Surface Mount

Power Splitter/Combiner

JCPS-8-10+

8 Way-0° 50Ω 5 to 1000 MHz

Generic photo used for illustration purposes only

CASE STYLE: BG291

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

Maximum Ratings

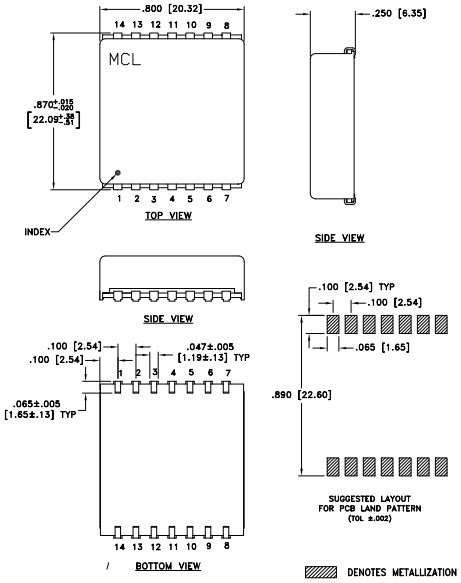
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.875W max.

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

Pin Connections

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

Outline Drawing



Weight: 4 grams
Dimensions are in inches [mm].
Tolerances: 2 Pl.±.03 [0.76]; 3Pl.±.015 [0.381] inches

Features

- wideband frequency, 5 to 1000 MHz
- excellent input matching, VSWR 1.35 typ.
- excellent output matching, VSWR 1.25 typ.
- shielded metal case
- J-leads for good solderability & strain relief
- aqueous washable
- protected under U.S Patent 6,963,255

Applications

- CATV
- VHF/UHF

Electrical Specifications

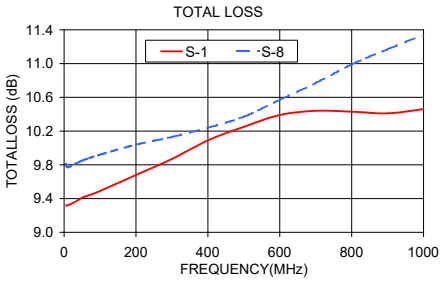
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 9.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
f_L-f_U	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
5-1000	34	20	22	16	20	15	0.5	1.5	1.2	2.2	1.8	3.0	5	10	15	1.0	0.7	1.3

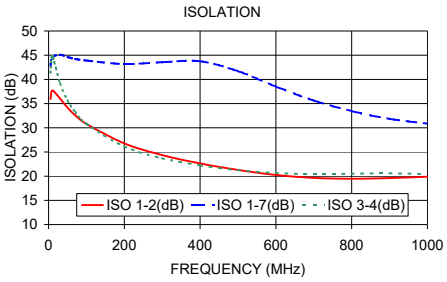
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

