



**SURFACE MOUNT**

# Power Splitter/Combiner

## AD3PS-1+

Mini-Circuits

3 Way-0° 50Ω 1 to 300 MHz

### FEATURES

- Wideband, 1 to 300 MHz
- High Isolation, 35 dB typ.
- Good input port matching VSWR, 1.12 typ.
- Good output port matching VSWR, 1.14 typ.
- Small size



Generic photo used for illustration purposes only

CASE STYLE: CJ725

**+RoHS Compliant**

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

### APPLICATIONS

- VHF-TV
- Aircraft Communications

### ELECTRICAL SPECIFICATIONS

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range	—	1	—	300	MHz
Insertion Loss above 4.8 dB	1 - 10	—	0.3	0.8	dB
	10 - 150	—	0.4	1.0	
	150 - 300	—	0.8	1.5	
Isolation	1 - 10	23	40	—	dB
	10 - 150	20	35	—	
	150 - 300	18	27	—	
Phase Unbalance	1 - 10	—	—	1	Degree
	10 - 150	—	—	4	
	150 - 300	—	—	6	
Amplitude Unbalance	1 - 10	—	—	0.2	dB
	10 - 150	—	—	0.3	
	150 - 300	—	—	0.5	

### ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°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.

### ELECTRICAL SCHEMATIC





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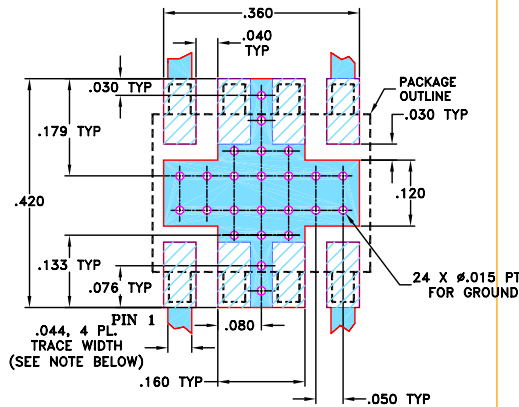
3 Way-0° 50Ω 1 to 300 MHz

### PIN CONNECTIONS

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

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-83  
SUGGESTED PCB LAYOUT (PL-063)

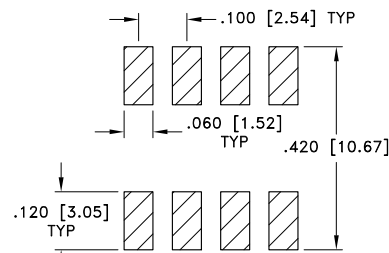
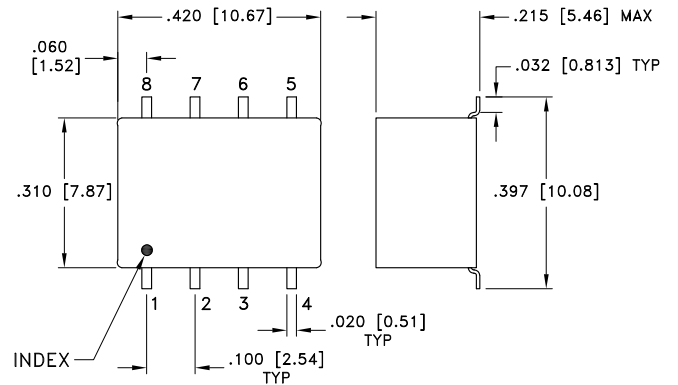


NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

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

### OUTLINE DRAWING



SUGGESTED LAYOUT FOR PCB LAND PATTERN  
PATTERN TO BE WITHIN ±.002



Weight: .40 gram  
Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.01; 3Pl.±.005 Inch

- Notes:
1. Case material: Plastic.
  2. Termination Finish: Tin plate over Nickel plate.

### TAPE & REEL INFORMATION: F10



**SURFACE MOUNT**

# Power Splitter/Combiner

**AD3PS-1+**

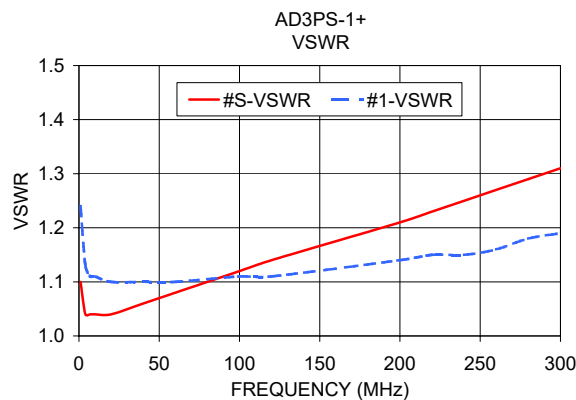
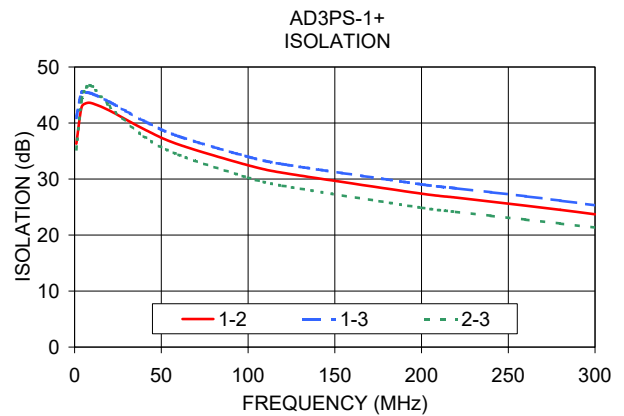
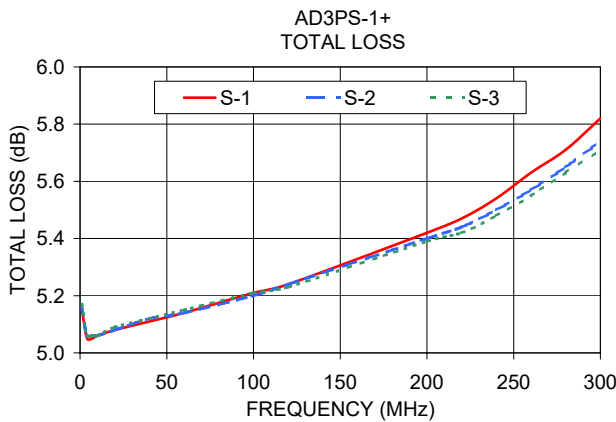
Mini-Circuits

