

2 Way-0° 75Ω

5 to 1200 MHz

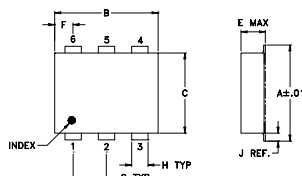
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.
Permanent damage may occur if any of these limits are exceeded.	

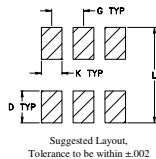
Pin Connections

SUM PORT	1
PORT 1	3
PORT 2	4
GROUND	6
NOT USED	2,5

Outline Drawing

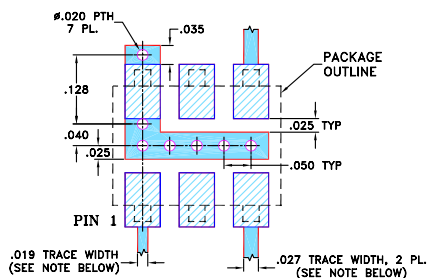


PCB Land Pattern



Outline Dimensions (inch)

A	B	C	D	E	F	G
.272	.310	.220	.100	.162	.055	.100
6.91	7.87	5.59	2.54	4.11	1.40	2.54
H	J	K	L	wt		
.030	.026	.065	.300	grams		
0.76	0.66	1.65	7.62	0.25		

Demo Board MCL P/N: TB-243
Suggested PCB Layout (PL-141)

- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- wide bandwidth, 5 to 1200 MHz
- high isolation, 27dB typ.
- excellent VSWR, 1.22:1 typ.
- small size
- low cost
- aqueous washable
- protected by US Patent 6,133,525

Applications

- CATV

Electrical Specifications (T_{AMB}=25°C)

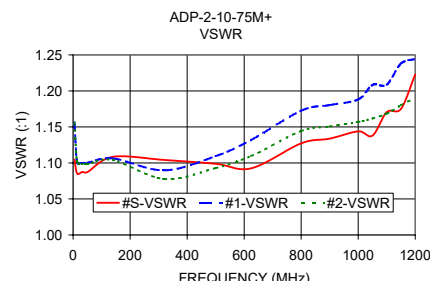
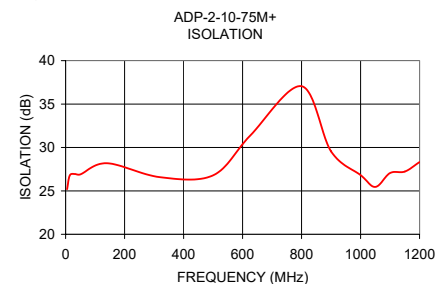
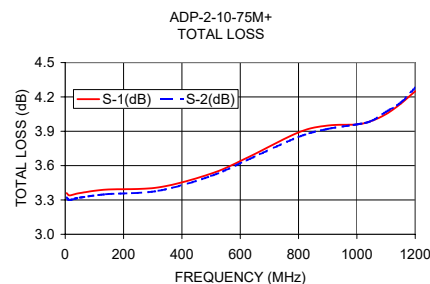
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
5-50	26	20	0.2	0.5	1.0	0.1
50-500	27	22	0.4	0.8	2.0	0.2
500-1000	29	20	0.7	1.3*	4.0	0.3
1000-1200	27	18	1.0	1.6*	5.0	0.4

* Above 50°C add 0.2 dB to Insertion Loss.

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						
5.00	3.36	3.32	0.04	25.19	0.09	1.10	1.16	1.16
14.00	3.34	3.30	0.04	26.78	0.12	1.09	1.10	1.10
32.00	3.35	3.31	0.03	26.94	0.13	1.09	1.10	1.10
50.00	3.36	3.32	0.04	26.90	0.15	1.09	1.10	1.10
140.00	3.39	3.35	0.03	28.19	0.20	1.11	1.11	1.10
320.00	3.41	3.38	0.03	26.58	0.13	1.10	1.09	1.08
500.00	3.53	3.51	0.02	26.79	0.17	1.10	1.11	1.09
625.00	3.67	3.65	0.02	31.34	0.20	1.09	1.13	1.11
800.00	3.89	3.85	0.04	37.06	0.10	1.13	1.17	1.14
900.00	3.95	3.92	0.03	29.55	0.31	1.13	1.18	1.15
1000.00	3.96	3.96	0.00	26.82	0.47	1.14	1.19	1.16
1050.00	3.99	3.99	0.01	25.46	0.24	1.14	1.21	1.16
1100.00	4.05	4.07	0.03	27.06	0.07	1.17	1.21	1.17
1150.00	4.14	4.15	0.01	27.23	0.02	1.17	1.24	1.18
1200.00	4.25	4.28	0.03	28.32	0.25	1.22	1.24	1.19

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.
- 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



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CASE STYLE: CD636

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Reel Size	Devices/Reel
7"	20, 50, 100, 200
13"	500, 1000