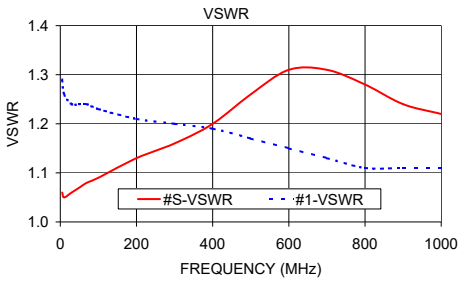
Typical Performance Data

Freq. (MHz)	Total Loss[1] (dB)						Amplitude Unbalance (dB)	Isolation (dB)				VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	6-7			
5.00	9.32	9.52	9.50	9.68	9.66	9.81	0.48	35.93	42.85	41.38	44.66	1.06	1.29	1.37
10.00	9.32	9.50	9.47	9.65	9.63	9.77	0.45	37.70	44.59	44.75	44.72	1.05	1.26	1.33
30.00	9.36	9.55	9.52	9.69	9.68	9.81	0.45	36.05	45.09	39.23	42.45	1.06	1.24	1.32
50.00	9.41	9.58	9.55	9.72	9.72	9.85	0.45	34.15	44.62	35.64	39.66	1.07	1.24	1.31
70.00	9.44	9.61	9.58	9.74	9.74	9.88	0.44	32.59	44.23	33.28	37.44	1.08	1.24	1.31
100.00	9.49	9.66	9.62	9.78	9.77	9.92	0.42	30.78	43.90	30.81	35.03	1.09	1.23	1.30
200.00	9.68	9.83	9.77	9.92	9.89	10.04	0.36	26.77	43.17	26.11	30.42	1.13	1.21	1.26
300.00	9.87	10.01	9.92	10.06	9.99	10.13	0.36	24.36	43.56	23.70	28.36	1.16	1.20	1.23
400.00	10.09	10.19	10.08	10.19	10.09	10.24	0.39	22.64	43.75	22.22	27.44	1.20	1.19	1.19
500.00	10.25	10.35	10.22	10.32	10.21	10.37	0.40	21.29	41.70	21.25	26.98	1.26	1.17	1.15
600.00	10.39	10.50	10.39	10.50	10.39	10.57	0.41	20.26	38.51	20.65	26.76	1.31	1.15	1.12
700.00	10.44	10.58	10.51	10.65	10.60	10.77	0.39	19.65	35.63	20.44	26.89	1.31	1.13	1.09
800.00	10.43	10.60	10.62	10.79	10.80	10.99	0.56	19.47	33.44	20.50	27.74	1.28	1.11	1.06
900.00	10.41	10.62	10.71	10.93	10.99	11.17	0.76	19.61	31.84	20.60	29.88	1.24	1.11	1.06
1000.00	10.46	10.69	10.88	11.12	11.17	11.34	0.88	19.89	30.86	20.42	34.76	1.22	1.11	1.10

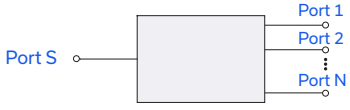
1. Total Loss = Insertion Loss + 9dB splitter loss.



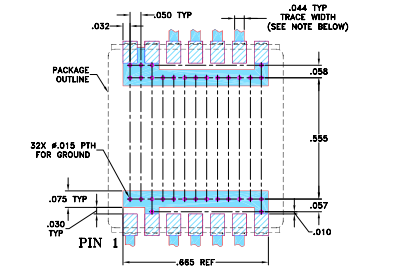




electrical schematic



Demo Board MCL P/N: TB-134
Suggested PCB Layout (PL-037)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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

