

# Surface Mount Power Splitter/Combiner

## ADP-2-10-75M+

2 Way-0° 75Ω

5 to 1200 MHz



Generic photo used for illustration purposes only

CASE STYLE: CD636

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

### Maximum Ratings

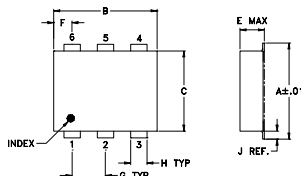
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

Permanent damage may occur if any of these limits are exceeded.

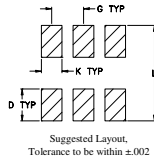
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



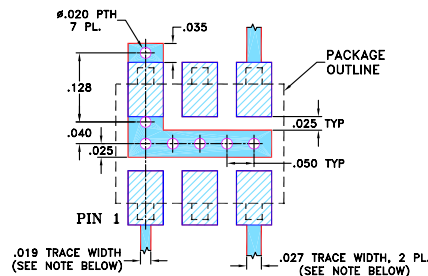
### Outline Dimensions (inch)

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.

- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

### 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<sub>AMB</sub>=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

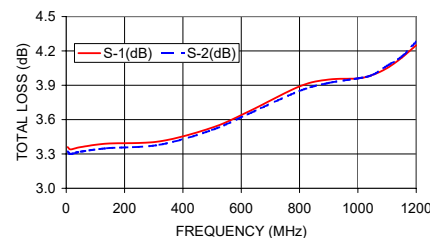
\* Above 50°C add 0.2 dB to Insertion Loss.

### Typical Performance Data

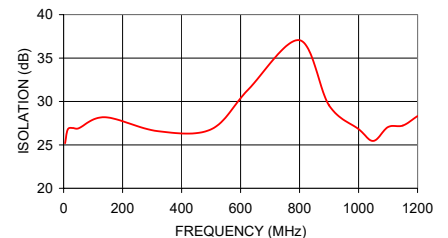
Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5.00	3.36	3.32	0.04	25.19	0.09	1.10	1.16	1.16
14.00	3.34	3.30	0.04	26.78	0.12	1.09	1.10	1.10
32.00	3.35	3.31	0.03	26.94	0.13	1.09	1.10	1.10
50.00	3.36	3.32	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.

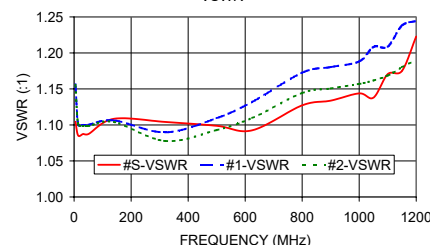
ADP-2-10-75M+  
TOTAL LOSS



ADP-2-10-75M+  
ISOLATION



ADP-2-10-75M+  
VSWR



### electrical schematic



# 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 <sup>1</sup> (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)	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

<sup>1</sup>Total Loss = Insertion Loss + 3dB Splitter Loss



# 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 <sup>1</sup> (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)	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

<sup>1</sup>Total Loss = Insertion Loss + 3dB Splitter Loss



# 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 <sup>1</sup> (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)	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

<sup>1</sup>Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2  
ADP-2-10-75M+  
100623  
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IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant

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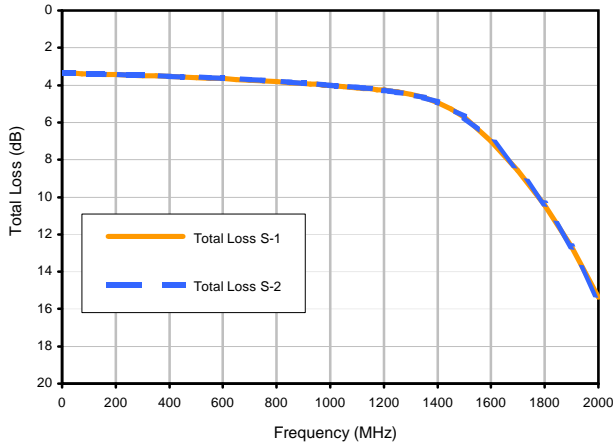


