

Surface Mount Power Splitter/Combiner

4 Way-0° 50Ω 5 to 1000 MHz

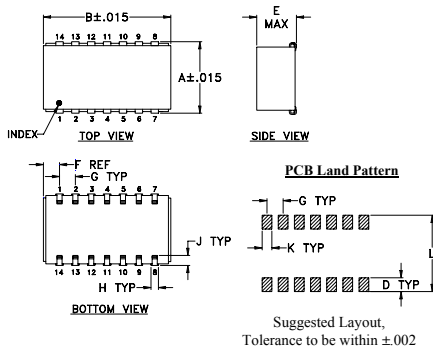
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.375W max.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

SUM PORT	10
PORT 1	2
PORT 2	3
PORT 3	5
PORT 4	6
GROUND	1,4,7,8,9,11,12,13,14

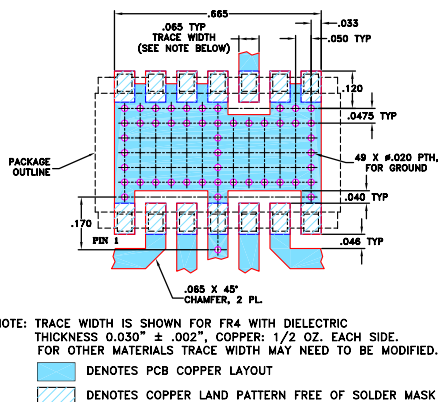
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.505	.800	--	.100	.250	.100
12.83	20.32	--	2.54	6.35	2.54
G	H	J	K	L	wt
.100	.047	.065	.065	.525	grams
2.54	1.19	1.651	1.65	13.34	3.0

Demo Board MCL P/N: TB-133 Suggested PCB Layout (PL-091)



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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 frequency, 5 to 1000 MHz
- good input matching, VSWR 1.2 typ.
- good output matching, VSWR 1.1 typ.
- shielded case
- aqueous washable
- protected under US patent 6,963,255

Applications

- VHF/UHF-TV receivers/transmitters
- cellular

Electrical Specifications

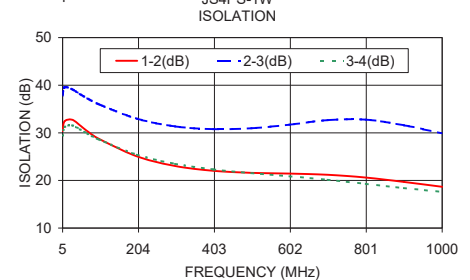
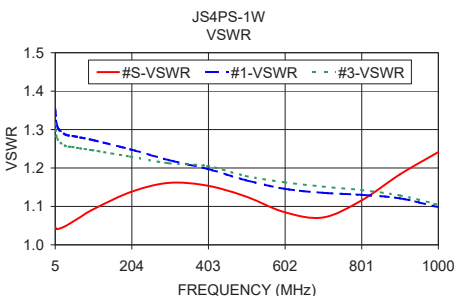
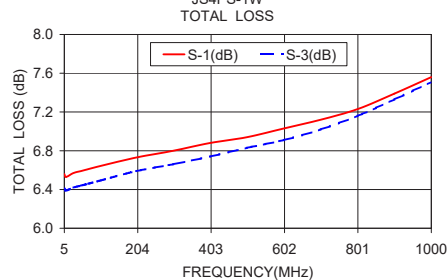
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 6.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
f _L -f _U	29	20	26	18	20	15	0.3	1.1	0.8	1.5	1.5	2.4	5	5	12	0.8	0.7	0.7

L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
5.00	6.56	6.36	6.41	6.21	0.36	30.36	37.82	29.37	0.69	1.05	1.35	1.29	1.32	1.26
10.00	6.53	6.34	6.39	6.20	0.34	32.42	39.54	31.18	0.39	1.04	1.31	1.25	1.28	1.23
30.00	6.57	6.38	6.42	6.24	0.33	32.75	39.14	31.56	0.18	1.05	1.29	1.24	1.26	1.21
50.00	6.59	6.40	6.44	6.26	0.33	31.59	38.16	30.74	0.23	1.06	1.28	1.23	1.25	1.21
70.00	6.61	6.42	6.46	6.28	0.33	30.35	37.24	29.84	0.28	1.07	1.28	1.23	1.25	1.21
100.00	6.64	6.44	6.49	6.30	0.34	28.75	36.00	28.60	0.48	1.09	1.27	1.22	1.25	1.20
200.00	6.73	6.54	6.59	6.40	0.33	25.05	32.97	25.41	0.99	1.14	1.25	1.20	1.23	1.19
300.00	6.80	6.62	6.66	6.48	0.32	23.04	31.34	23.48	1.43	1.16	1.22	1.18	1.21	1.17
400.00	6.88	6.70	6.74	6.56	0.32	22.03	30.78	22.32	1.93	1.15	1.20	1.17	1.21	1.16
500.00	6.94	6.77	6.83	6.64	0.31	21.60	30.97	21.54	2.25	1.13	1.17	1.16	1.18	1.15
600.00	7.03	6.88	6.91	6.74	0.29	21.44	31.71	20.88	2.64	1.09	1.15	1.16	1.16	1.15
700.00	7.12	6.99	7.02	6.85	0.26	21.20	32.66	20.14	2.87	1.07	1.14	1.17	1.15	1.16
800.00	7.23	7.13	7.16	7.00	0.24	20.60	32.77	19.28	3.13	1.12	1.13	1.18	1.14	1.16
900.00	7.39	7.33	7.33	7.19	0.20	19.68	31.58	18.40	3.28	1.18	1.12	1.19	1.13	1.16
1000.00	7.56	7.56	7.51	7.39	0.17	18.66	29.87	17.60	3.43	1.24	1.10	1.19	1.10	1.15