2 Way-0° Power Splitter/Combiner ADP-2-10-75M+

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) 1-2	VSWR (:1)		
	S-1	S-2				S	1	2
5	3.33	3.33	0.00	0.01	25.75	1.11	1.14	1.14
10	3.32	3.32	0.00	0.02	26.59	1.09	1.11	1.11
20	3.33	3.33	0.00	0.01	26.74	1.09	1.10	1.10
30	3.34	3.33	0.01	0.01	26.73	1.09	1.10	1.10
40	3.35	3.34	0.01	0.01	26.76	1.09	1.10	1.10
50	3.36	3.35	0.01	0.02	26.85	1.09	1.10	1.10
75	3.38	3.37	0.01	0.03	26.98	1.09	1.10	1.10
100	3.39	3.38	0.01	0.03	27.17	1.09	1.10	1.10
125	3.41	3.40	0.01	0.06	27.26	1.08	1.09	1.09
150	3.42	3.41	0.01	0.04	27.50	1.08	1.09	1.09
175	3.43	3.42	0.01	0.06	27.61	1.08	1.09	1.09
200	3.44	3.43	0.01	0.06	27.83	1.09	1.09	1.09
250	3.46	3.45	0.01	0.08	28.19	1.09	1.09	1.09
300	3.49	3.48	0.01	0.08	28.38	1.09	1.09	1.09
350	3.51	3.50	0.01	0.09	28.56	1.09	1.10	1.09
400	3.53	3.53	0.00	0.11	28.80	1.09	1.10	1.09
450	3.56	3.55	0.01	0.13	28.83	1.09	1.10	1.09
500	3.59	3.58	0.01	0.13	28.89	1.09	1.10	1.09
550	3.62	3.61	0.01	0.18	28.96	1.09	1.10	1.09
600	3.65	3.64	0.01	0.19	28.84	1.08	1.11	1.09
650	3.69	3.68	0.01	0.17	28.81	1.07	1.11	1.09
700	3.73	3.71	0.02	0.16	28.76	1.07	1.12	1.09
750	3.77	3.75	0.02	0.11	28.34	1.07	1.12	1.10
800	3.82	3.79	0.03	0.05	27.91	1.07	1.13	1.10
850	3.86	3.84	0.02	0.01	27.49	1.07	1.14	1.11
900	3.91	3.90	0.01	0.02	27.21	1.07	1.15	1.12
925	3.94	3.92	0.02	0.10	27.38	1.07	1.15	1.13
950	3.96	3.96	0.00	0.02	27.30	1.07	1.16	1.14
975	4.00	3.97	0.03	0.01	27.05	1.08	1.16	1.14
1000	4.01	4.01	0.00	0.01	27.34	1.08	1.17	1.15
1025	4.06	4.04	0.02	0.04	27.43	1.08	1.18	1.15
1050	4.08	4.07	0.01	0.04	27.49	1.09	1.18	1.16
1075	4.12	4.10	0.02	0.11	28.21	1.09	1.19	1.16
1100	4.14	4.13	0.01	0.10	28.27	1.10	1.19	1.17
1125	4.17	4.16	0.02	0.16	29.56	1.10	1.20	1.18
1150	4.20	4.20	0.00	0.15	29.50	1.11	1.21	1.18
1175	4.25	4.23	0.02	0.31	31.77	1.12	1.21	1.19
1200	4.27	4.28	0.01	0.25	30.93	1.14	1.22	1.19
1225	4.33	4.32	0.02	0.44	32.36	1.16	1.23	1.20
1250	4.36	4.38	0.02	0.39	30.15	1.19	1.24	1.21
1275	4.43	4.43	0.01	0.63	29.59	1.21	1.25	1.22
1300	4.50	4.49	0.01	0.47	26.39	1.24	1.26	1.23
1350	4.68	4.67	0.01	0.65	22.84	1.31	1.29	1.25
1400	4.93	4.91	0.02	0.86	19.74	1.41	1.33	1.28
1450	5.28	5.25	0.03	1.07	17.26	1.53	1.37	1.32
1500	5.73	5.68	0.04	1.30	15.25	1.66	1.43	1.36
1600	7.00	6.94	0.06	1.70	12.15	2.02	1.56	1.47
1700	8.57	8.50	0.07	2.08	10.11	2.44	1.69	1.60
1800	10.42	10.35	0.07	2.51	8.57	2.89	1.82	1.72
1900	12.65	12.65	0.00	3.10	7.24	3.33	1.91	1.81
2000	15.37	15.49	0.12	4.01	6.17	3.61	1.94	1.85

¹Total Loss = Insertion Loss + 3dB Splitter Loss

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2 Way-0° Power Splitter/Combiner ADP-2-10-75M+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = -40°C