3 Way-0° 50Ω 1 to 300 MHz

**TYPICAL PERFORMANCE DATA**

Frequency (MHz)	Total Loss <sup>1</sup> (dB)			Amplitude Unbalance (dB)	Isolation (dB)			Phase Unbalance (deg.)	VSWR (:1)			
	S-1	S-2	S-3		1-2	1-3	2-3		S	1	2	3
1.00	5.15	5.16	5.17	0.01	36.32	40.91	35.31	0.04	1.10	1.24	1.26	1.25
4.00	5.05	5.06	5.06	0.01	42.83	45.40	44.11	0.04	1.04	1.13	1.13	1.13
7.00	5.05	5.06	5.06	0.01	43.56	45.44	46.46	0.09	1.04	1.11	1.12	1.12
10.00	5.06	5.06	5.06	0.01	43.53	45.25	46.58	0.11	1.04	1.11	1.11	1.11
20.00	5.08	5.08	5.09	0.01	42.24	43.79	43.05	0.16	1.04	1.10	1.10	1.11
40.00	5.11	5.12	5.12	0.00	38.90	40.37	37.60	0.35	1.06	1.10	1.10	1.10
60.00	5.14	5.14	5.15	0.01	36.16	37.63	34.33	0.51	1.08	1.10	1.11	1.11
100.00	5.21	5.20	5.21	0.00	32.45	33.97	30.23	0.89	1.12	1.11	1.12	1.12
120.00	5.24	5.24	5.23	0.01	31.12	32.66	28.79	1.05	1.14	1.11	1.12	1.12
200.00	5.42	5.40	5.39	0.03	27.39	29.05	24.87	1.69	1.21	1.14	1.16	1.15
220.00	5.47	5.44	5.42	0.05	26.68	28.34	24.14	1.84	1.23	1.15	1.17	1.16
240.00	5.54	5.50	5.48	0.06	25.96	27.65	23.43	1.93	1.25	1.15	1.18	1.17
260.00	5.63	5.57	5.55	0.08	25.24	26.92	22.74	2.15	1.27	1.16	1.19	1.18
280.00	5.71	5.65	5.63	0.09	24.50	26.14	22.04	2.25	1.29	1.18	1.21	1.19
300.00	5.82	5.74	5.71	0.11	23.71	25.31	21.33	2.39	1.31	1.19	1.23	1.21

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



- 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/terms/viewterm.html](http://www.minicircuits.com/terms/viewterm.html)



# 3 Way-0° Power Splitter/Combiner

# AD3PS-1+

## 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-3			1-2	1-3	2-3	S	1	2	3
1	5.33	5.33	5.32	0.01	0.01	40.16	39.34	39.68	1.15	1.22	1.22	1.22
2	5.22	5.21	5.21	0.01	0.02	40.94	40.42	40.54	1.09	1.17	1.16	1.16
3	5.16	5.15	5.15	0.01	0.02	41.60	41.14	41.13	1.07	1.14	1.14	1.14
4	5.13	5.13	5.12	0.01	0.01	42.08	41.67	41.57	1.06	1.13	1.13	1.13
5	5.11	5.11	5.11	0.01	0.02	42.38	42.07	41.91	1.05	1.12	1.12	1.12
6	5.11	5.11	5.10	0.00	0.03	42.56	42.35	42.09	1.04	1.12	1.12	1.11
7	5.10	5.11	5.10	0.01	0.04	42.79	42.52	42.19	1.04	1.12	1.11	1.11
8	5.10	5.11	5.10	0.01	0.03	42.97	42.73	42.31	1.04	1.12	1.11	1.11
9	5.11	5.11	5.11	0.01	0.05	43.11	42.95	42.46	1.04	1.11	1.11	1.11
10	5.12	5.12	5.12	0.01	0.08	43.24	43.14	42.59	1.03	1.11	1.11	1.11
11	5.12	5.13	5.13	0.01	0.12	43.40	43.25	42.60	1.03	1.11	1.11	1.11
12	5.12	5.14	5.13	0.01	0.13	43.28	43.37	42.65	1.03	1.11	1.11	1.10
13	5.12	5.13	5.13	0.01	0.14	43.25	43.40	42.63	1.03	1.11	1.10	1.10
14	5.12	5.13	5.12	0.01	0.13	43.21	43.38	42.55	1.03	1.11	1.10	1.10
15	5.11	5.12	5.12	0.01	0.12	43.15	43.35	42.45	1.03	1.11	1.10	1.10
20	5.12	5.12	5.12	0.01	0.15	42.87	43.29	42.06	1.03	1.11	1.10	1.10
25	5.12	5.13	5.12	0.01	0.16	42.33	43.09	41.51	1.03	1.11	1.10	1.10
30	5.13	5.13	5.13	0.01	0.20	41.75	42.71	40.79	1.04	1.11	1.10	1.10
35	5.14	5.14	5.13	0.01	0.22	41.06	42.30	40.11	1.04	1.10	1.10	1.10
40	5.15	5.15	5.14	0.01	0.24	40.31	41.71	39.33	1.04	1.10	1.10	1.10
45	5.16	5.16	5.15	0.01	0.29	39.65	41.15	38.62	1.04	1.10	1.10	1.09
50	5.16	5.16	5.15	0.01	0.30	38.94	40.55	37.92	1.04	1.10	1.10	1.09
75	5.21	5.20	5.18	0.02	0.51	36.05	37.96	35.02	1.05	1.10	1.09	1.09
100	5.24	5.23	5.21	0.04	0.65	33.97	36.13	32.97	1.06	1.09	1.09	1.09
125	5.29	5.25	5.23	0.06	0.81	32.14	34.37	31.17	1.07	1.09	1.09	1.09
150	5.33	5.29	5.25	0.08	0.94	30.85	33.19	29.87	1.08	1.09	1.09	1.08
175	5.38	5.31	5.27	0.11	1.07	29.79	32.26	28.82	1.08	1.09	1.08	1.08
200	5.43	5.34	5.29	0.14	1.16	28.92	31.49	27.96	1.10	1.09	1.08	1.08
225	5.49	5.38	5.32	0.17	1.20	28.14	30.86	27.22	1.11	1.09	1.08	1.08
250	5.55	5.42	5.34	0.21	1.22	27.38	30.22	26.56	1.13	1.10	1.08	1.08
275	5.62	5.47	5.37	0.25	1.24	26.70	29.66	25.99	1.16	1.11	1.08	1.08
300	5.71	5.52	5.41	0.30	1.20	25.94	28.93	25.38	1.20	1.12	1.09	1.09
325	5.81	5.59	5.46	0.35	1.26	25.02	27.92	24.66	1.26	1.13	1.10	1.09
350	5.94	5.67	5.52	0.42	1.44	23.92	26.62	23.77	1.33	1.15	1.11	1.11
375	6.10	5.79	5.60	0.49	1.63	22.64	25.08	22.70	1.42	1.17	1.12	1.12
400	6.30	5.94	5.73	0.56	1.83	21.20	23.38	21.43	1.54	1.20	1.14	1.14
425	6.55	6.15	5.90	0.65	2.08	19.68	21.62	20.04	1.70	1.23	1.16	1.16
450	6.88	6.43	6.14	0.74	2.84	18.14	19.89	18.58	1.90	1.26	1.19	1.18
475	7.31	6.80	6.47	0.84	3.83	16.66	18.26	17.14	2.17	1.30	1.22	1.21
500	7.85	7.29	6.90	0.94	5.08	15.28	16.77	15.77	2.51	1.34	1.25	1.24