1. Total Loss = Insertion Loss + 6dB splitter loss.



electrical schematic



Generic photo used for illustration purposes only

CASE STYLE: BK377

+RoHS Compliant

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



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WZ/TD/CP/AM
200428

4 Way-0° Power Splitter/Combiner

JS4PS-1W+

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	S-4			1-2	2-3	3-4	S	1	2	3	4
5	6.20	6.38	6.33	6.51	0.32	0.73	29.13	36.26	32.08	1.05	1.26	1.31	1.28	1.32
10	6.20	6.38	6.33	6.50	0.30	0.43	30.39	37.90	32.87	1.04	1.23	1.28	1.24	1.29
20	6.22	6.40	6.35	6.52	0.30	0.18	30.68	38.33	32.75	1.04	1.21	1.26	1.23	1.27
30	6.24	6.41	6.37	6.53	0.30	0.19	30.35	37.94	32.23	1.05	1.21	1.26	1.23	1.27
40	6.25	6.43	6.39	6.55	0.30	0.22	30.01	37.62	31.72	1.05	1.21	1.26	1.23	1.27
50	6.26	6.44	6.40	6.56	0.30	0.24	29.69	37.35	31.22	1.06	1.21	1.25	1.23	1.27
60	6.27	6.45	6.41	6.58	0.30	0.26	29.38	37.06	30.70	1.06	1.21	1.25	1.22	1.27
70	6.28	6.46	6.42	6.58	0.30	0.38	29.07	36.82	30.20	1.07	1.21	1.25	1.22	1.27
80	6.30	6.47	6.44	6.60	0.30	0.41	28.75	36.57	29.70	1.07	1.20	1.25	1.22	1.26
90	6.30	6.48	6.45	6.61	0.30	0.45	28.43	36.33	29.22	1.08	1.20	1.25	1.22	1.26
100	6.31	6.49	6.46	6.62	0.30	0.53	28.12	36.10	28.76	1.08	1.20	1.24	1.22	1.26
150	6.36	6.53	6.50	6.66	0.31	0.79	26.63	35.00	26.71	1.11	1.19	1.24	1.21	1.24
200	6.40	6.58	6.54	6.71	0.31	1.04	25.30	34.04	25.07	1.13	1.19	1.23	1.20	1.23
250	6.44	6.61	6.58	6.75	0.31	1.34	24.14	33.19	23.78	1.14	1.18	1.22	1.19	1.21
300	6.48	6.65	6.62	6.81	0.32	1.59	23.11	32.44	22.74	1.15	1.17	1.21	1.18	1.20
350	6.53	6.69	6.66	6.85	0.32	1.81	22.20	31.82	21.89	1.16	1.17	1.20	1.16	1.18
400	6.57	6.73	6.71	6.90	0.32	2.10	21.41	31.29	21.21	1.17	1.16	1.19	1.15	1.16
450	6.61	6.77	6.75	6.94	0.33	2.37	20.71	30.85	20.66	1.17	1.15	1.18	1.14	1.14
500	6.66	6.81	6.79	6.98	0.32	2.62	20.12	30.49	20.24	1.17	1.14	1.16	1.13	1.12
550	6.71	6.85	6.84	7.04	0.32	2.85	19.61	30.22	19.92	1.17	1.13	1.15	1.12	1.10
600	6.77	6.90	6.89	7.09	0.32	3.05	19.18	30.01	19.69	1.17	1.12	1.14	1.11	1.08
650	6.82	6.95	6.94	7.14	0.31	3.30	18.82	29.84	19.54	1.17	1.11	1.12	1.11	1.07
700	6.88	6.99	7.00	7.19	0.31	3.51	18.52	29.67	19.43	1.17	1.10	1.10	1.10	1.05
750	6.94	7.04	7.06	7.24	0.30	3.68	18.26	29.52	19.37	1.16	1.08	1.09	1.10	1.04
800	7.01	7.10	7.13	7.30	0.29	3.92	18.05	29.33	19.32	1.16	1.07	1.07	1.10	1.04
850	7.08	7.16	7.20	7.36	0.28	4.13	17.84	29.07	19.26	1.15	1.06	1.05	1.10	1.04
900	7.16	7.22	7.28	7.42	0.27	4.40	17.65	28.74	19.18	1.14	1.05	1.04	1.10	1.06
950	7.24	7.29	7.37	7.49	0.25	4.59	17.48	28.36	19.09	1.13	1.05	1.02	1.10	1.07
1000	7.33	7.37	7.47	7.57	0.23	4.82	17.31	27.94	18.98	1.12	1.04	1.02	1.10	1.08
1050	7.43	7.45	7.57	7.65	0.22	5.01	17.17	27.52	18.86	1.10	1.04	1.03	1.10	1.10
1100	7.54	7.54	7.69	7.75	0.21	5.29	17.08	27.06	18.77	1.08	1.06	1.05	1.10	1.12
1150	7.65	7.64	7.81	7.85	0.21	5.68	17.04	26.61	18.73	1.06	1.08	1.07	1.10	1.14
1200	7.77	7.74	7.95	7.95	0.21	6.12	17.07	26.21	18.77	1.06	1.10	1.10	1.10	1.17
1250	7.90	7.86	8.09	8.07	0.23	6.54	17.22	25.81	18.94	1.06	1.13	1.14	1.12	1.20
1300	8.04	7.98	8.24	8.19	0.26	7.02	17.48	25.45	19.27	1.08	1.17	1.17	1.14	1.24
1350	8.19	8.12	8.42	8.34	0.30	7.59	17.91	25.08	19.79	1.10	1.20	1.21	1.16	1.28
1400	8.36	8.27	8.60	8.49	0.33	8.08	18.52	24.80	20.56	1.11	1.24	1.24	1.19	1.32
1450	8.54	8.43	8.81	8.67	0.38	8.65	19.36	24.58	21.70	1.13	1.28	1.28	1.23	1.36
1500	8.74	8.62	9.05	8.87	0.43	9.19	20.47	24.38	23.28	1.14	1.32	1.33	1.26	1.41
1600	9.19	9.05	9.59	9.36	0.54	10.31	24.33	24.22	28.78	1.13	1.39	1.41	1.34	1.50