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB) 1-2	VSWR (:1)		
	S-1	S-2				S	1	2
5	3.38	3.38	0.00	0.01	20.79	1.14	1.29	1.28
10	3.30	3.30	0.00	0.03	24.26	1.10	1.17	1.16
20	3.28	3.27	0.01	0.04	26.62	1.07	1.10	1.09
30	3.28	3.27	0.01	0.07	27.41	1.05	1.08	1.06
40	3.29	3.28	0.01	0.08	27.97	1.04	1.07	1.04
50	3.30	3.29	0.01	0.12	28.41	1.04	1.06	1.03
75	3.31	3.30	0.01	0.20	28.88	1.04	1.05	1.04
100	3.32	3.31	0.01	0.22	29.11	1.06	1.04	1.05
125	3.33	3.31	0.02	0.32	29.18	1.07	1.04	1.05
150	3.34	3.32	0.02	0.36	29.46	1.06	1.04	1.05
175	3.34	3.33	0.01	0.46	29.56	1.05	1.04	1.04
200	3.35	3.33	0.02	0.51	29.71	1.05	1.04	1.04
250	3.36	3.34	0.02	0.66	29.82	1.08	1.05	1.06
300	3.38	3.36	0.02	0.78	29.88	1.08	1.06	1.06
350	3.39	3.38	0.01	0.91	29.90	1.09	1.08	1.07
400	3.41	3.39	0.02	1.07	30.04	1.10	1.09	1.09
450	3.43	3.41	0.02	1.22	29.97	1.11	1.11	1.10
500	3.45	3.42	0.03	1.36	30.03	1.11	1.12	1.11
550	3.47	3.45	0.02	1.53	30.08	1.10	1.13	1.12
600	3.50	3.47	0.03	1.67	29.88	1.10	1.14	1.13
650	3.53	3.49	0.04	1.79	29.78	1.08	1.15	1.14
700	3.56	3.52	0.04	1.87	29.48	1.06	1.16	1.14
750	3.60	3.55	0.05	1.96	28.87	1.04	1.17	1.16
800	3.63	3.58	0.05	2.06	28.11	1.02	1.18	1.17
850	3.66	3.62	0.04	2.15	27.35	1.04	1.19	1.18
900	3.70	3.67	0.03	2.28	26.84	1.06	1.20	1.19
925	3.74	3.68	0.06	2.47	27.00	1.08	1.20	1.19
950	3.74	3.72	0.02	2.43	26.84	1.09	1.20	1.19
975	3.78	3.73	0.05	2.46	26.63	1.10	1.20	1.18
1000	3.80	3.76	0.04	2.53	26.84	1.10	1.20	1.18
1025	3.83	3.78	0.05	2.55	26.91	1.12	1.20	1.17
1050	3.85	3.81	0.04	2.64	27.09	1.13	1.20	1.17
1075	3.88	3.83	0.05	2.64	27.74	1.14	1.20	1.17
1100	3.90	3.86	0.04	2.75	27.97	1.14	1.20	1.16
1125	3.93	3.89	0.04	2.73	29.26	1.14	1.20	1.15
1150	3.95	3.91	0.04	2.83	29.33	1.15	1.19	1.15
1175	3.99	3.94	0.05	2.74	31.87	1.18	1.19	1.15
1200	4.01	3.98	0.03	2.88	31.20	1.21	1.19	1.15
1225	4.06	4.02	0.05	2.77	32.56	1.23	1.19	1.14
1250	4.09	4.06	0.03	2.92	29.81	1.26	1.20	1.13
1275	4.15	4.12	0.04	2.81	28.95	1.28	1.21	1.13
1300	4.21	4.17	0.04	3.01	25.53	1.32	1.23	1.16
1350	4.38	4.34	0.03	3.02	21.76	1.43	1.27	1.25
1400	4.63	4.58	0.05	2.98	18.66	1.53	1.34	1.35
1450	4.99	4.94	0.05	2.95	16.24	1.69	1.42	1.44
1500	5.47	5.41	0.06	2.86	14.30	1.85	1.51	1.55
1600	6.83	6.74	0.09	2.77	11.39	2.10	1.67	1.71
1700	8.44	8.35	0.09	2.68	9.48	2.33	1.78	1.77
1800	10.27	10.21	0.06	2.77	8.04	2.63	1.84	1.69
1900	12.45	12.46	0.02	3.19	6.76	3.21	1.87	1.64
2000	15.18	15.36	0.18	2.34	5.66	4.29	1.91	1.60

¹Total Loss = Insertion Loss + 3dB Splitter Loss

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2 Way-0° Power Splitter/Combiner ADP-2-10-75M+

