.08	1.05
2525	3.71	3.58	0.13	0.80	20.80	1.24	1.08	1.05
2550	3.72	3.60	0.12	0.89	20.32	1.26	1.08	1.05
2575	3.74	3.61	0.13	0.89	19.84	1.27	1.08	1.05
2600	3.76	3.62	0.14	0.87	19.34	1.30	1.08	1.05
2700	3.81	3.68	0.13	0.86	17.43	1.38	1.09	1.06
2800	3.90	3.77	0.13	0.99	15.65	1.48	1.10	1.08
2900	4.01	3.88	0.13	0.96	14.08	1.60	1.12	1.10
3000	4.15	4.02	0.13	1.02	12.71	1.75	1.15	1.13
3100	4.32	4.20	0.11	1.27	11.55	1.92	1.19	1.17
3200	4.52	4.41	0.11	1.38	10.55	2.11	1.25	1.22
3300	4.76	4.66	0.10	1.53	9.71	2.34	1.32	1.28
3400	5.03	4.96	0.07	1.64	9.01	2.59	1.40	1.37
3500	5.37	5.33	0.04	1.76	8.40	2.92	1.51	1.48
3600	5.76	5.74	0.02	1.92	7.94	3.31	1.63	1.63

[1] Total Loss = Insertion Loss+ 3 dB Splitter Loss

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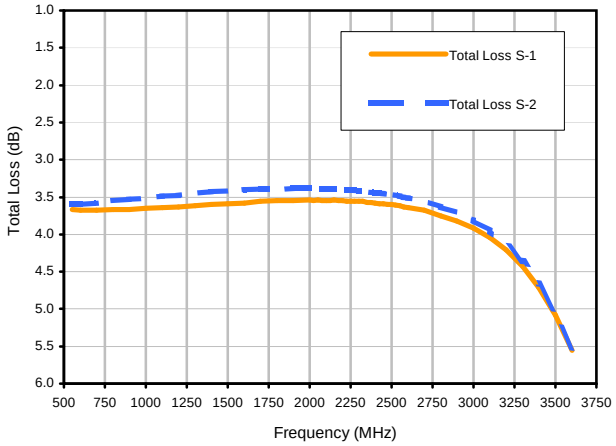
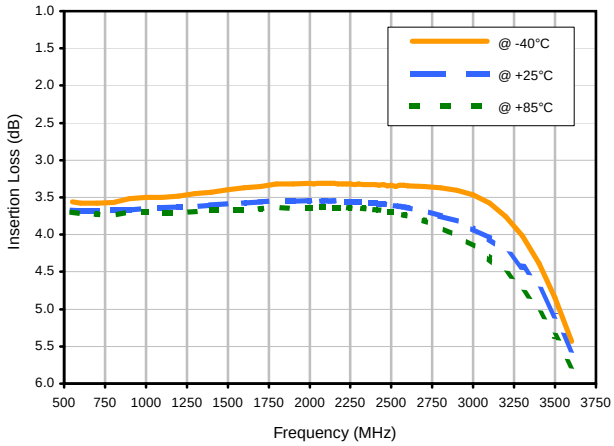
2 Way-0° Power Splitter/Combiner SBA-2-22