# 2 Way-0° Power Splitter/Combiner

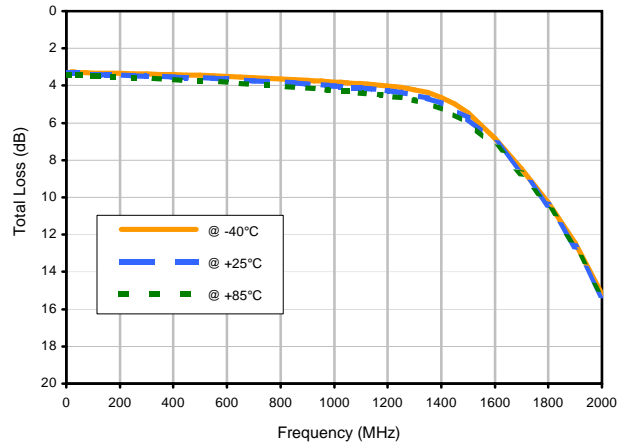
# ADP-2-10-75M+

## Typical Performance Curves

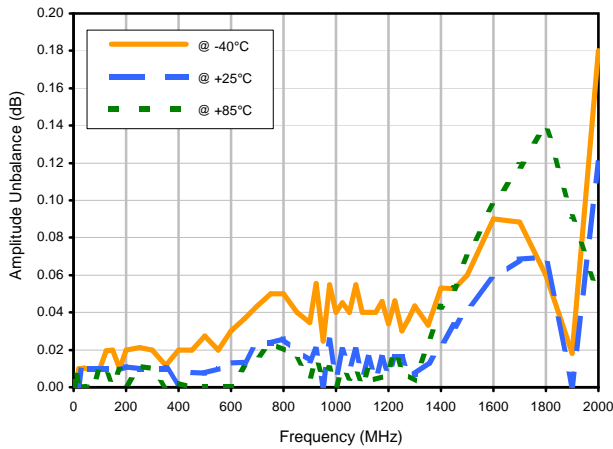
**Total Loss**



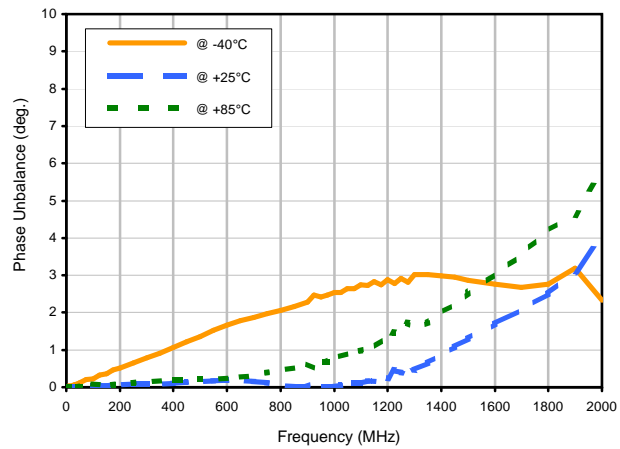
**Total Loss S-1 vs. TEMPERATURE**



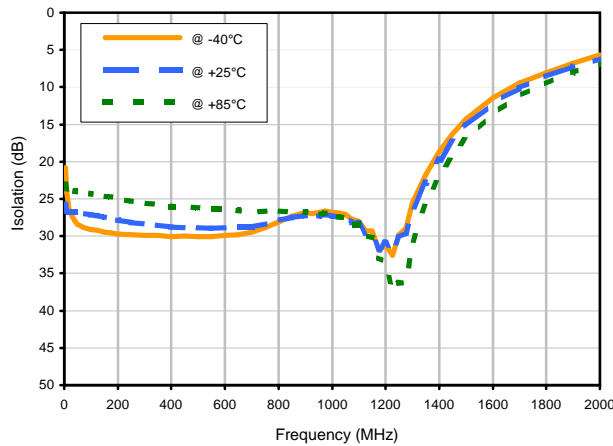
**Amplitude Unbalance vs. TEMPERATURE**



**Phase Unbalance vs. TEMPERATURE**



**Isolation 1-2 vs. TEMPERATURE**



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



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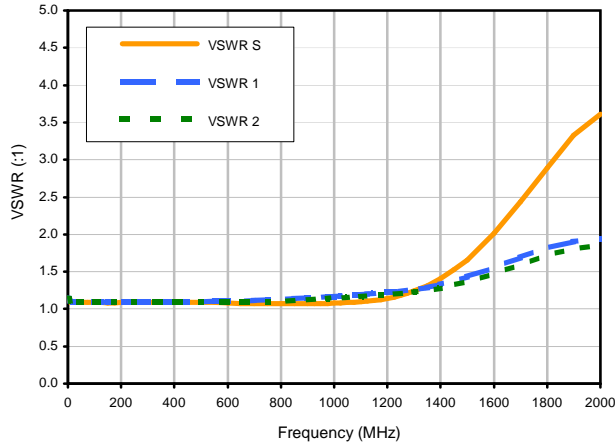