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) 1-2	VSWR (:1)		
	S-1	S-2				S	1	2
5	3.42	3.42	0.00	0.01	23.06	1.12	1.20	1.20
10	3.42	3.41	0.01	0.01	23.86	1.11	1.17	1.17
20	3.42	3.42	0.00	0.01	23.97	1.11	1.16	1.17
30	3.43	3.43	0.00	0.02	23.97	1.12	1.16	1.17
40	3.44	3.44	0.00	0.02	23.99	1.13	1.16	1.18
50	3.45	3.45	0.00	0.02	24.02	1.13	1.16	1.19
75	3.47	3.47	0.00	0.05	24.15	1.14	1.16	1.19
100	3.49	3.48	0.01	0.09	24.34	1.12	1.16	1.17
125	3.51	3.50	0.01	0.07	24.47	1.11	1.16	1.15
150	3.52	3.52	0.00	0.07	24.68	1.10	1.16	1.15
175	3.54	3.53	0.01	0.07	24.78	1.11	1.16	1.15
200	3.55	3.55	0.00	0.10	24.99	1.11	1.15	1.15
250	3.58	3.57	0.01	0.12	25.37	1.10	1.14	1.13
300	3.61	3.60	0.01	0.15	25.58	1.09	1.13	1.12
350	3.64	3.64	0.00	0.18	25.79	1.09	1.12	1.11
400	3.67	3.67	0.00	0.19	26.02	1.08	1.11	1.10
450	3.70	3.70	0.00	0.18	26.13	1.08	1.10	1.09
500	3.74	3.74	0.00	0.22	26.21	1.08	1.10	1.08
550	3.78	3.78	0.00	0.21	26.36	1.09	1.09	1.07
600	3.82	3.82	0.00	0.24	26.39	1.09	1.09	1.07
650	3.87	3.86	0.01	0.28	26.53	1.09	1.08	1.06
700	3.92	3.90	0.02	0.31	26.69	1.10	1.08	1.06
750	3.97	3.95	0.02	0.40	26.66	1.11	1.09	1.06
800	4.02	4.00	0.02	0.44	26.62	1.11	1.09	1.06
850	4.07	4.06	0.01	0.51	26.68	1.11	1.10	1.07
900	4.12	4.12	0.00	0.61	26.76	1.11	1.12	1.09
925	4.16	4.14	0.02	0.51	26.93	1.11	1.12	1.10
950	4.18	4.18	0.00	0.69	27.03	1.10	1.13	1.11
975	4.22	4.21	0.01	0.68	26.87	1.10	1.14	1.12
1000	4.24	4.24	0.00	0.78	27.24	1.10	1.15	1.13
1025	4.29	4.28	0.01	0.82	27.43	1.10	1.16	1.14
1050	4.31	4.32	0.01	0.90	27.47	1.10	1.17	1.15
1075	4.36	4.35	0.01	0.94	28.43	1.10	1.18	1.16
1100	4.39	4.39	0.00	0.97	28.46	1.11	1.20	1.18
1125	4.43	4.42	0.01	1.04	29.87	1.11	1.21	1.19
1150	4.46	4.46	0.00	1.08	30.20	1.12	1.22	1.20
1175	4.51	4.50	0.01	1.25	32.87	1.12	1.22	1.21
1200	4.54	4.55	0.01	1.26	33.40	1.13	1.24	1.21
1225	4.61	4.59	0.02	1.45	37.33	1.15	1.24	1.22
1250	4.65	4.66	0.01	1.46	36.38	1.17	1.25	1.23
1275	4.72	4.72	0.01	1.71	36.14	1.19	1.26	1.24
1300	4.79	4.79	0.00	1.57	30.77	1.21	1.27	1.24
1350	4.99	4.96	0.02	1.74	25.80	1.26	1.29	1.24
1400	5.24	5.20	0.04	1.98	22.01	1.35	1.32	1.25
1450	5.58	5.53	0.05	2.22	19.15	1.46	1.35	1.26
1500	6.02	5.95	0.07	2.53	16.90	1.59	1.39	1.29
1600	7.22	7.12	0.10	3.05	13.46	1.99	1.52	1.40
1700	8.71	8.59	0.12	3.55	11.20	2.49	1.68	1.58
1800	10.47	10.33	0.14	4.21	9.50	2.98	1.85	1.79
1900	12.61	12.52	0.09	4.62	8.05	3.31	1.97	1.95
2000	15.26	15.21	0.05	5.84	6.90	3.34	1.97	2.00