¹Total Loss = Insertion Loss + 6dB Splitter Loss

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4 Way-0° Power Splitter/Combiner

JS4PS-1W+

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)			VSWR (:1)				
	S-1	S-2	S-3	S-4			1-2	2-3	3-4	S	1	2	3	4
5	6.21	6.42	6.37	6.57	0.36	1.63	25.19	33.29	26.87	1.08	1.36	1.44	1.39	1.47
10	6.20	6.35	6.32	6.47	0.27	1.07	28.77	36.45	30.54	1.06	1.26	1.31	1.28	1.33
20	6.19	6.33	6.30	6.43	0.24	0.51	32.07	38.89	34.13	1.05	1.21	1.24	1.22	1.25
30	6.21	6.33	6.31	6.43	0.22	0.36	32.88	39.26	35.00	1.06	1.19	1.22	1.20	1.23
40	6.21	6.33	6.32	6.44	0.22	0.28	32.93	39.19	34.83	1.07	1.18	1.21	1.19	1.22
50	6.22	6.34	6.32	6.44	0.22	0.29	32.62	38.94	34.27	1.07	1.18	1.20	1.18	1.21
60	6.23	6.35	6.33	6.45	0.22	0.31	32.21	38.67	33.54	1.08	1.17	1.20	1.18	1.21
70	6.24	6.36	6.34	6.45	0.22	0.41	31.73	38.34	32.78	1.09	1.17	1.20	1.18	1.21
80	6.25	6.37	6.35	6.46	0.22	0.41	31.22	38.02	32.03	1.09	1.17	1.20	1.18	1.21
90	6.25	6.37	6.35	6.47	0.22	0.50	30.70	37.69	31.34	1.10	1.16	1.20	1.18	1.21
100	6.26	6.38	6.36	6.48	0.22	0.52	30.19	37.35	30.68	1.10	1.16	1.20	1.18	1.21
150	6.29	6.41	6.39	6.51	0.22	0.83	27.97	35.82	27.98	1.12	1.16	1.18	1.17	1.19
200	6.33	6.44	6.42	6.55	0.22	1.12	26.19	34.52	25.99	1.15	1.15	1.18	1.16	1.19
250	6.36	6.47	6.45	6.58	0.22	1.38	24.73	33.44	24.46	1.16	1.15	1.18	1.16	1.18
300	6.40	6.50	6.49	6.62	0.22	1.65	23.51	32.54	23.25	1.18	1.15	1.17	1.15	1.16
350	6.43	6.53	6.52	6.65	0.22	1.92	22.49	31.77	22.29	1.19	1.14	1.17	1.14	1.16
400	6.47	6.56	6.55	6.69	0.22	2.22	21.62	31.15	21.50	1.19	1.13	1.16	1.13	1.14
450	6.50	6.59	6.58	6.72	0.22	2.49	20.88	30.63	20.87	1.19	1.13	1.15	1.12	1.13
500	6.54	6.62	6.62	6.76	0.21	2.76	20.25	30.21	20.38	1.20	1.12	1.14	1.11	1.11
550	6.58	6.65	6.65	6.79	0.22	3.01	19.73	29.89	20.01	1.19	1.11	1.14	1.10	1.09
600	6.62	6.68	6.69	6.83	0.21	3.22	19.27	29.62	19.73	1.19	1.10	1.12	1.09	1.07
650	6.67	6.72	6.73	6.87	0.20	3.45	18.89	29.43	19.52	1.18	1.09	1.10	1.09	1.05
700	6.71	6.75	6.78	6.91	0.19	3.67	18.58	29.24	19.37	1.18	1.08	1.09	1.08	1.04
750	6.77	6.79	6.82	6.94	0.17	3.89	18.30	29.05	19.28	1.17	1.07	1.07	1.08	1.03
800	6.82	6.83	6.88	6.99	0.17	4.16	18.06	28.88	19.20	1.17	1.06	1.06	1.07	1.03
850	6.88	6.88	6.94	7.04	0.17	4.36	17.84	28.62	19.13	1.16	1.05	1.05	1.08	1.04
900	6.94	6.92	7.00	7.09	0.17	4.65	17.62	28.29	19.05	1.15	1.04	1.03	1.08	1.05
950	7.01	6.98	7.07	7.14	0.17	4.87	17.41	27.95	18.98	1.14	1.04	1.02	1.08	1.07
1000	7.09	7.04	7.15	7.20	0.17	5.15	17.23	27.61	18.87	1.12	1.04	1.02	1.08	1.09
1050	7.17	7.10	7.25	7.28	0.18	5.33	17.06	27.17	18.77	1.10	1.05	1.02	1.09	1.11
1100	7.26	7.18	7.34	7.36	0.19	5.55	16.94	26.73	18.69	1.08	1.06	1.05	1.09	1.13
1150	7.36	7.25	7.44	7.44	0.19	5.85	16.87	26.30	18.67	1.07	1.08	1.08	1.09	1.15
1200	7.45	7.33	7.56	7.53	0.22	6.10	16.87	25.93	18.73	1.06	1.11	1.10	1.11	1.18
1250	7.56	7.43	7.67	7.62	0.24	6.35	16.99	25.53	18.92	1.06	1.14	1.14	1.12	1.21
1300	7.68	7.54	7.80	7.73	0.26	6.53	17.23	25.15	19.26	1.08	1.17	1.17	1.15	1.25
1350	7.81	7.65	7.96	7.86	0.31	6.87	17.61	24.70	19.82	1.10	1.21	1.20	1.18	1.29
1400	7.95	7.77	8.11	7.99	0.34	7.12	18.20	24.55	20.61	1.11	1.25	1.24	1.21	1.33
1450	8.09	7.90	8.29	8.14	0.39	7.69	19.01	24.25	21.81	1.13	1.29	1.28	1.25	1.37
1500	8.25	8.05	8.49	8.32	0.44	8.16	20.09	24.00	23.45	1.14	1.33	1.32	1.28	1.42
1600	8.65	8.42	8.97	8.76	0.55	9.09	23.62	23.73	28.77	1.13	1.39	1.41	1.36	1.51