<sup>1</sup>Total Loss = Insertion Loss + 4.8dB Splitter Loss



# 3 Way-0° Power Splitter/Combiner

# AD3PS-1+

## 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-3			1-2	1-3	2-3	S	1	2	3
1	5.51	5.50	5.50	0.02	0.03	32.68	31.90	43.18	1.25	1.48	1.41	1.42
2	5.37	5.36	5.37	0.01	0.02	36.41	35.74	47.84	1.16	1.34	1.30	1.30
3	5.28	5.26	5.27	0.01	0.02	38.38	37.84	50.42	1.13	1.28	1.25	1.25
4	5.21	5.20	5.20	0.01	0.03	39.45	38.97	51.07	1.11	1.24	1.22	1.22
5	5.16	5.14	5.15	0.01	0.03	40.16	39.62	50.20	1.09	1.22	1.20	1.20
6	5.11	5.10	5.11	0.01	0.01	40.67	39.98	48.46	1.08	1.20	1.18	1.18
7	5.09	5.08	5.09	0.01	0.03	40.93	40.19	47.20	1.07	1.18	1.17	1.16
8	5.07	5.06	5.07	0.01	0.03	41.27	40.46	46.40	1.07	1.17	1.15	1.15
9	5.07	5.06	5.07	0.01	0.06	41.69	40.78	45.95	1.06	1.15	1.14	1.14
10	5.06	5.06	5.07	0.01	0.09	42.14	41.10	45.71	1.06	1.14	1.13	1.13
11	5.06	5.06	5.07	0.01	0.10	42.46	41.37	45.53	1.05	1.14	1.13	1.12
12	5.06	5.06	5.07	0.01	0.10	42.71	41.47	45.17	1.05	1.13	1.12	1.11
13	5.05	5.05	5.06	0.01	0.16	42.87	41.52	44.82	1.05	1.12	1.11	1.11
14	5.04	5.04	5.05	0.01	0.18	42.95	41.54	44.46	1.05	1.12	1.11	1.10
15	5.04	5.03	5.04	0.01	0.16	42.98	41.52	44.13	1.05	1.12	1.11	1.10
20	5.03	5.03	5.03	0.01	0.15	42.77	41.39	43.02	1.05	1.10	1.09	1.08
25	5.03	5.02	5.03	0.01	0.21	42.31	41.15	41.94	1.05	1.10	1.09	1.08
30	5.03	5.03	5.03	0.01	0.21	41.68	40.81	40.92	1.05	1.09	1.09	1.07
35	5.04	5.03	5.04	0.01	0.29	40.83	40.37	39.92	1.06	1.09	1.08	1.07
40	5.05	5.03	5.04	0.01	0.31	40.00	39.90	39.02	1.06	1.09	1.08	1.06
45	5.05	5.04	5.05	0.02	0.35	39.16	39.40	38.14	1.07	1.09	1.08	1.06
50	5.06	5.04	5.05	0.02	0.39	38.40	38.95	37.38	1.07	1.08	1.08	1.06
75	5.09	5.07	5.07	0.02	0.63	36.12	37.75	35.11	1.08	1.07	1.06	1.07
100	5.12	5.09	5.09	0.03	0.82	34.93	36.96	33.84	1.07	1.06	1.06	1.07
125	5.16	5.11	5.11	0.06	1.00	32.35	34.34	31.44	1.09	1.06	1.06	1.07
150	5.20	5.14	5.13	0.08	1.20	30.53	32.64	29.67	1.11	1.06	1.05	1.05
175	5.24	5.16	5.14	0.11	1.37	29.94	32.35	29.02	1.11	1.06	1.05	1.06
200	5.29	5.19	5.15	0.13	1.48	29.32	31.94	28.43	1.12	1.06	1.06	1.07
225	5.34	5.22	5.17	0.17	1.55	28.15	30.77	27.33	1.14	1.07	1.06	1.07
250	5.40	5.24	5.18	0.21	1.63	27.43	30.18	26.66	1.15	1.08	1.06	1.05
275	5.46	5.29	5.21	0.25	1.61	27.14	30.11	26.44	1.16	1.09	1.07	1.05
300	5.54	5.33	5.24	0.31	1.59	26.27	29.19	25.79	1.21	1.11	1.08	1.07
325	5.64	5.39	5.27	0.36	1.47	25.16	27.93	24.88	1.27	1.12	1.09	1.09
350	5.75	5.46	5.33	0.42	1.33	24.08	26.69	24.04	1.33	1.14	1.10	1.10
375	5.90	5.58	5.41	0.49	1.04	22.69	25.00	22.87	1.43	1.17	1.12	1.11
400	6.09	5.72	5.52	0.57	0.68	21.09	23.11	21.41	1.57	1.20	1.14	1.14
425	6.34	5.92	5.69	0.65	0.16	19.53	21.32	19.94	1.73	1.23	1.17	1.16
450	6.66	6.20	5.92	0.74	0.50	17.96	19.58	18.43	1.96	1.27	1.20	1.19
475	7.09	6.57	6.26	0.83	1.31	16.43	17.91	16.90	2.26	1.31	1.24	1.22
500	7.62	7.06	6.69	0.93	2.36	15.03	16.42	15.51	2.64	1.35	1.28	1.25