Typical Performance Curves

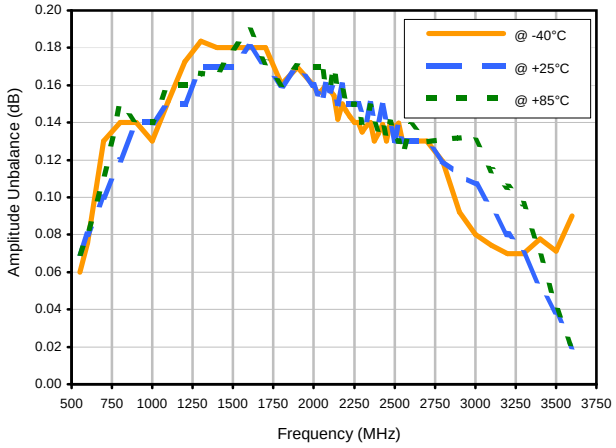
Total Loss



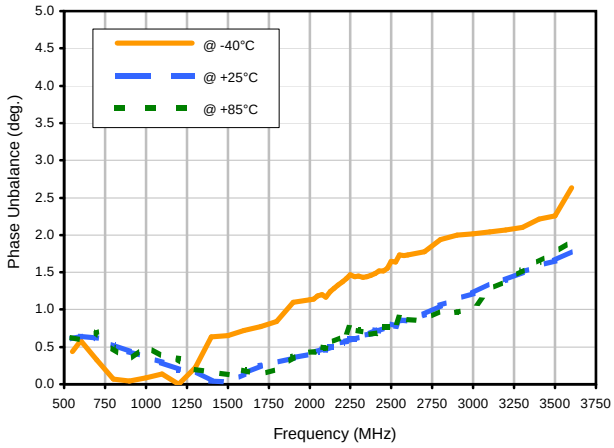
Total Loss S-1 vs. TEMPERATURE



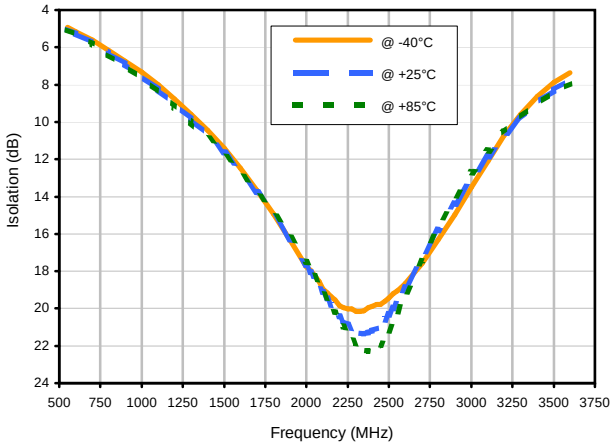
Amplitude Unbalance vs. TEMPERATURE



Phase Unbalance vs. TEMPERATURE



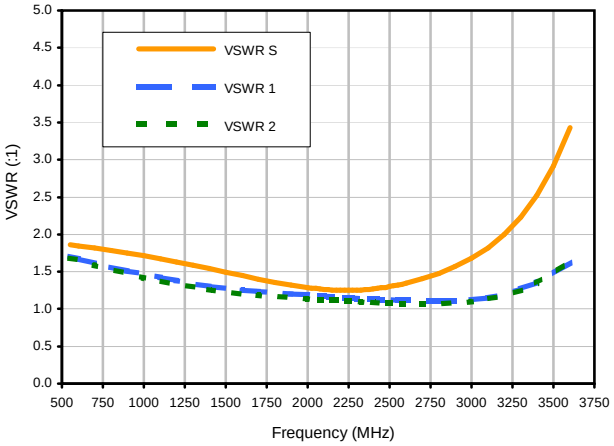
Isolation 1-2 vs. TEMPERATURE