¹Total Loss = Insertion Loss + 6dB Splitter Loss

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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	S-4			1-2	2-3	3-4	S	1	2	3	4
5	6.25	6.49	6.43	6.66	0.41	0.45	27.01	34.83	29.43	1.05	1.32	1.39	1.34	1.40
10	6.26	6.49	6.43	6.66	0.41	0.25	27.51	35.48	29.80	1.04	1.30	1.36	1.32	1.38
20	6.28	6.52	6.46	6.69	0.41	0.11	27.54	35.53	29.68	1.04	1.29	1.35	1.31	1.37
30	6.30	6.54	6.48	6.71	0.41	0.10	27.35	35.29	29.34	1.04	1.28	1.35	1.31	1.37
40	6.32	6.55	6.50	6.73	0.41	0.17	27.14	35.10	28.98	1.04	1.28	1.35	1.31	1.37
50	6.34	6.57	6.51	6.75	0.41	0.21	26.94	34.95	28.61	1.05	1.28	1.35	1.31	1.37
60	6.35	6.58	6.53	6.76	0.41	0.24	26.75	34.81	28.24	1.05	1.28	1.35	1.31	1.37
70	6.36	6.60	6.54	6.77	0.42	0.32	26.56	34.67	27.86	1.05	1.28	1.35	1.30	1.36
80	6.38	6.61	6.56	6.79	0.41	0.37	26.36	34.52	27.47	1.05	1.28	1.34	1.30	1.36
90	6.39	6.62	6.56	6.79	0.41	0.45	26.15	34.38	27.10	1.06	1.27	1.33	1.29	1.35
100	6.40	6.63	6.57	6.81	0.41	0.47	25.95	34.26	26.73	1.07	1.27	1.33	1.29	1.34
150	6.45	6.68	6.63	6.86	0.41	0.76	24.92	33.64	25.04	1.09	1.26	1.32	1.28	1.32
200	6.49	6.72	6.68	6.91	0.41	1.01	23.89	33.04	23.65	1.10	1.25	1.30	1.26	1.30
250	6.54	6.77	6.72	6.96	0.42	1.31	22.93	32.49	22.51	1.12	1.24	1.28	1.24	1.27
300	6.59	6.82	6.77	7.02	0.43	1.54	22.05	31.99	21.60	1.13	1.23	1.27	1.23	1.25
350	6.65	6.86	6.82	7.07	0.43	1.81	21.25	31.55	20.88	1.14	1.22	1.25	1.21	1.23
400	6.70	6.91	6.87	7.13	0.43	2.13	20.56	31.19	20.32	1.14	1.21	1.24	1.20	1.20
450	6.75	6.96	6.93	7.19	0.44	2.39	19.95	30.90	19.89	1.14	1.19	1.22	1.18	1.18
500	6.81	7.01	6.98	7.24	0.43	2.62	19.45	30.67	19.59	1.14	1.18	1.20	1.17	1.15
550	6.87	7.06	7.04	7.30	0.43	2.85	19.02	30.51	19.40	1.14	1.17	1.18	1.16	1.13
600	6.93	7.12	7.10	7.36	0.43	3.08	18.68	30.37	19.29	1.15	1.15	1.16	1.15	1.11
650	7.00	7.18	7.16	7.42	0.42	3.31	18.40	30.28	19.23	1.15	1.14	1.14	1.14	1.08
700	7.07	7.23	7.23	7.48	0.41	3.51	18.17	30.16	19.23	1.15	1.12	1.12	1.13	1.07
750	7.15	7.30	7.31	7.54	0.39	3.69	17.98	30.02	19.25	1.14	1.11	1.10	1.13	1.06
800	7.22	7.36	7.38	7.61	0.39	3.94	17.83	29.83	19.28	1.14	1.10	1.08	1.13	1.05
850	7.30	7.44	7.47	7.68	0.38	4.15	17.69	29.55	19.27	1.14	1.08	1.06	1.12	1.05
900	7.40	7.51	7.56	7.76	0.36	4.45	17.55	29.20	19.25	1.13	1.07	1.05	1.12	1.06
950	7.50	7.59	7.66	7.83	0.33	4.69	17.43	28.80	19.21	1.12	1.06	1.03	1.12	1.07
1000	7.61	7.68	7.76	7.92	0.31	4.94	17.32	28.44	19.13	1.11	1.05	1.01	1.11	1.08
1050	7.72	7.78	7.88	8.02	0.30	5.07	17.23	27.97	19.05	1.09	1.05	1.02	1.11	1.09
1100	7.84	7.89	8.01	8.13	0.29	5.30	17.18	27.50	18.98	1.08	1.05	1.04	1.10	1.11
1150	7.97	8.00	8.14	8.23	0.27	5.60	17.18	27.07	18.94	1.06	1.07	1.06	1.10	1.13
1200	8.11	8.12	8.29	8.35	0.24	5.89	17.24	26.73	18.99	1.05	1.10	1.09	1.10	1.15
1250	8.25	8.24	8.43	8.47	0.23	6.11	17.42	26.35	19.13	1.06	1.13	1.12	1.11	1.18
1300	8.40	8.38	8.59	8.61	0.22	6.35	17.73	26.02	19.43	1.08	1.16	1.16	1.13	1.22
1350	8.57	8.54	8.78	8.76	0.24	6.74	18.18	25.64	19.91	1.09	1.19	1.19	1.15	1.25
1400	8.74	8.69	8.96	8.91	0.27	7.00	18.84	25.56	20.59	1.11	1.23	1.23	1.17	1.29
1450	8.92	8.86	9.16	9.09	0.30	7.36	19.78	25.34	21.62	1.12	1.27	1.27	1.21	1.33
1500	9.12	9.04	9.38	9.29	0.34	7.65	20.98	25.24	23.11	1.13	1.31	1.31	1.24	1.38
1600	9.60	9.49	9.90	9.76	0.41	8.56	25.25	25.25	28.79	1.13	1.39	1.40	1.32	1.47