¹Total Loss = Insertion Loss + 3dB Splitter Loss

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

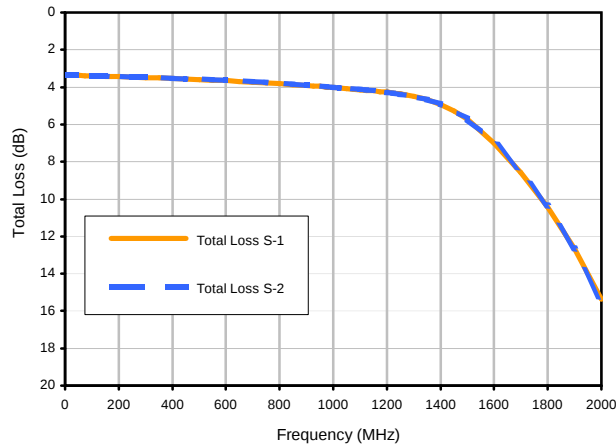


2 Way-0° Power Splitter/Combiner

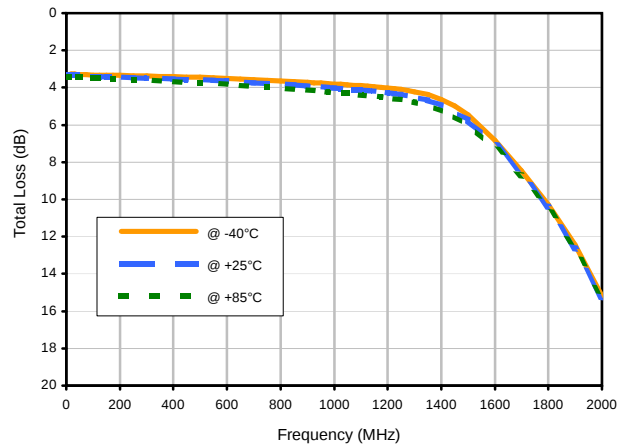
ADP-2-10-75M+

Typical Performance Curves

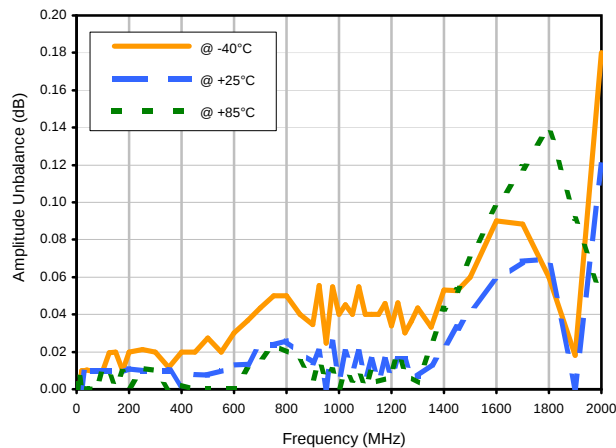
Total Loss



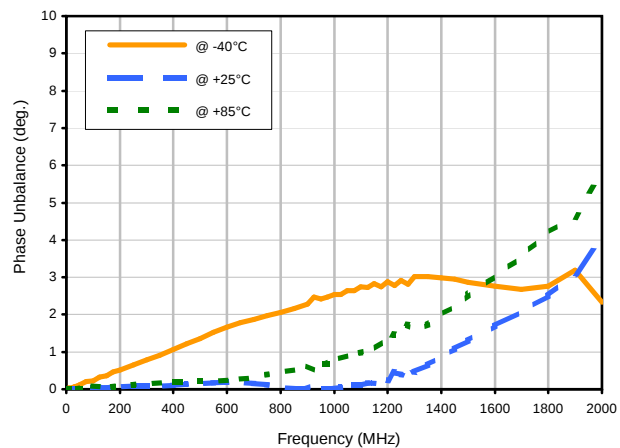
Total Loss S-1 vs. TEMPERATURE



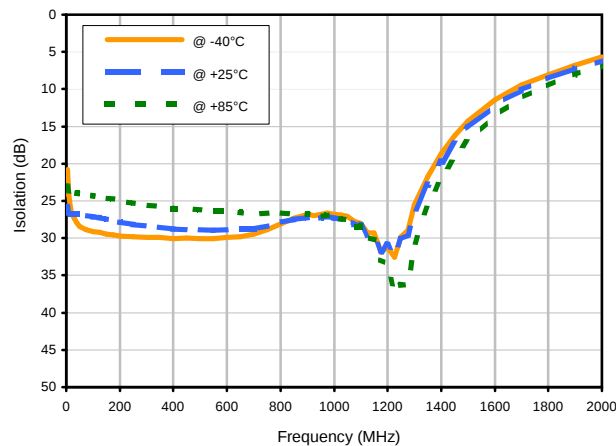
Amplitude Unbalance vs. TEMPERATURE



Phase Unbalance vs. TEMPERATURE



Isolation 1-2 vs. TEMPERATURE



REV. X2
ADP-2-10-75M+
100623
Page 1 of 2