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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8 Way-0° Power Splitter/Combiner JCPS-8-10+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0 dBm @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	S-6	S-8			1-2	1-7	3-4	5-7	S	1	8
5	9.33	9.48	9.47	9.66	9.61	9.75	0.42	0.95	36.80	42.40	37.11	46.12	1.07	1.29	1.39
10	9.34	9.48	9.47	9.64	9.61	9.74	0.40	0.41	37.95	43.44	39.47	45.78	1.06	1.26	1.34
15	9.34	9.49	9.48	9.65	9.62	9.75	0.41	0.29	37.27	43.50	39.35	45.00	1.06	1.25	1.33
20	9.36	9.51	9.49	9.66	9.63	9.77	0.41	0.24	36.33	43.43	38.44	44.21	1.07	1.25	1.33
30	9.38	9.53	9.52	9.69	9.66	9.80	0.41	0.34	34.72	43.27	36.40	42.42	1.07	1.25	1.32
40	9.41	9.56	9.54	9.71	9.68	9.82	0.41	0.43	33.38	43.11	34.66	40.79	1.08	1.25	1.32
50	9.43	9.58	9.56	9.74	9.70	9.84	0.41	0.55	32.23	43.03	33.18	39.33	1.08	1.25	1.32
75	9.48	9.63	9.61	9.79	9.75	9.89	0.41	0.79	29.91	43.01	30.38	36.48	1.10	1.24	1.31
100	9.54	9.67	9.66	9.83	9.79	9.93	0.39	1.02	28.08	43.10	28.29	34.38	1.12	1.23	1.30
125	9.59	9.73	9.70	9.87	9.83	9.97	0.38	1.25	26.60	43.31	26.66	32.75	1.14	1.22	1.29
150	9.64	9.77	9.74	9.91	9.86	10.00	0.36	1.43	25.35	43.65	25.32	31.43	1.16	1.21	1.28
175	9.69	9.82	9.78	9.94	9.90	10.03	0.34	1.59	24.28	43.94	24.19	30.36	1.18	1.20	1.27
200	9.75	9.87	9.82	9.98	9.93	10.06	0.31	1.76	23.39	44.26	23.24	29.51	1.19	1.19	1.26
250	9.87	9.96	9.91	10.06	9.99	10.13	0.29	1.95	21.94	44.71	21.72	28.21	1.22	1.17	1.23
300	9.98	10.07	9.99	10.13	10.05	10.19	0.30	2.10	20.86	44.78	20.60	27.36	1.25	1.14	1.20
350	10.10	10.16	10.07	10.21	10.11	10.25	0.30	2.46	20.07	44.30	19.80	26.84	1.26	1.12	1.18
400	10.19	10.25	10.13	10.28	10.17	10.31	0.30	2.75	19.53	43.55	19.30	26.68	1.26	1.09	1.15
450	10.27	10.32	10.19	10.33	10.23	10.37	0.31	3.13	19.19	42.54	19.06	26.79	1.25	1.06	1.12
475	10.31	10.35	10.22	10.36	10.26	10.40	0.30	3.47	19.10	41.86	19.04	26.97	1.24	1.05	1.11
500	10.33	10.38	10.24	10.39	10.28	10.42	0.30	3.79	19.04	41.11	19.07	27.20	1.23	1.04	1.10
525	10.35	10.41	10.26	10.41	10.32	10.46	0.30	4.13	19.02	40.26	19.16	27.51	1.21	1.04	1.09
550	10.37	10.43	10.28	10.44	10.34	10.49	0.29	4.47	19.03	39.36	19.28	27.85	1.19	1.03	1.08
575	10.38	10.45	10.31	10.47	10.38	10.53	0.29	4.85	19.05	38.40	19.43	28.23	1.17	1.03	1.07
600	10.39	10.48	10.33	10.50	10.42	10.56	0.28	5.21	19.09	37.47	19.59	28.64	1.15	1.03	1.06