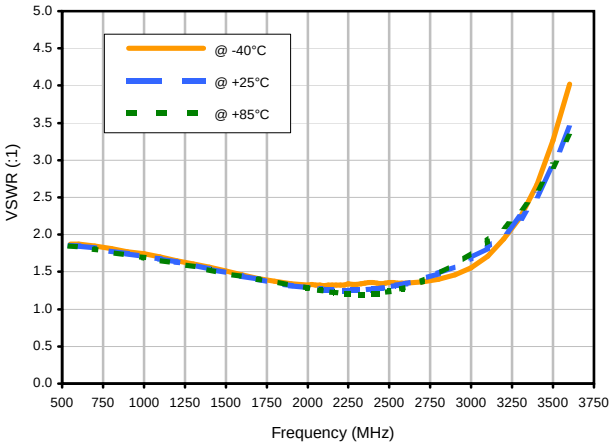
REV. X2
SBA-2-22
100706
Page 1 of 2

Typical Performance Curves

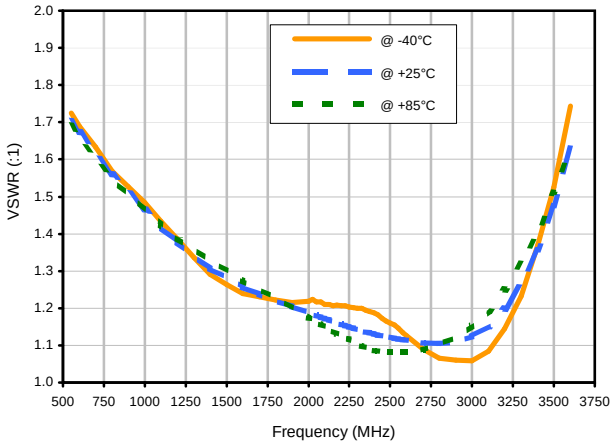
VSWR



VSWR SUM vs. TEMPERATURE



VSWR OUT1 vs. TEMPERATURE



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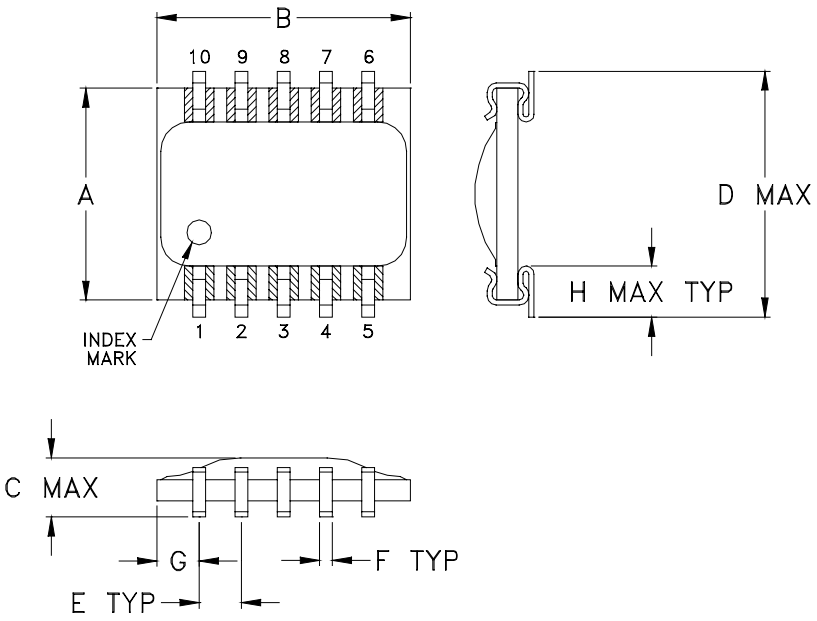
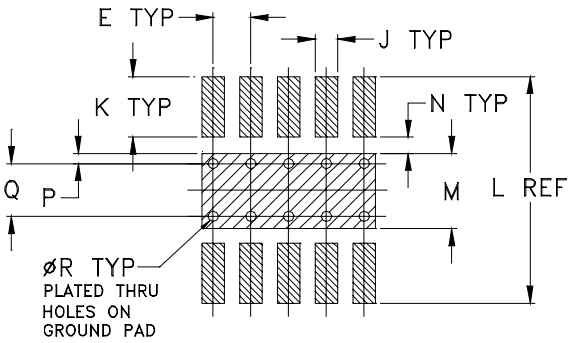
Case Style SM2