<sup>1</sup>Total Loss = Insertion Loss + 4.8dB Splitter Loss



# 3 Way-0° Power Splitter/Combiner

# AD3PS-1+

## 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-3			1-2	1-3	2-3	S	1	2	3
1	5.47	5.45	5.46	0.01	0.03	46.63	44.72	46.83	1.17	1.30	1.29	1.29
2	5.32	5.31	5.32	0.01	0.02	47.12	45.35	45.10	1.11	1.22	1.22	1.21
3	5.26	5.25	5.26	0.01	0.01	47.34	45.54	44.23	1.08	1.19	1.18	1.18
4	5.24	5.22	5.24	0.01	0.02	47.55	45.62	43.88	1.06	1.17	1.17	1.16
5	5.22	5.22	5.23	0.01	0.02	47.76	45.74	43.78	1.06	1.16	1.16	1.16
6	5.22	5.21	5.22	0.01	0.03	47.78	45.83	43.77	1.05	1.16	1.15	1.15
7	5.21	5.21	5.22	0.01	0.03	47.78	45.88	43.74	1.05	1.15	1.14	1.14
8	5.22	5.21	5.22	0.01	0.04	47.82	46.00	43.75	1.05	1.15	1.14	1.14
9	5.22	5.22	5.23	0.02	0.05	47.84	46.16	43.78	1.04	1.15	1.14	1.14
10	5.23	5.23	5.25	0.02	0.10	47.76	46.29	43.79	1.04	1.14	1.14	1.14
11	5.23	5.24	5.26	0.02	0.13	47.48	46.31	43.76	1.04	1.14	1.13	1.14
12	5.24	5.24	5.26	0.02	0.11	47.34	46.28	43.66	1.04	1.14	1.13	1.14
13	5.24	5.24	5.26	0.02	0.13	47.05	46.16	43.49	1.04	1.14	1.13	1.14
14	5.24	5.23	5.25	0.02	0.14	46.70	45.97	43.30	1.04	1.14	1.13	1.13
15	5.24	5.23	5.25	0.02	0.14	46.37	45.79	43.14	1.04	1.14	1.13	1.13
20	5.24	5.24	5.25	0.02	0.14	45.26	45.58	42.63	1.04	1.14	1.13	1.13
25	5.25	5.24	5.26	0.02	0.18	44.22	45.03	41.94	1.05	1.13	1.12	1.13
30	5.25	5.25	5.27	0.02	0.20	43.22	44.55	41.35	1.05	1.13	1.12	1.13
35	5.26	5.26	5.28	0.02	0.27	42.38	44.08	40.73	1.04	1.13	1.12	1.14
40	5.27	5.27	5.29	0.02	0.32	41.84	43.78	40.23	1.04	1.13	1.12	1.14
45	5.28	5.27	5.30	0.03	0.37	41.38	43.45	39.74	1.04	1.13	1.12	1.14
50	5.29	5.28	5.30	0.02	0.41	40.92	43.14	39.24	1.03	1.13	1.12	1.14
75	5.33	5.32	5.33	0.02	0.65	37.59	39.89	35.97	1.02	1.13	1.12	1.13
100	5.38	5.35	5.36	0.03	0.86	34.04	36.05	32.64	1.05	1.14	1.13	1.11
125	5.42	5.38	5.38	0.04	1.07	32.14	34.23	30.86	1.05	1.13	1.12	1.11
150	5.47	5.41	5.41	0.06	1.28	31.50	33.92	30.16	1.05	1.13	1.12	1.12
175	5.51	5.44	5.43	0.08	1.50	30.29	32.78	28.97	1.07	1.13	1.12	1.12
200	5.57	5.48	5.45	0.11	1.76	29.02	31.48	27.77	1.08	1.12	1.11	1.10
225	5.63	5.51	5.48	0.15	1.97	28.41	31.07	27.18	1.09	1.12	1.10	1.09
250	5.69	5.56	5.50	0.19	2.21	27.86	30.72	26.70	1.12	1.12	1.09	1.10
275	5.77	5.61	5.55	0.22	2.50	27.00	29.91	25.98	1.16	1.13	1.09	1.11
300	5.86	5.67	5.58	0.27	2.78	26.18	29.17	25.34	1.20	1.13	1.09	1.10
325	5.97	5.74	5.63	0.33	3.09	25.44	28.47	24.81	1.24	1.14	1.09	1.10
350	6.10	5.84	5.71	0.40	3.38	24.38	27.29	24.05	1.32	1.15	1.10	1.11
375	6.26	5.96	5.80	0.46	3.70	23.06	25.72	22.99	1.41	1.17	1.12	1.13
400	6.46	6.12	5.92	0.54	4.05	21.69	24.11	21.84	1.52	1.20	1.13	1.14
425	6.72	6.33	6.10	0.62	4.47	20.21	22.36	20.53	1.66	1.22	1.15	1.15
450	7.06	6.61	6.34	0.71	5.16	18.65	20.57	19.09	1.86	1.26	1.18	1.18
475	7.48	6.99	6.67	0.81	6.28	17.15	18.90	17.64	2.10	1.29	1.21	1.20
500	8.02	7.47	7.10	0.92	7.57	15.74	17.37	16.27	2.40	1.33	1.24	1.22