¹Total Loss = Insertion Loss + 6dB Splitter Loss

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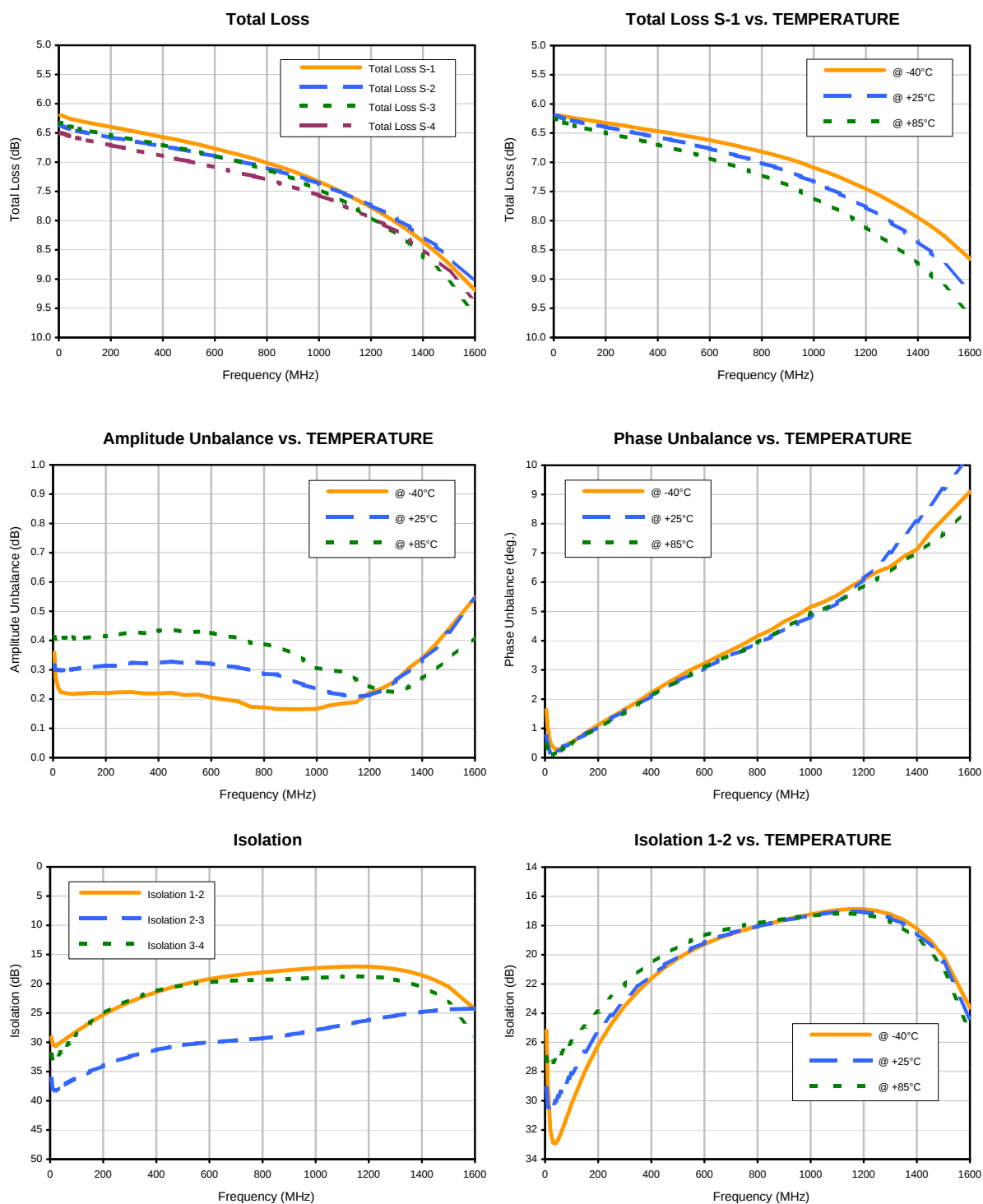
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4 Way-0° Power Splitter/Combiner