650	10.40	10.52	10.38	10.57	10.52	10.66	0.28	5.89	19.17	35.67	19.91	29.47	1.13	1.03	1.04
700	10.43	10.58	10.45	10.66	10.64	10.77	0.35	6.60	19.21	34.13	20.08	30.21	1.15	1.04	1.03
750	10.47	10.65	10.55	10.78	10.77	10.90	0.43	7.17	19.22	32.96	20.08	30.91	1.20	1.04	1.02
800	10.52	10.73	10.66	10.91	10.91	11.03	0.51	7.69	19.23	32.17	19.93	31.78	1.25	1.05	1.02
850	10.60	10.82	10.78	11.05	11.04	11.14	0.54	8.07	19.31	31.82	19.77	33.19	1.30	1.05	1.03
900	10.67	10.91	10.90	11.18	11.14	11.23	0.55	8.30	19.51	31.93	19.65	35.78	1.30	1.06	1.06
925	10.72	10.95	10.97	11.26	11.18	11.26	0.53	8.41	19.64	32.22	19.61	37.61	1.30	1.06	1.06
950	10.78	11.00	11.04	11.32	11.21	11.27	0.54	8.39	19.79	32.65	19.58	39.05	1.28	1.07	1.07
975	10.85	11.06	11.11	11.40	11.23	11.29	0.55	8.28	19.95	33.30	19.52	38.55	1.25	1.07	1.08
1000	10.94	11.13	11.19	11.48	11.27	11.30	0.54	8.20	20.09	34.18	19.46	35.99	1.21	1.07	1.10
1025	11.04	11.21	11.28	11.57	11.29	11.32	0.53	8.05	20.18	35.44	19.35	33.05	1.16	1.07	1.10
1050	11.17	11.31	11.39	11.67	11.33	11.34	0.50	7.88	20.19	37.06	19.16	30.43	1.10	1.07	1.10
1075	11.33	11.43	11.52	11.79	11.39	11.38	0.46	7.63	20.11	39.24	18.90	28.20	1.04	1.07	1.11
1100	11.53	11.58	11.67	11.92	11.46	11.43	0.49	7.53	19.89	42.18	18.55	26.30	1.03	1.07	1.12
1150	12.06	12.01	12.08	12.27	11.71	11.63	0.64	7.36	19.21	43.18	17.73	23.36	1.18	1.06	1.12
1200	12.78	12.58	12.60	12.72	12.07	11.95	0.83	7.86	18.48	37.85	16.96	21.31	1.35	1.05	1.13
1250	13.66	13.26	13.19	13.21	12.53	12.35	1.31	9.57	18.07	34.63	16.52	20.03	1.49	1.04	1.13
1300	14.62	14.00	13.78	13.67	13.02	12.75	1.87	13.50	18.29	33.31	16.69	19.39	1.55	1.04	1.12
1350	15.62	14.79	14.38	14.12	13.57	13.16	2.46	20.79	18.91	34.08	17.96	19.28	1.54	1.08	1.11
1400	16.69	15.77	15.20	14.80	14.33	13.74	2.95	32.37	17.94	39.03	21.16	19.42	1.67	1.16	1.11
1450	18.00	17.23	16.62	16.14	15.67	14.81	3.19	47.55	14.74	48.76	23.66	19.00	2.20	1.26	1.13
1500	19.55	19.11	18.64	18.21	17.57	16.34	3.21	62.82	12.20	34.76	19.60	18.03	3.07	1.35	1.17
1600	22.57	22.46	22.33	22.36	20.97	19.23	3.34	77.33	9.77	29.50	14.24	16.57	4.59	1.47	1.28
1700	24.63	24.49	24.44	24.88	23.04	21.13	3.75	66.74	8.59	29.44	11.52	16.06	5.19	1.57	1.38
1800	24.99	24.99	25.17	25.84	24.49	22.40	3.44	47.13	7.86	31.06	9.82	16.50	5.12	1.64	1.50
1900	24.78	24.84	25.21	25.88	25.74	23.42	3.35	40.76	7.38	33.21	8.82	17.77	4.58	1.68	1.58
2000	25.18	25.44	25.98	26.56	27.48	24.70	3.45	52.98	7.09	36.21	8.29	19.89	3.88	1.70	1.59