<sup>1</sup>Total Loss = Insertion Loss + 4.8dB Splitter Loss

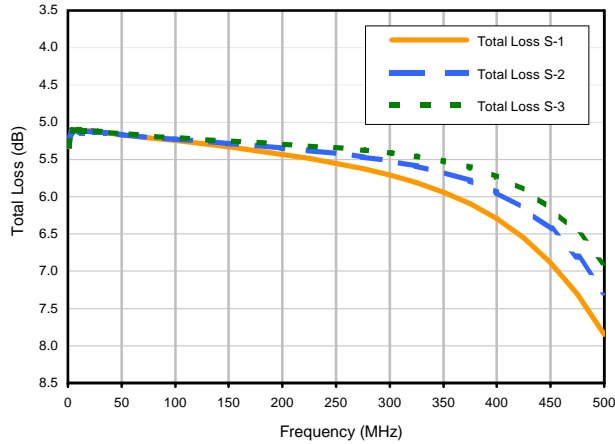


# 3 Way-0° Power Splitter/Combiner

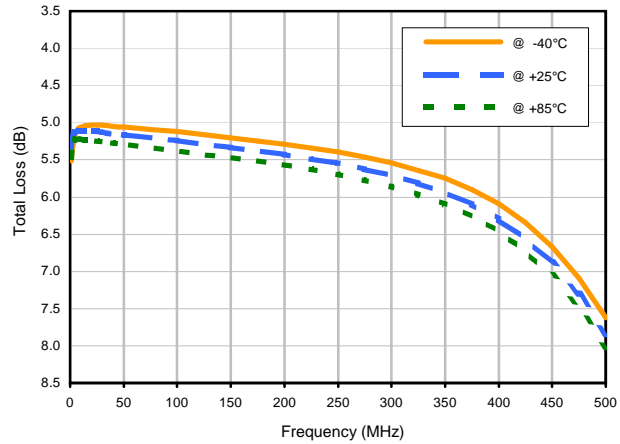
# AD3PS-1+

## Typical Performance Curves

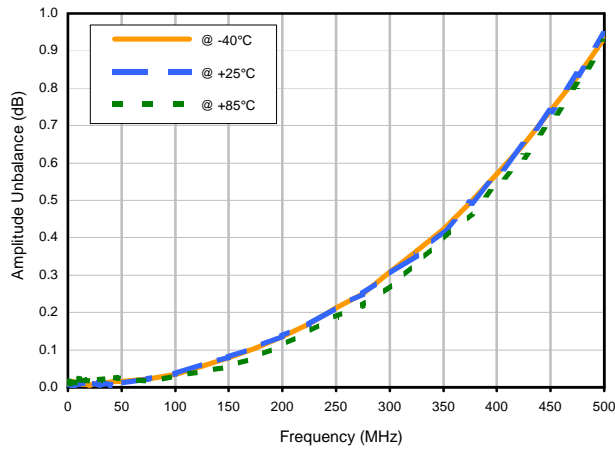
**Total Loss**



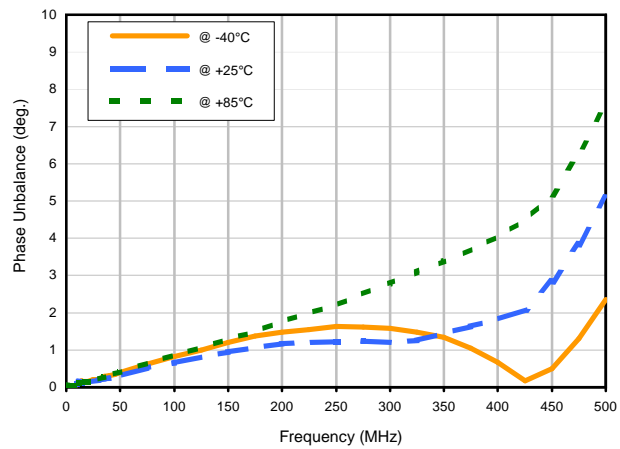
**Total Loss S-1 vs. TEMPERATURE**



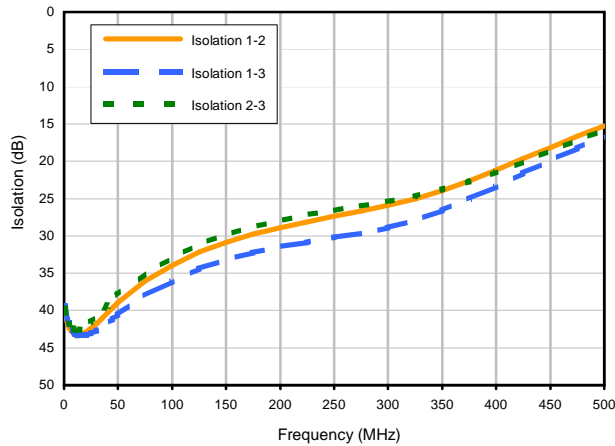
**Amplitude Unbalance vs. TEMPERATURE**



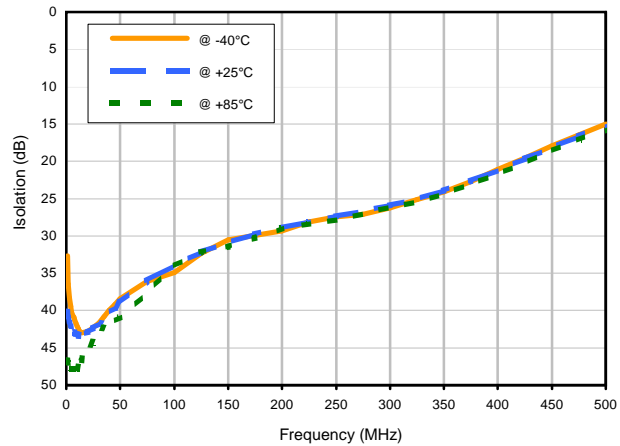
**Phase Unbalance vs. TEMPERATURE**



**Isolation**



**Isolation 1-2 vs. TEMPERATURE**



REV. X2  
AD3PS-1+  
100623  
Page 1 of 2



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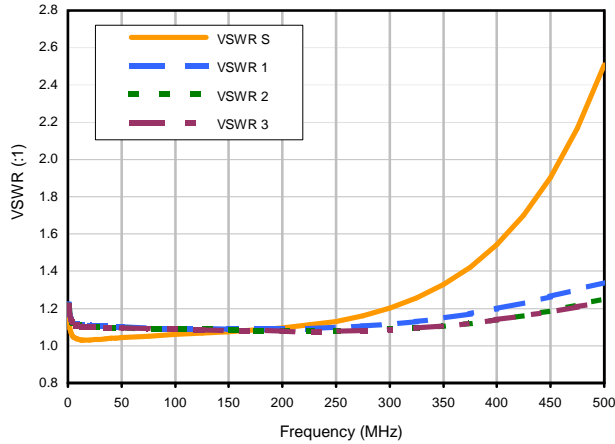


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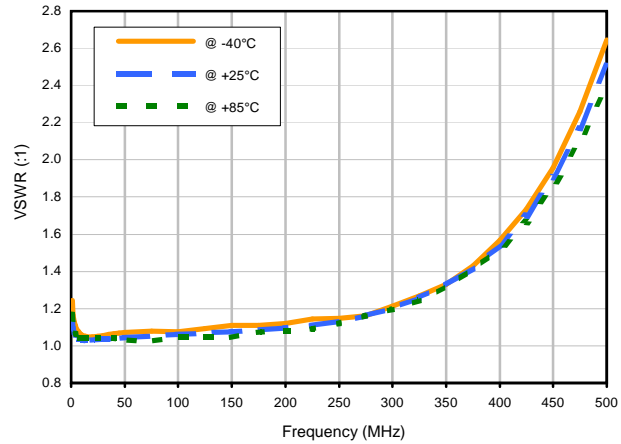