JS4PS-1W+

Typical Performance Curves

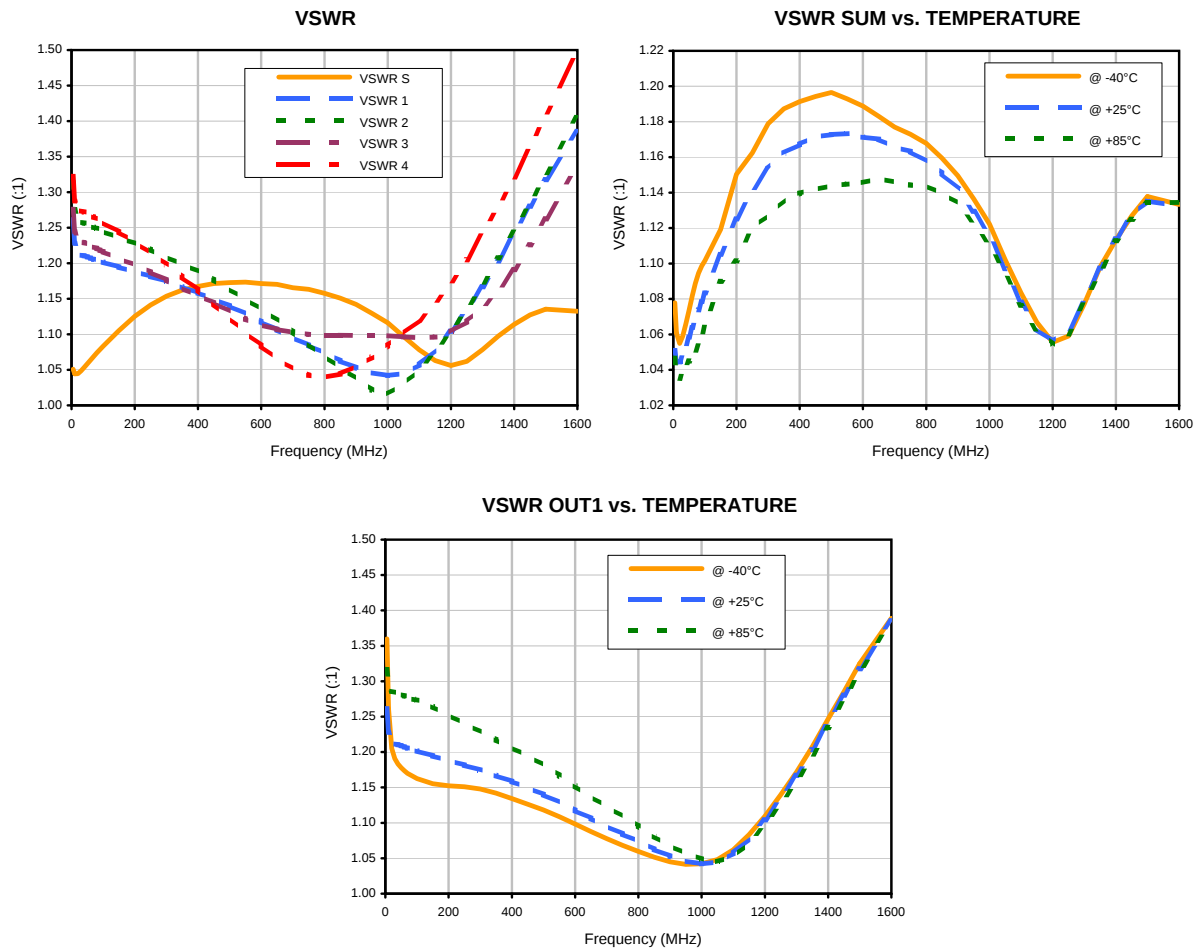


REV. X2
JS4PS-1W+
100622
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4 Way-0° Power Splitter/Combiner

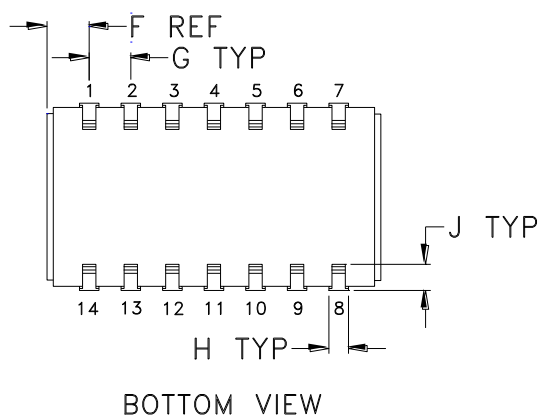
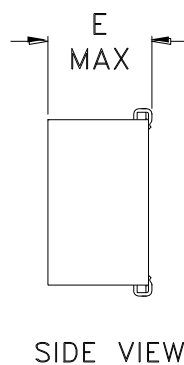
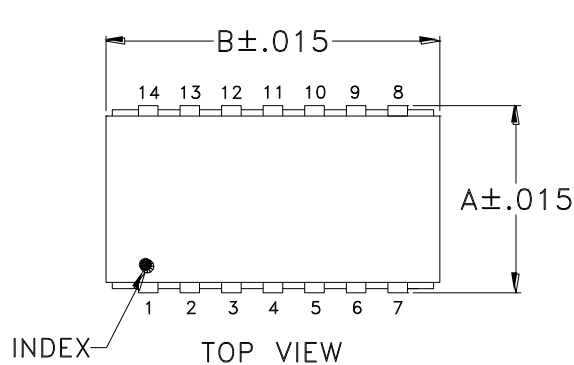
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Typical Performance Curves