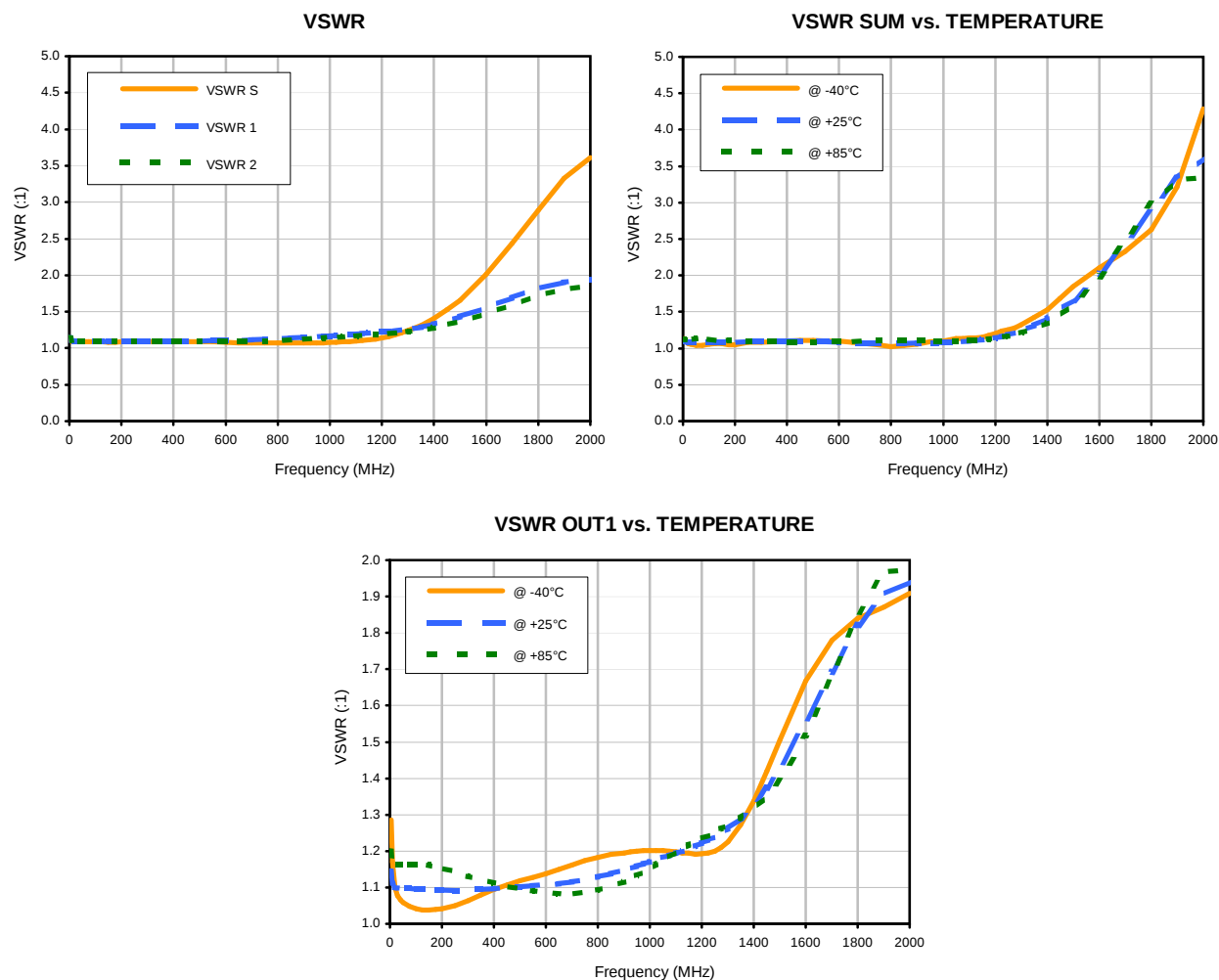
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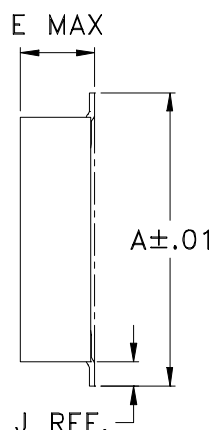
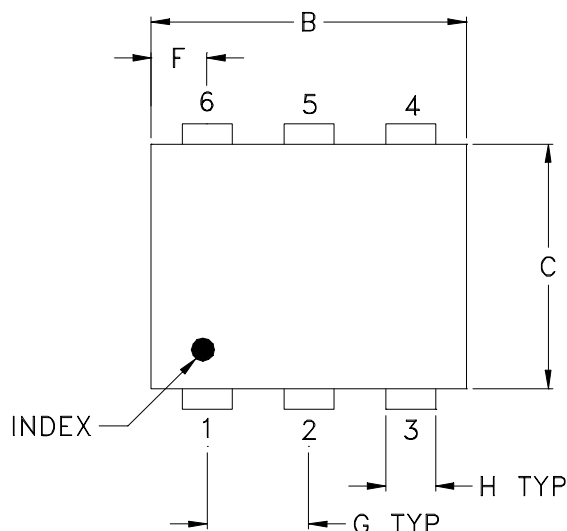


Typical Performance Curves

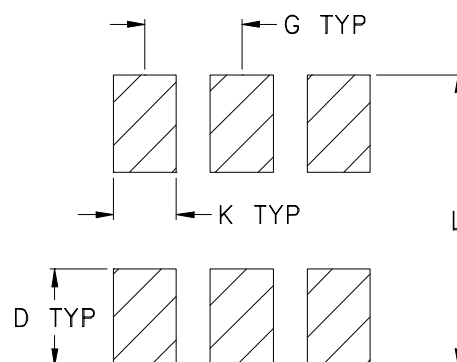


CD541
CD542
CD636
CD637

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	WT, GRAM
CD541					.082 (2.08)							.15
CD542	.272 (6.91)	.310 (7.87)	.220 (5.58)	.100 (2.54)	.112 (2.84)	.055 (1.40)	.100 (2.54)	.030 (0.76)	.026 (0.66)	.065 (1.65)	.300 (7.62)	.20
CD636					.162 (4.11)							.25
CD637					.206 (5.23)							.40