## Typical Performance Curves

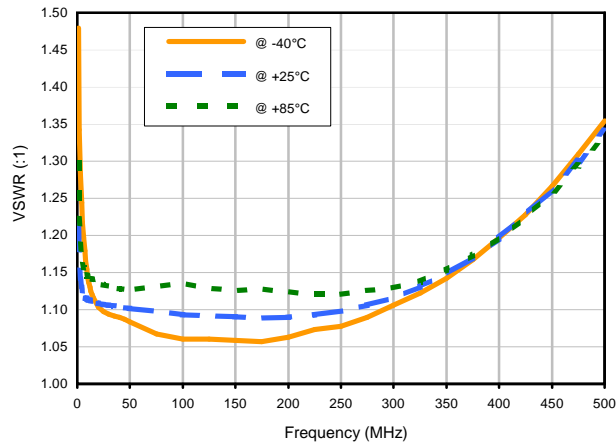
VSWR



VSWR SUM vs. TEMPERATURE



VSWR OUT1 vs. TEMPERATURE



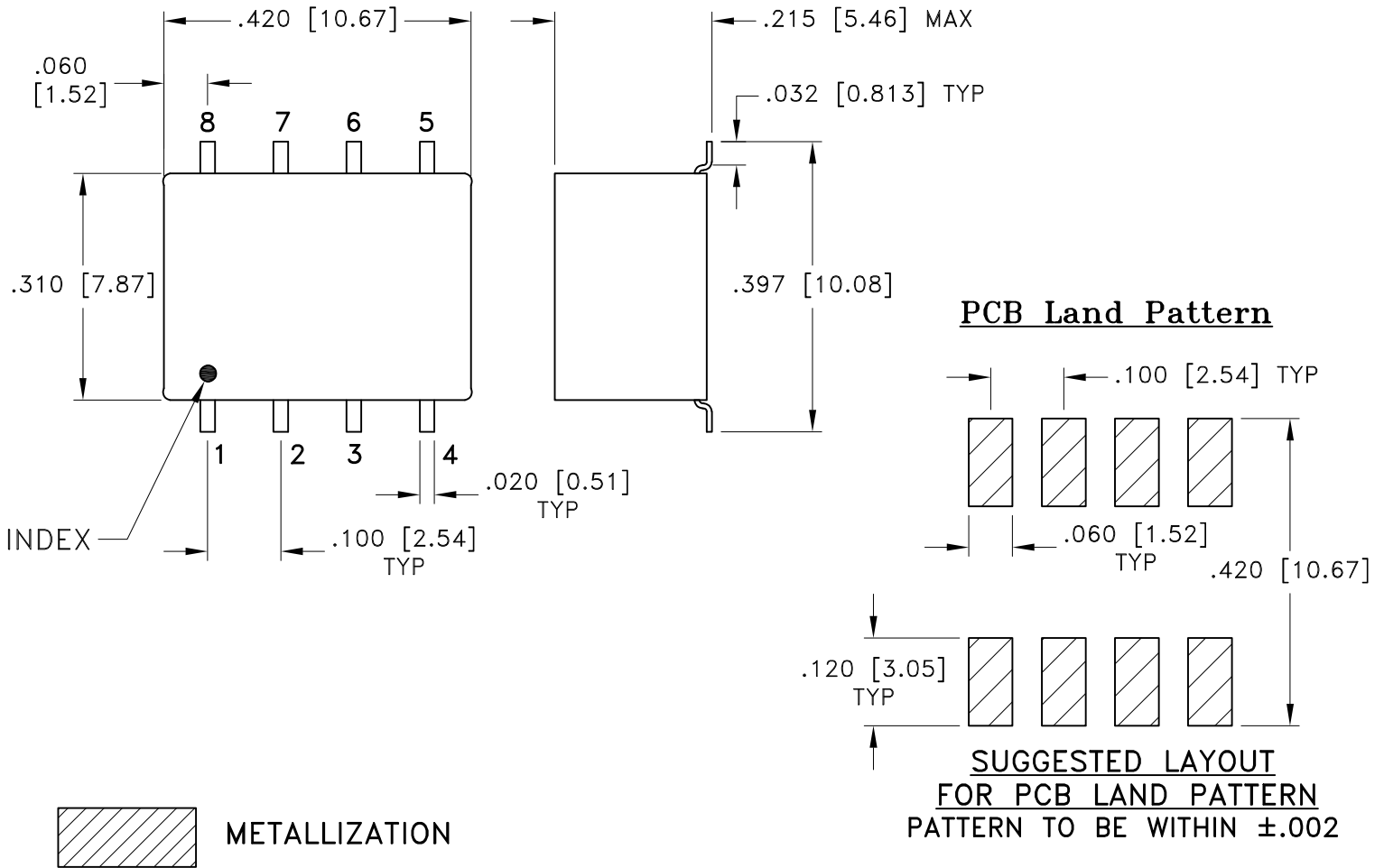


# Case Style

CJ

## Outline Dimensions

CJ725



Weight: .40 gram

Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.01; 3 Pl. ±.005 Inch

### Notes:

1. Case material: Plastic.
2. Termination finish:  
Tin plate over Nickel plate.

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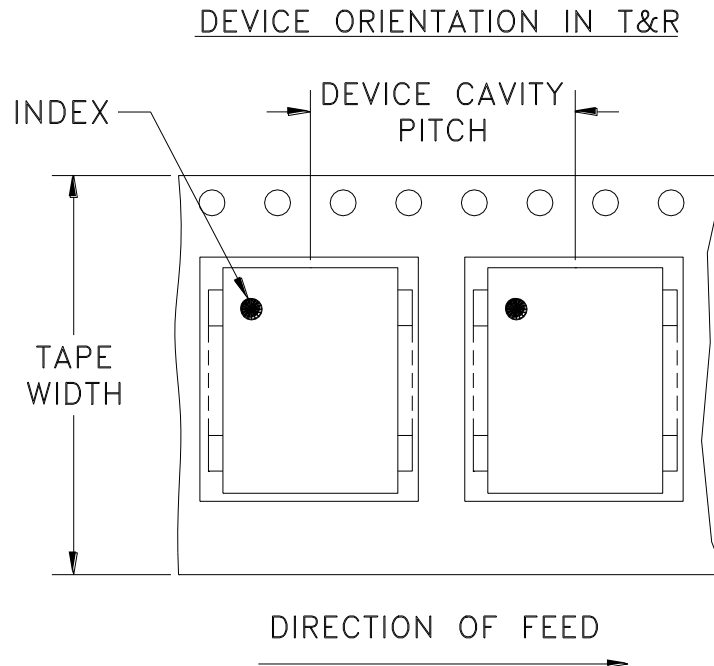

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# Tape & Reel Packaging TR-F10