SM2

Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

ADJACENT GROUND PINS SHALL BE CONNECTED TO EACH OTHER AND TO GROUND PAD

CASE #	A	B	C	D	E	F	G	H	J	K	L	M	N	P
SM2	.250 (6.35)	.300 (7.62)	.095 (2.41)	.290 (7.37)	.050 (1.27)	.015 (0.38)	.050 (1.27)	.060 (1.52)	.030 (0.76)	.080 (2.03)	.300 (7.62)	.100 (2.54)	.020 (0.51)	.015 (0.38)

CASE #	Q	R	WT. GRAM
SM2	.070 (1.78)	.014 (0.36)	.3

Dimensions are in inches (mm). Tolerances: ± .005

Notes:

1. Case material: Plastic encapsulation on Ceramic base.
2. Termination finish:
   For RoHS Case Styles: Tin plate over Nickel plate.
   For RoHS-5 Case Styles: Tin-Lead plate.

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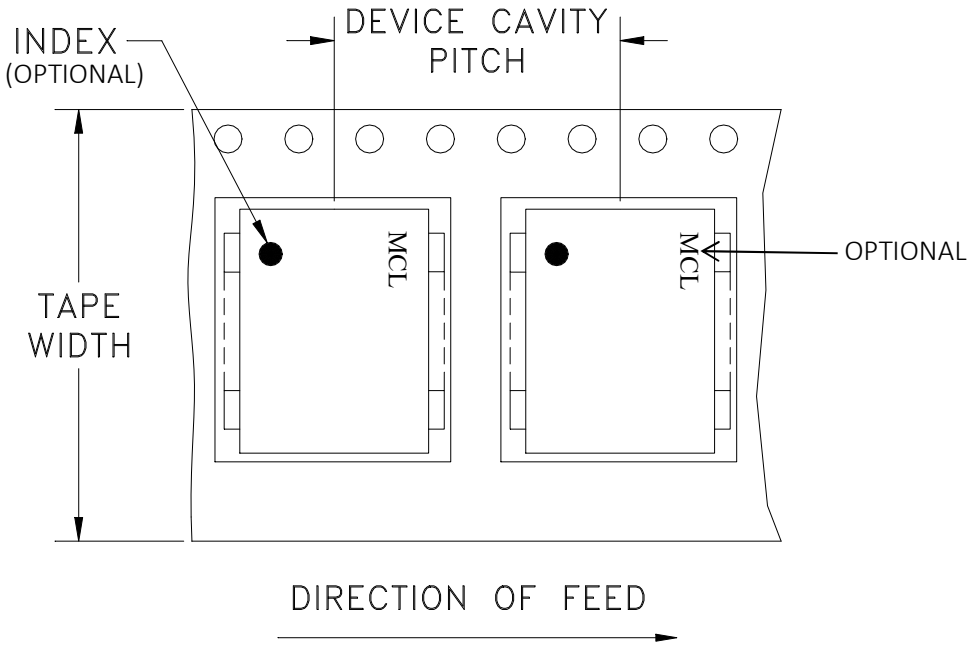
Tape & Reel Packaging TR-F34