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

Notes:

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



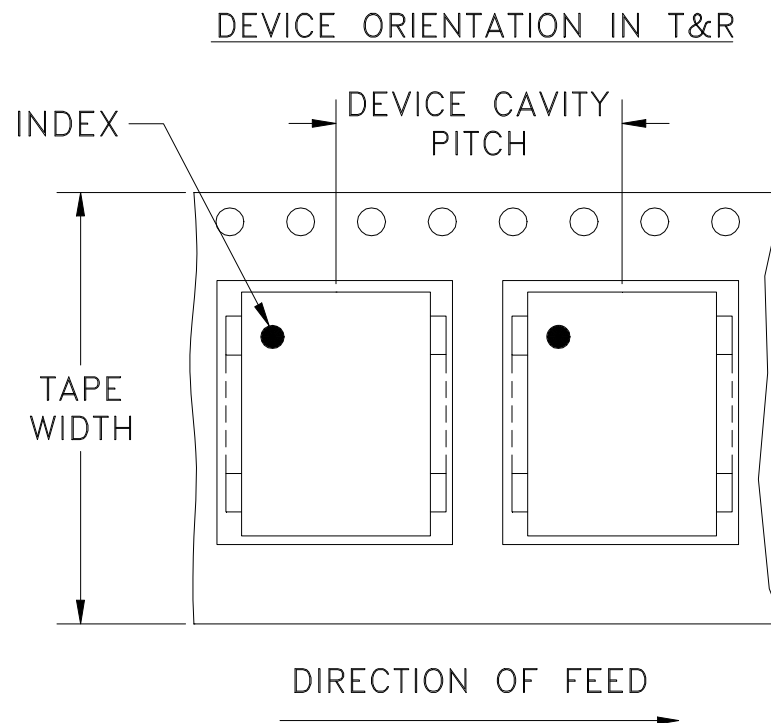
INTERNET <http://www.minicircuits.com>

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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

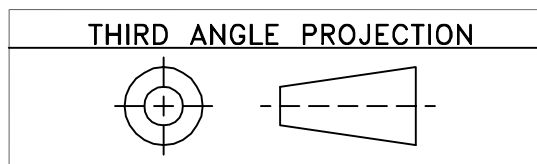


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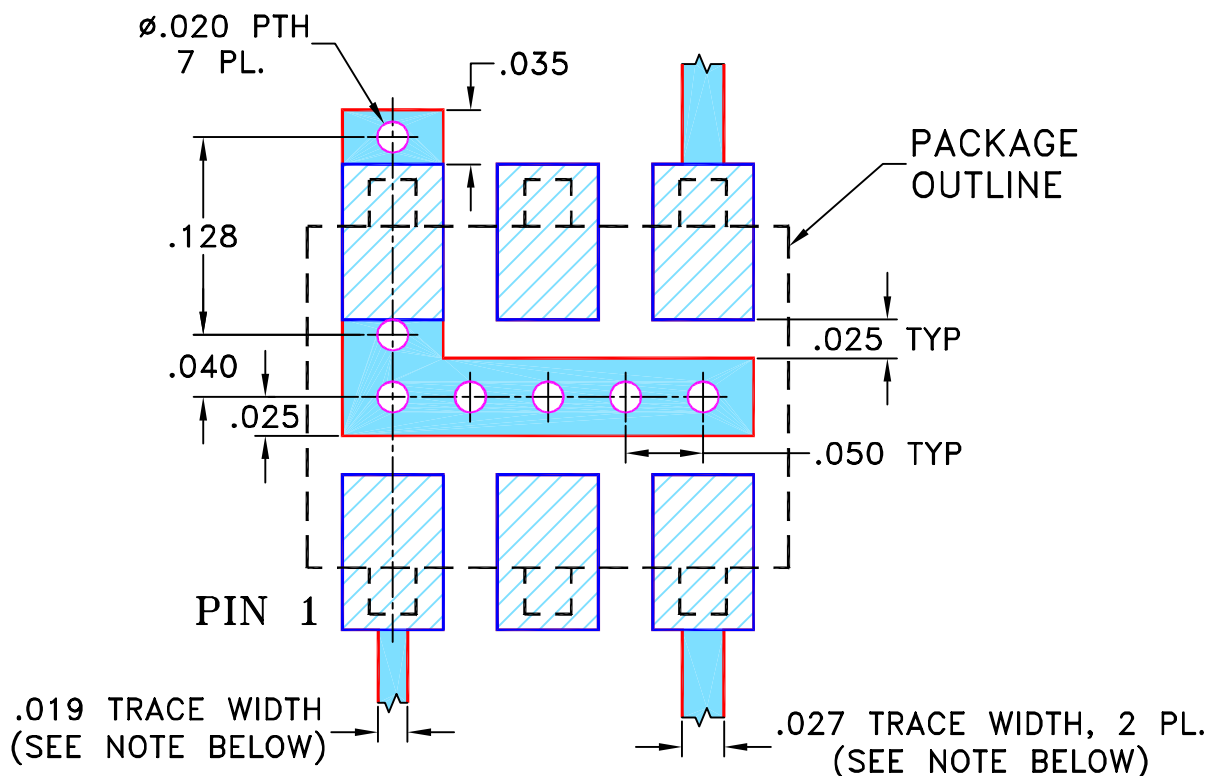
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REVISIONS					
REV OR	ECN No.	DESCRIPTION	DATE	DR	AUTH
	M88803	NEW RELEASE	10/20/03	GF	HY
A	M102713	ADDED "...WITH SMOBC"	01/17/06	MMG	IL