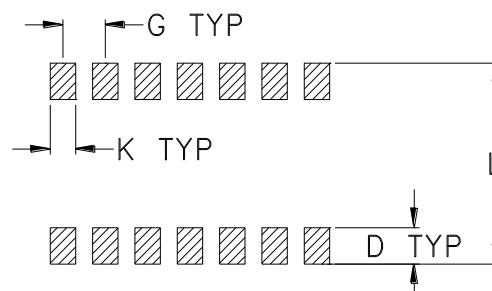


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100622
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Outline Dimensions



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
BK377	.505 (12.83)	.800 (20.32)	-- --	.100 (2.54)	.250 (6.35)	.100 (2.54)	.100 (2.54)	.047 (1.19)	.065 (1.65)	.065 (1.65)	.525 (13.34)	2.0 MAX.

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

Notes:

- Case material: Copper Nickel alloy.
- Base material: Printed wiring laminate.
- 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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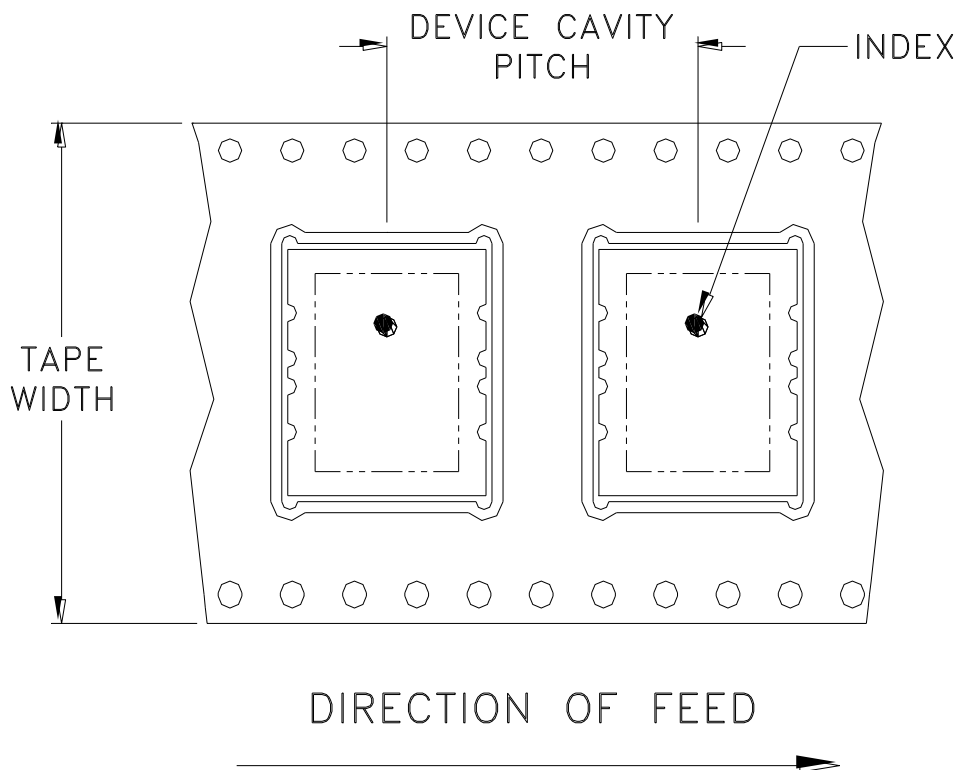
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Tape & Reel Packaging TR-F107

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
32	20	7	Small quantity standards (see note)	10
				20
				50
				100
		13	Standard	200