[1]Total Loss = Insertion Loss + 9dB Splitter Loss

8 Way-0° Power Splitter/Combiner JCPS-8-10+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0 dBm @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	S-6	S-8			1-2	1-7	3-4	5-7	S	1	8
5	9.35	9.54	9.49	9.69	9.74	9.86	0.51	2.26	30.21	38.65	29.98	50.17	1.14	1.43	1.55
10	9.29	9.43	9.39	9.54	9.56	9.68	0.39	1.37	35.69	42.10	35.98	48.97	1.10	1.29	1.37
15	9.29	9.42	9.38	9.51	9.52	9.64	0.36	0.94	39.49	43.68	41.73	47.53	1.10	1.25	1.31
20	9.29	9.42	9.39	9.51	9.51	9.64	0.36	0.69	40.90	44.35	46.32	46.32	1.10	1.23	1.29
30	9.31	9.43	9.40	9.52	9.52	9.64	0.34	0.50	39.44	44.74	43.08	43.84	1.10	1.21	1.27
40	9.33	9.45	9.42	9.53	9.53	9.65	0.32	0.46	37.04	44.82	38.87	41.85	1.11	1.21	1.26
50	9.34	9.46	9.43	9.56	9.54	9.66	0.32	0.44	35.05	44.80	36.26	40.08	1.12	1.20	1.26
75	9.39	9.50	9.47	9.59	9.57	9.70	0.31	0.56	31.51	44.81	32.27	36.93	1.14	1.19	1.24
100	9.43	9.54	9.51	9.63	9.61	9.73	0.30	0.85	29.18	44.79	29.76	34.79	1.16	1.18	1.23
125	9.47	9.58	9.54	9.66	9.63	9.76	0.29	1.08	27.51	44.90	27.90	33.22	1.17	1.17	1.23
150	9.52	9.62	9.58	9.69	9.67	9.79	0.27	1.33	26.14	45.00	26.43	31.85	1.19	1.17	1.22
175	9.57	9.66	9.62	9.72	9.69	9.82	0.25	1.46	24.97	45.12	25.21	30.69	1.21	1.16	1.21
200	9.62	9.71	9.65	9.75	9.72	9.84	0.25	1.66	23.98	45.25	24.18	29.79	1.23	1.15	1.21
250	9.72	9.79	9.72	9.81	9.77	9.90	0.25	1.86	22.46	45.16	22.54	28.47	1.26	1.13	1.19
300	9.82	9.88	9.79	9.88	9.82	9.95	0.25	2.04	21.35	44.79	21.34	27.56	1.28	1.11	1.16
350	9.92	9.96	9.86	9.93	9.86	10.00	0.26	2.38	20.53	44.08	20.49	27.03	1.29	1.09	1.14
400	10.00	10.03	9.91	9.99	9.90	10.04	0.26	2.69	19.97	43.26	19.95	26.81	1.29	1.06	1.12
450	10.06	10.08	9.96	10.03	9.94	10.09	0.27	3.02	19.63	42.26	19.69	26.90	1.27	1.04	1.10
475	10.09	10.11	9.97	10.05	9.96	10.10	0.27	3.20	19.52	41.62	19.66	27.07	1.25	1.03	1.09
500	10.10	10.12	9.99	10.07	9.98	10.13	0.26	3.43	19.45	40.91	19.68	27.27	1.24	1.02	1.08
525	10.12	10.14	10.00	10.08	10.00	10.15	0.26	3.74	19.42	40.13	19.76	27.54	1.22	1.02	1.07
550	10.12	10.16	10.01	10.10	10.03	10.17	0.26	4.09	19.40	39.26	19.87	27.84	1.20	1.02	1.06
575	10.13	10.17	10.03	10.13	10.06	10.20	0.25	4.42	19.40	38.33	19.99	28.17	1.17	1.02	1.05
600	10.13	10.19	10.04	10.15	10.09	10.23	0.24	4.79	19.41	37.41	20.12	28.52	1.15	1.02	1.05
650	10.13	10.22	10.09	10.21	10.17	10.31	0.24	5.44	19.43	35.62	20.34	29.25	1.14	1.03	1.04