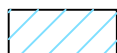
**SUGGESTED MOUNTING CONFIGURATION
FOR CD542 CASE STYLE, "hv" PIN CONNECTION**



- NOTES:** 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" $\pm$.002". 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 $\pm$ 3 PL DECIMALS $\pm$.005 ANGLES $\pm$ FRACTIONS $\pm$	DRAWN	GF	09/18/03
	CHECKED	IL	10/20/03
	APPROVED	HY	10/20/03



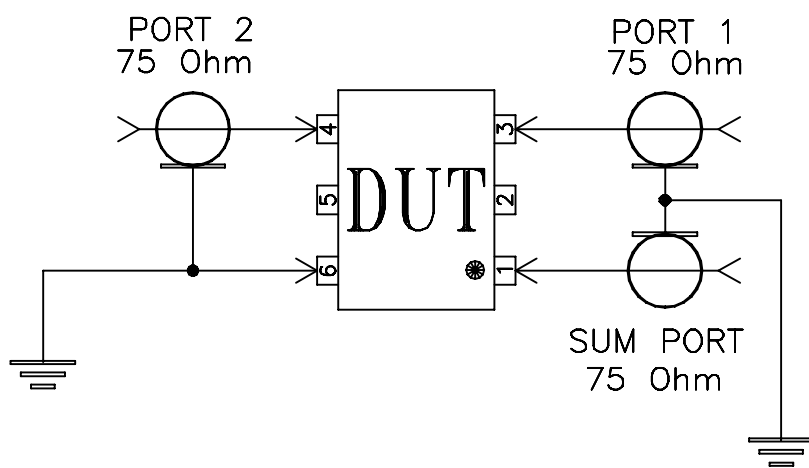
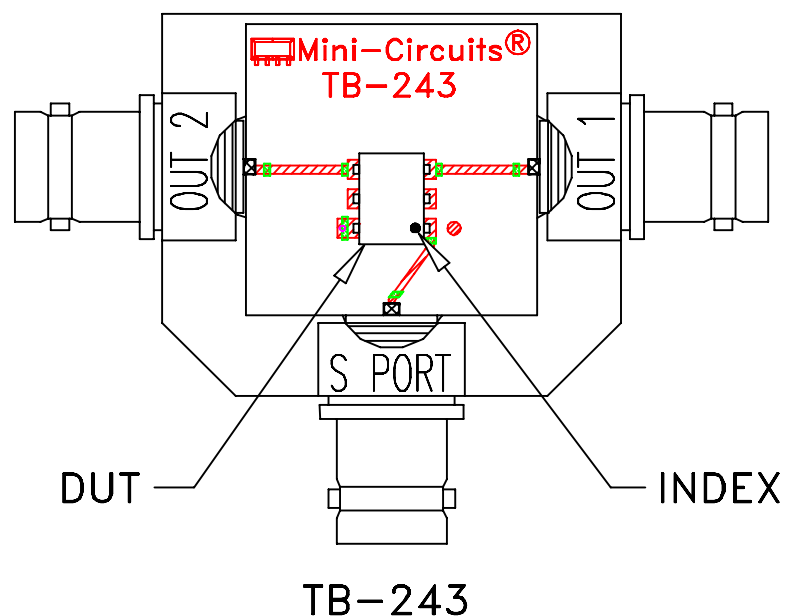
Mini-Circuits® 13 Neptune Avenue
Brooklyn NY 11235

PL, hv, 75, CD542, ADP, TB-243

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SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-141	A
FILE:	98PL141	SCALE:	8:1
		SHEET:	1 OF 1

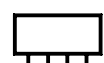
Evaluation Board and Circuit



Schematic Diagram

Notes:

1. BNC Female connectors.
2. PCB Material: Rogers R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.030 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
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