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

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



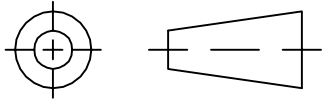
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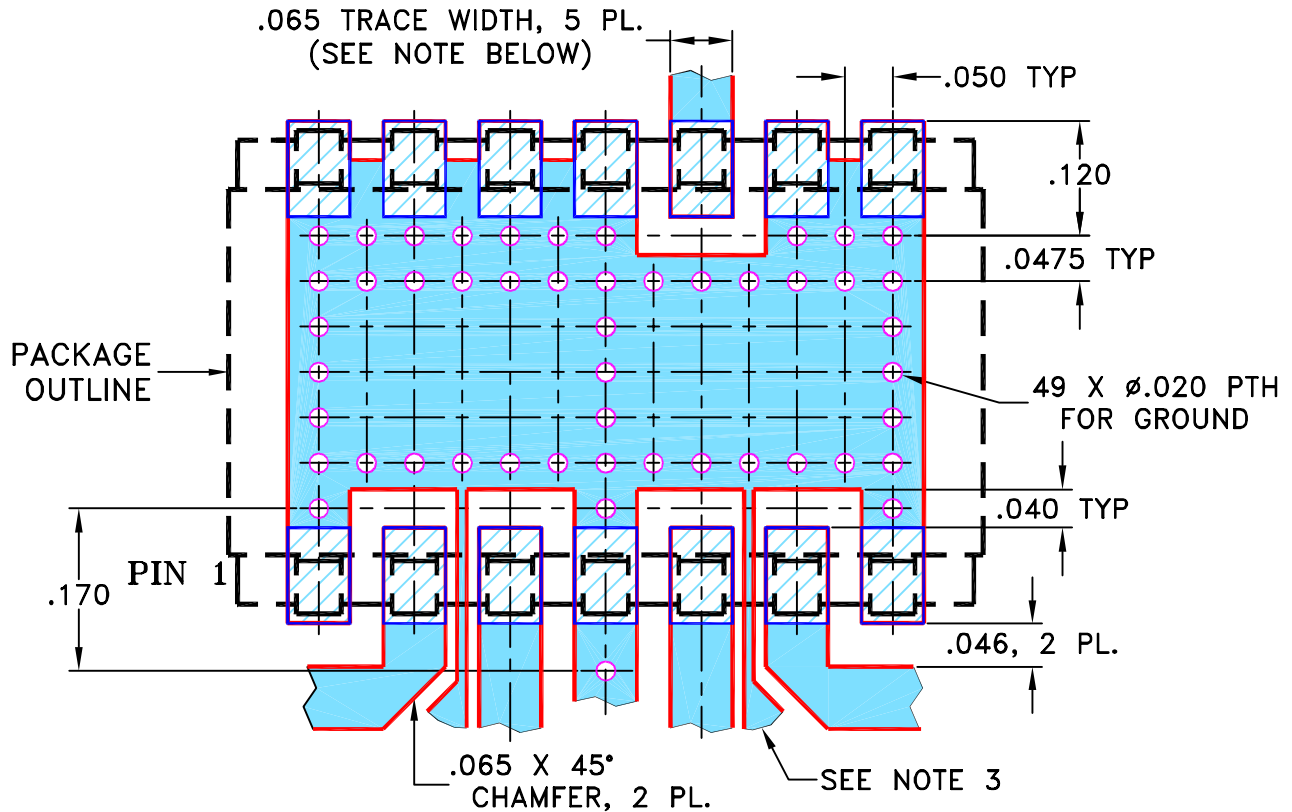
THIRD ANGLE PROJECTION



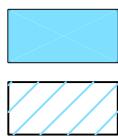
REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M82272	NEW RELEASE	08/06/02	GF	DJ
A	M101048	ADDED GROUND EXTENSIONS BETWEEN PINS 2 & 3, 5 & 6 & NOTES 2 & 3	10/06/05	MMG	HY
B	M102713	MODIFIED NOTES, ADDED "...WITH SMOBC"	01/16/06	GT	IL

SUGGESTED MOUNTING CONFIGURATION FOR BK377 CASE STYLE, "ng" PIN CONNECTION



- NOTES: 1. TRACE WIDTH IS SHOWN FOR 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.
3. IF DESIGN RULES ALLOW, EXTEND GROUND AS SHOWN TO ACHIEVE BETTER ISOLATION.



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

07/23/02

CHECKED

HY

08/01/02

APPROVED

DJ

08/06/02



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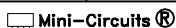
PL, ng, BK377, JS4PS, TB-133

SIZE
ACODE IDENT
15542DRAWING NO:
98-PL-091REV:
B

FILE: 98PL091

SCALE: 5:1

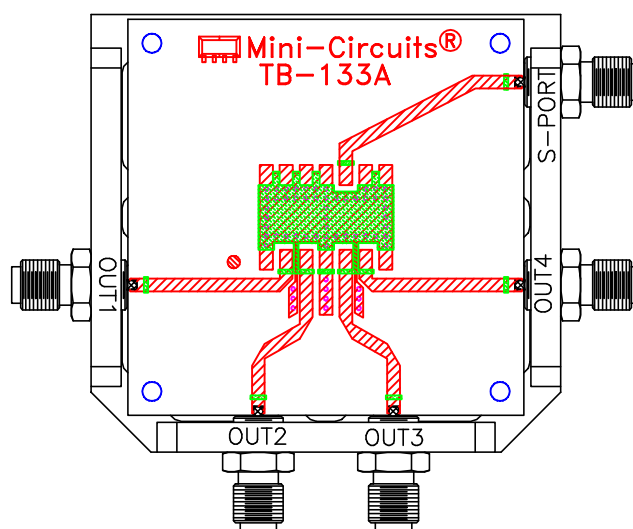
SHEET: 1 OF 1



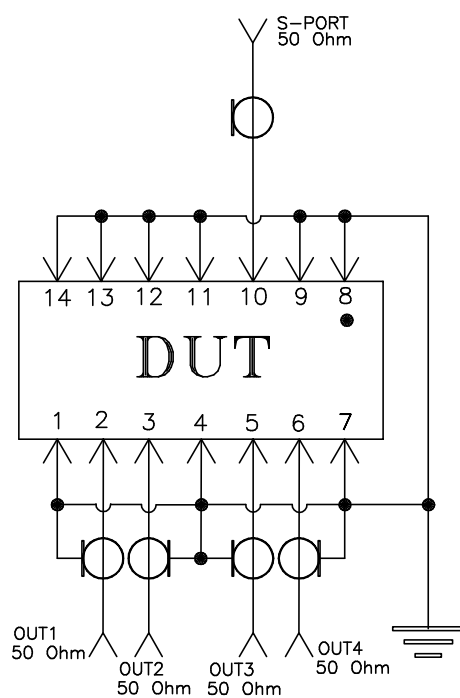
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ASHEETA1.DWG REV:A DATE:01/12/95

Evaluation Board and Circuit



TB-133



Schematic Diagram

Notes:

1. SMA 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