700	10.15	10.26	10.15	10.28	10.27	10.42	0.27	6.12	19.40	34.05	20.37	29.81	1.16	1.04	1.03
750	10.17	10.32	10.23	10.39	10.39	10.53	0.36	6.71	19.34	32.85	20.20	30.31	1.22	1.05	1.02
800	10.21	10.38	10.33	10.51	10.51	10.65	0.43	7.25	19.32	32.00	19.91	30.96	1.28	1.05	1.03
850	10.27	10.47	10.44	10.63	10.62	10.74	0.47	7.69	19.37	31.63	19.66	32.05	1.33	1.06	1.04
900	10.33	10.53	10.55	10.75	10.71	10.82	0.49	7.96	19.56	31.69	19.51	34.13	1.35	1.07	1.07
925	10.37	10.56	10.61	10.81	10.74	10.84	0.47	8.08	19.70	31.96	19.47	35.65	1.34	1.08	1.08
950	10.42	10.60	10.66	10.87	10.76	10.85	0.45	8.13	19.87	32.37	19.44	37.29	1.32	1.08	1.09
975	10.47	10.65	10.72	10.93	10.78	10.85	0.47	8.02	20.07	33.00	19.39	38.03	1.29	1.08	1.10
1000	10.53	10.69	10.78	11.00	10.79	10.85	0.47	7.98	20.23	33.88	19.35	36.69	1.24	1.09	1.11
1025	10.61	10.76	10.86	11.07	10.80	10.85	0.46	7.89	20.35	35.13	19.26	34.03	1.19	1.09	1.11
1050	10.72	10.83	10.95	11.15	10.82	10.85	0.43	7.74	20.36	36.82	19.07	31.30	1.13	1.09	1.11
1075	10.85	10.93	11.07	11.26	10.85	10.86	0.40	7.54	20.28	39.18	18.82	28.85	1.06	1.08	1.12
1100	11.02	11.06	11.20	11.37	10.90	10.89	0.48	7.41	20.05	42.51	18.47	26.78	1.01	1.08	1.13
1150	11.49	11.43	11.56	11.69	11.10	11.05	0.64	7.20	19.29	44.11	17.60	23.61	1.17	1.07	1.13
1200	12.14	11.94	12.05	12.11	11.42	11.33	0.82	7.55	18.43	37.46	16.74	21.39	1.37	1.05	1.13
1250	12.94	12.57	12.59	12.57	11.83	11.69	1.25	8.88	17.91	33.84	16.21	19.99	1.54	1.04	1.12
1300	13.80	13.22	13.12	12.97	12.27	12.07	1.73	12.22	18.06	32.21	16.27	19.25	1.61	1.04	1.11
1350	14.66	13.87	13.60	13.33	12.73	12.41	2.24	18.77	18.71	32.46	17.39	19.15	1.60	1.08	1.10
1400	15.53	14.66	14.22	13.80	13.34	12.85	2.69	29.38	17.95	35.92	20.54	19.46	1.63	1.16	1.10
1450	16.74	15.97	15.44	14.95	14.53	13.78	2.96	43.90	14.49	47.16	23.87	19.20	2.10	1.26	1.11
1500	18.41	17.92	17.46	17.00	16.46	15.34	3.07	59.64	11.71	35.09	19.40	18.13	3.05	1.36	1.16
1600	22.02	21.85	21.66	21.59	20.22	18.44	3.58	76.82	9.26	29.09	13.77	16.42	5.06	1.50	1.28
1700	24.56	24.28	24.15	24.46	22.53	20.52	4.04	68.00	8.14	29.01	11.06	15.83	5.92	1.60	1.39
1800	25.14	24.94	25.05	25.54	24.02	21.89	3.65	48.46	7.46	30.70	9.37	16.23	6.04	1.68	1.52
1900	24.81	24.64	24.92	25.44	25.10	22.84	3.25	40.54	7.01	32.99	8.42	17.44	5.38	1.73	1.61
2000	25.05	24.88	25.27	25.77	26.15	23.76	3.06	49.64	6.77	35.80	7.97	19.48	4.43	1.76	1.62