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
24	16	7	10,20,50,100,200
		13	500

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Note: Please consult individual model data sheet to determine device per reel availability.



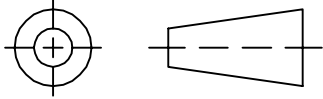
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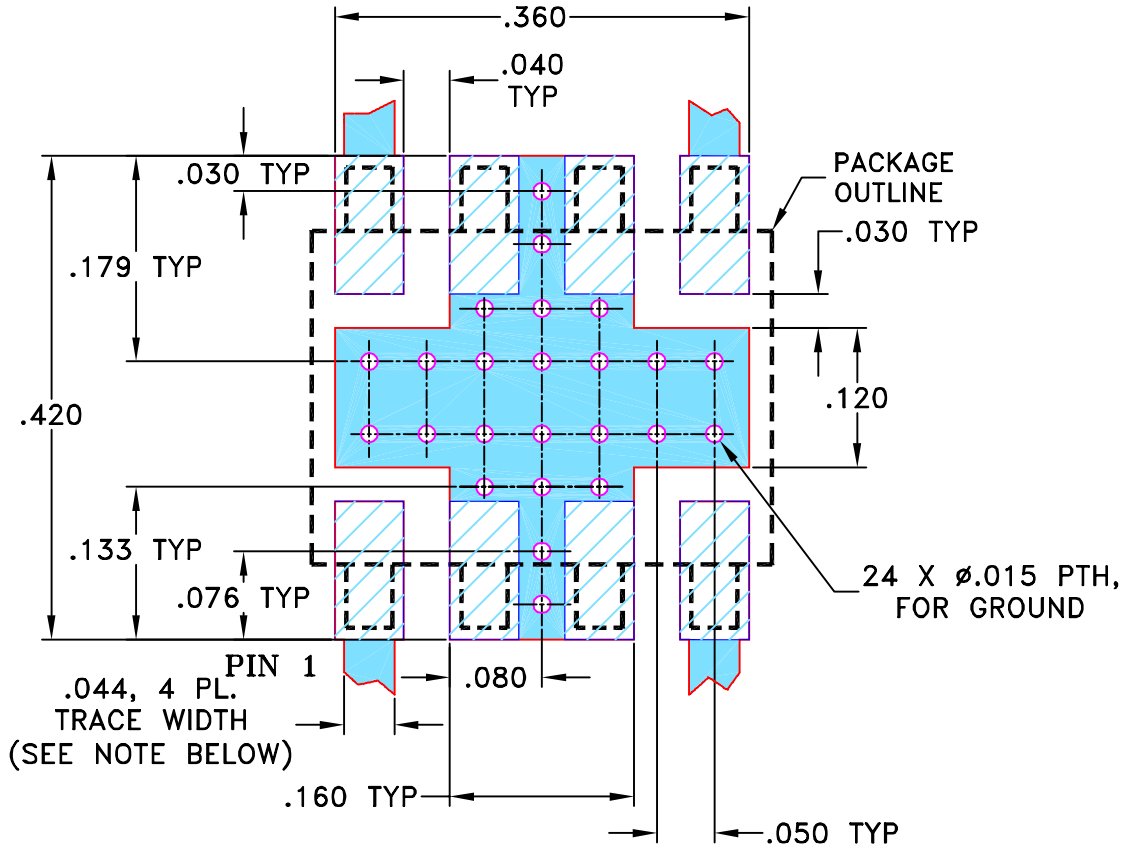
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M82272	NEW RELEASE	08/06/02	GF	DJ
A	M102713	UPDATED NOTES, ADDED "...WITH SMOBC"	01/16/06	GT	IL