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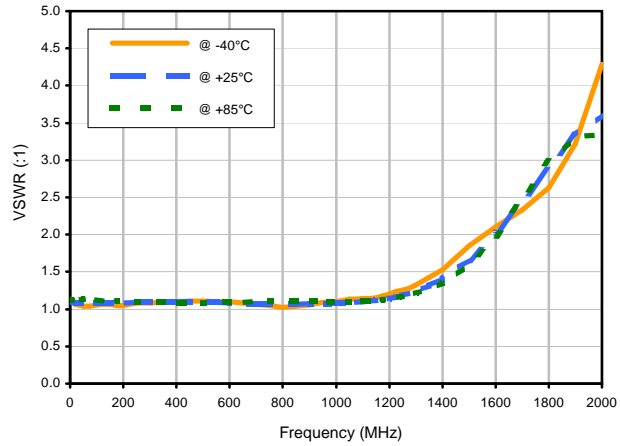


## Typical Performance Curves

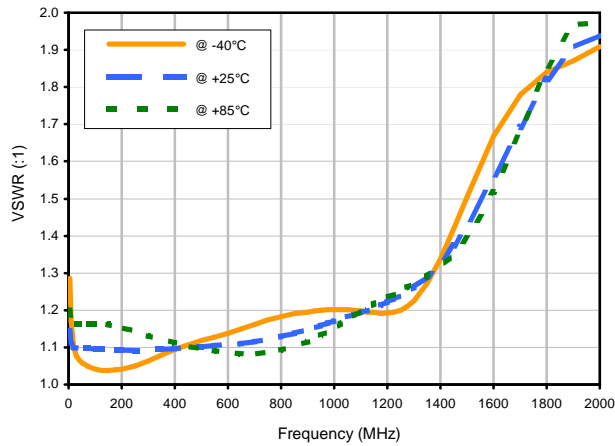
### VSWR



### VSWR SUM vs. TEMPERATURE



### VSWR OUT1 vs. TEMPERATURE

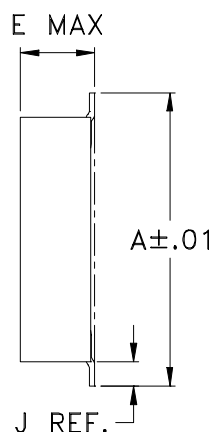
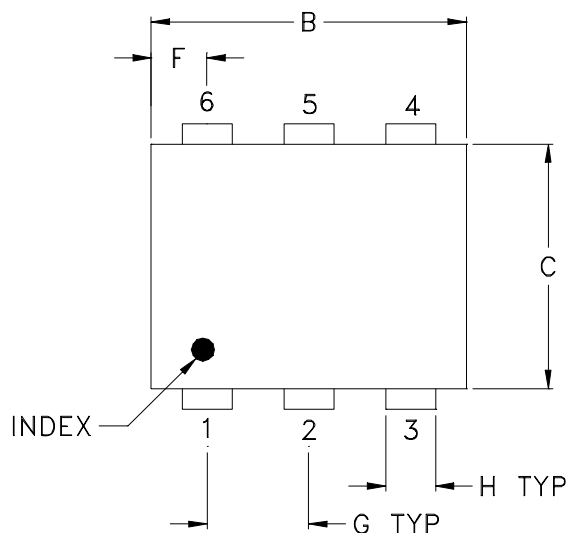


# Case Style

# CD

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.

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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](http://www.minicircuits.com/pages/pdfs/tape.pdf)



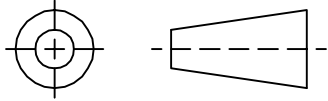
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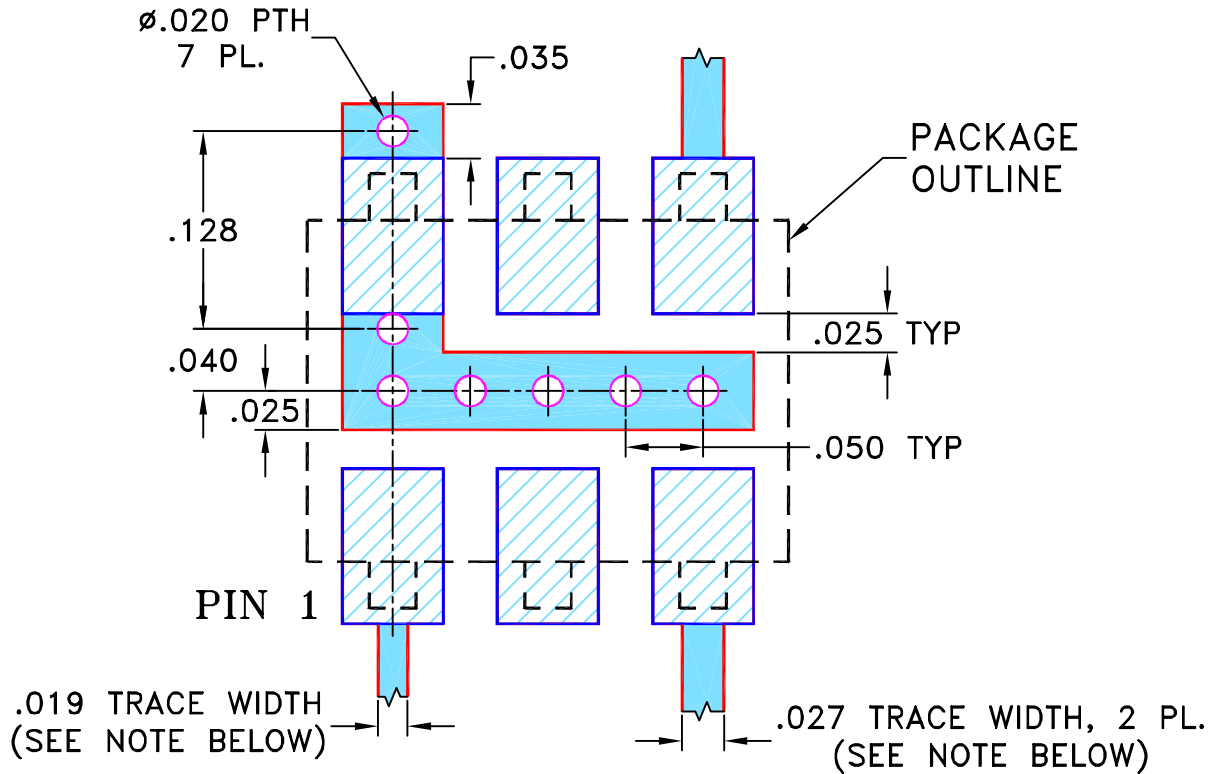
THIRD ANGLE PROJECTION





REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	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" ± .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.

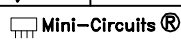
-  DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

UNLESS OTHERWISE SPECIFIED	INITIALS		DATE
DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± .005 ANGLES ± FRACTIONS ±	DRAWN	GF	09/18/03
	CHECKED	IL	10/20/03
	APPROVED	HY	10/20/03

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Brooklyn NY 11235

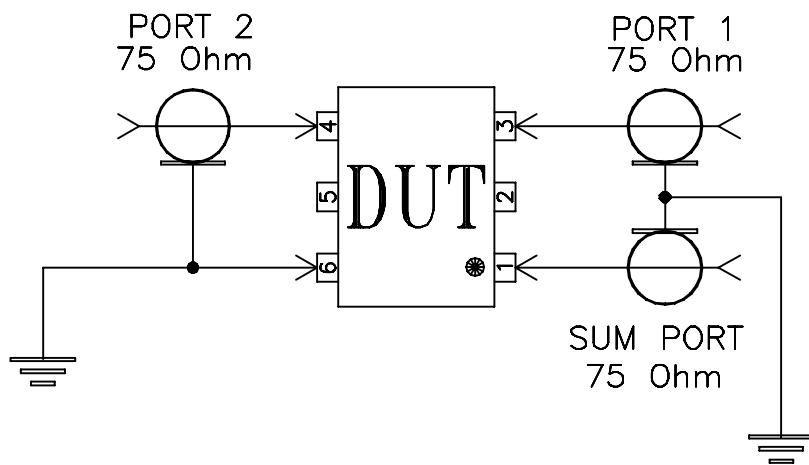
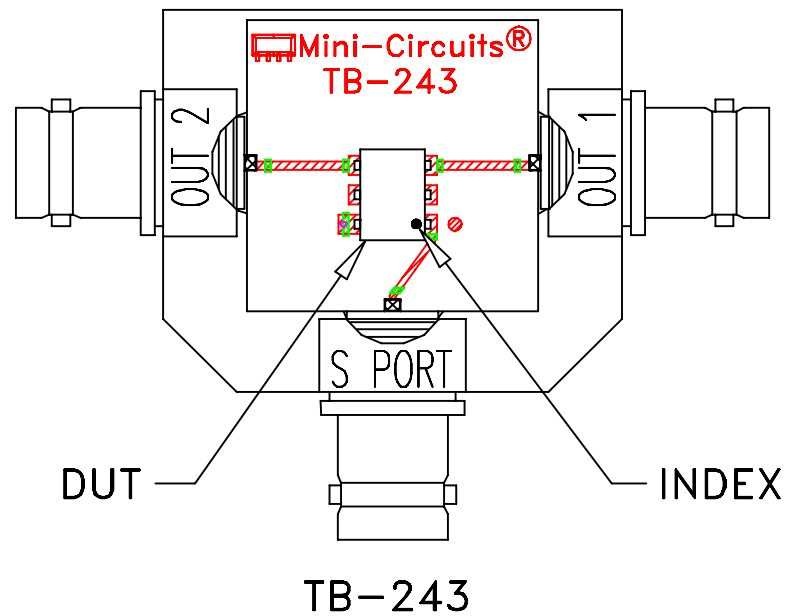
PL, hv, 75, CD542, ADP, TB-243

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

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


# 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.

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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