DEVICE ORIENTATION IN T&R



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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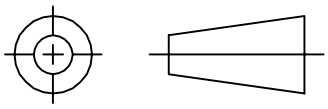
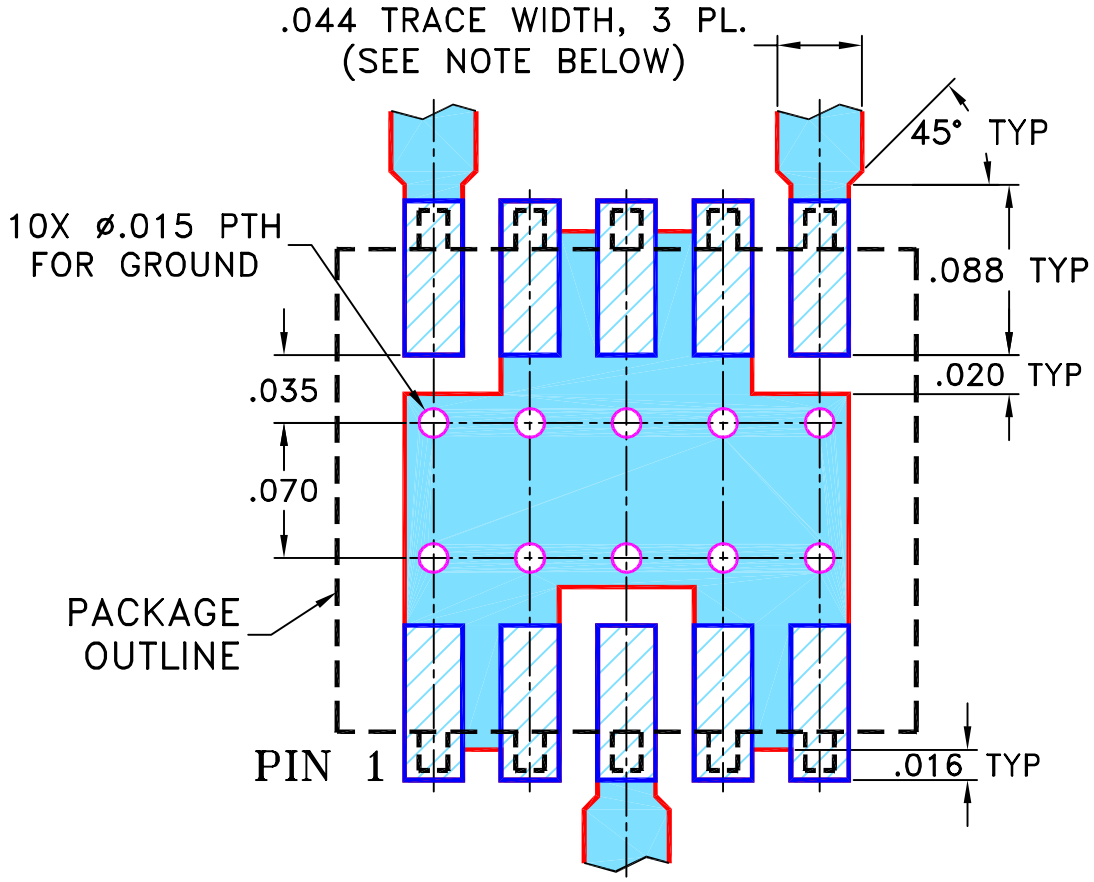
THIRD ANGLE PROJECTION



REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M82272	NEW RELEASE	08/05/02	MMG	DJ
A	M101144	ADDED SM1 CASE STYLE TO TITLE	10/07/05	MMG	HY
		& NOTE 2, UPDATED DWG.			
B	M102713	ADDED "...WITH SMOBC"	01/14/06	GF	IL

SUGGESTED MOUNTING CONFIGURATION FOR SM1/SM2 CASE STYLE, "lg" PIN CONNECTION



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

UNLESS OTHERWISE SPECIFIED		INITIALS	DATE
DIMENSIONS ARE IN INCHES	DRAWN	MMG	07/19/02
TOLERANCES ON:	CHECKED	HY	08/01/02
2 PL DECIMALS ±	APPROVED	DJ	08/05/02
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

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ASHEETA1.DWG REV:A DATE:01/12/95

Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

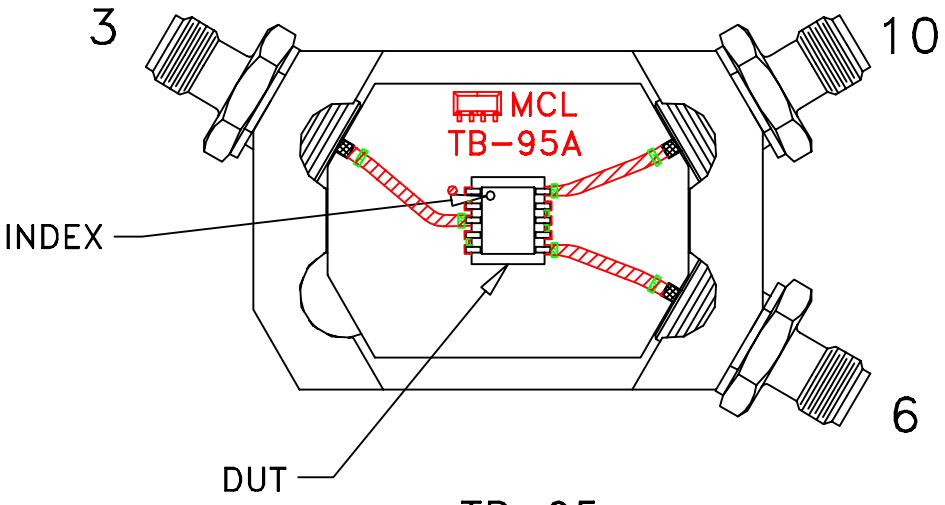
PL, "lg", SM1/SM2, SBA, TB-95

SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-070	B

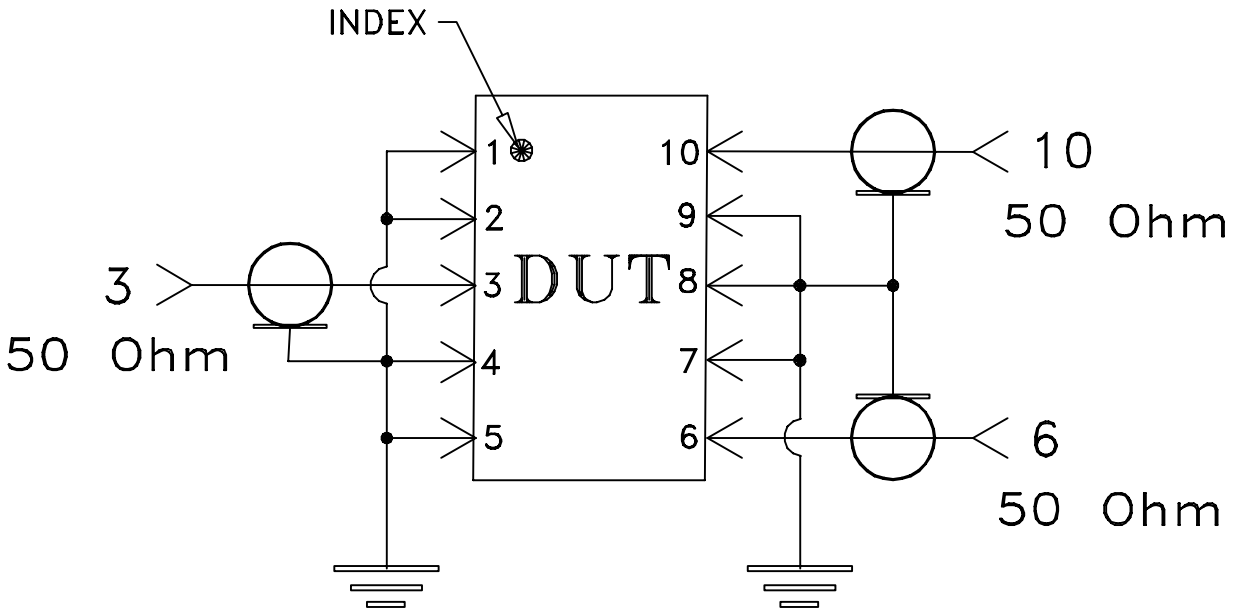
FILE:	SCALE:	SHEET:
98PL070	10:1	1 OF 1

Evaluation Board and Circuit

For Pin Connections refer to Data Sheet of the DUT



TB-95



Schematic Diagram

Notes:

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

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Environmental Specifications ENV02T1

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
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
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
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

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