SUGGESTED MOUNTING CONFIGURATION FOR CJ725 CASE STYLE, "ma", "nf" PIN CONNECTIONS



- NOTES: 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	DRAWN GF	07/18/02
TOLERANCES ON:	CHECKED HY	08/01/02
2 PL DECIMALS ±	APPROVED DJ	08/06/02
3 PL DECIMALS ± .005		
ANGLES ±		
FRACTIONS ±		

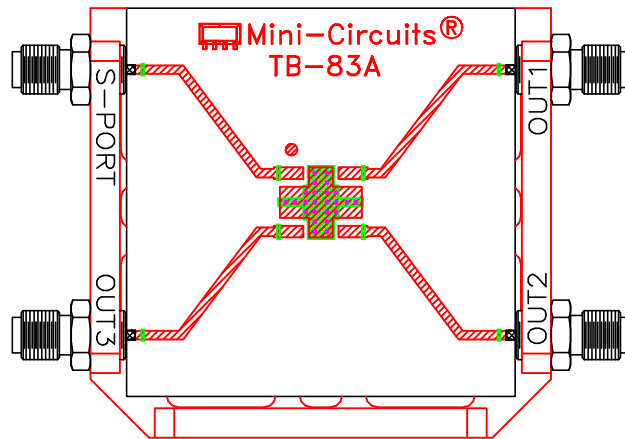
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PL, ma/nf, CJ725, AD3PS/ADQ, TB-83

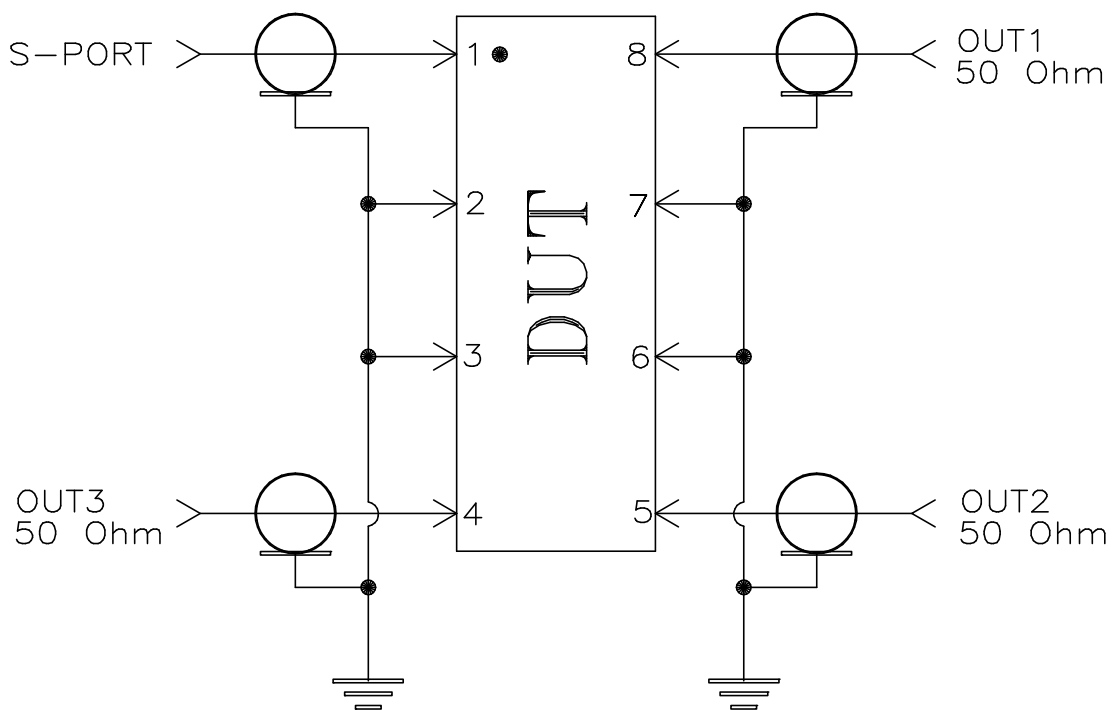
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SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-063	A
FILE:	98PL063	SCALE:	SHEET:
		6:1	1 OF 1

# Evaluation Board and Circuit




TB-83



Schematic Diagram

## Notes:

1. SMA Female connectors.
2. PCB Material: Rogers R04350 or equivalent, Dielectric Constant=3.5, Thickness=.020 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