[1]Total Loss = Insertion Loss + 9dB Splitter Loss

8 Way-0° Power Splitter/Combiner JCPS-8-10+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0 dBm @Temperature = +85°C

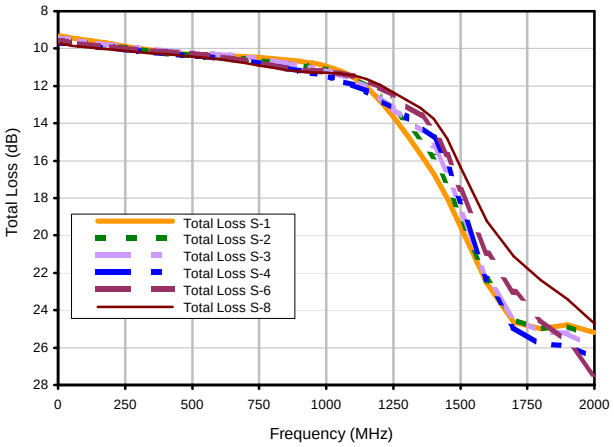
FREQ. (MHz)	TOTAL LOSS[1] (dB)						AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)				VSWR (:1)		
	S-1	S-2	S-3	S-4	S-6	S-8			1-2	1-7	3-4	5-7	S	1	8
5	9.42	9.63	9.60	9.85	9.80	9.96	0.54	0.91	33.16	41.04	34.10	46.81	1.06	1.36	1.46
10	9.43	9.63	9.61	9.84	9.80	9.96	0.52	0.38	33.66	41.68	35.69	46.22	1.04	1.33	1.43
15	9.45	9.65	9.63	9.86	9.82	9.97	0.52	0.24	33.31	41.70	35.64	45.19	1.04	1.33	1.42
20	9.47	9.67	9.64	9.87	9.84	9.99	0.53	0.25	32.79	41.63	35.13	44.18	1.04	1.33	1.42
30	9.50	9.70	9.67	9.90	9.87	10.02	0.53	0.32	31.82	41.53	33.82	42.15	1.05	1.33	1.42
40	9.52	9.73	9.70	9.93	9.89	10.05	0.53	0.44	30.93	41.44	32.53	40.47	1.05	1.33	1.41
50	9.55	9.75	9.72	9.96	9.91	10.07	0.53	0.54	30.13	41.41	31.36	39.01	1.06	1.32	1.41
75	9.61	9.81	9.78	10.01	9.96	10.13	0.52	0.83	28.36	41.47	28.93	36.17	1.07	1.32	1.40
100	9.67	9.86	9.83	10.06	10.01	10.17	0.50	1.07	26.85	41.66	27.04	34.01	1.08	1.31	1.39
125	9.72	9.92	9.88	10.10	10.05	10.21	0.49	1.31	25.52	41.94	25.53	32.33	1.10	1.30	1.38
150	9.78	9.97	9.92	10.15	10.09	10.25	0.47	1.51	24.35	42.27	24.27	31.00	1.12	1.28	1.36
175	9.84	10.02	9.97	10.18	10.13	10.28	0.44	1.71	23.36	42.70	23.22	29.99	1.14	1.27	1.34
200	9.91	10.08	10.02	10.23	10.16	10.32	0.41	1.90	22.52	43.14	22.32	29.20	1.15	1.25	1.32
250	10.04	10.19	10.11	10.32	10.24	10.39	0.36	2.11	21.13	43.92	20.87	27.93	1.18	1.22	1.29
300	10.18	10.31	10.22	10.41	10.32	10.47	0.36	2.37	20.08	44.32	19.79	27.15	1.21	1.19	1.25
350	10.31	10.43	10.31	10.50	10.40	10.54	0.36	2.73	19.30	44.24	19.02	26.72	1.23	1.16	1.22
400	10.43	10.53	10.39	10.58	10.47	10.61	0.36	3.12	18.78	43.69	18.54	26.61	1.23	1.13	1.18
450	10.53	10.63	10.47	10.65	10.55	10.68	0.35	3.45	18.47	42.69	18.33	26.83	1.23	1.10	1.15
475	10.57	10.67	10.50	10.69	10.58	10.71	0.35	3.68	18.39	41.98	18.32	27.08	1.22	1.09	1.13
500	10.60	10.71	10.53	10.72	10.62	10.74	0.34	3.99	18.36	41.20	18.36	27.38	1.21	1.07	1.12
525	10.64	10.75	10.56	10.75	10.66	10.78	0.33	4.32	18.37	40.34	18.47	27.75	1.19	1.06	1.11
550	10.66	10.78	10.59	10.79	10.70	10.82	0.32	4.68	18.41	39.40	18.62	28.19	1.18	1.05	1.10
575	10.68	10.81	10.62	10.82	10.74	10.86	0.32	5.04	18.48	38.46	18.80	28.67	1.16	1.05	1.08
600	10.70	10.84	10.64	10.86	10.79	10.90	0.30	5.38	18.56	37.50	19.01	29.19	1.14	1.04	1.07
650	10.72	10.90	10.71	10.93	10.90	11.00	0.29	6.04	18.76	35.72	19.46	30.27	1.11	1.03	1.06
700	10.76	10.97	10.79	11.03	11.03	11.12	0.36	6.68	18.92	34.22	19.81	31.28	1.12	1.03	1.04
750	10.81	11.05	10.89	11.16	11.18	11.26	0.44	7.20	19.05	33.07	19.98	32.25	1.17	1.03	1.02
800	10.88	11.14	11.01	11.29	11.32	11.39	0.51	7.65	19.16	32.30	20.00	33.41	1.22	1.03	1.01
850	10.97	11.25	11.15	11.45	11.46	11.51	0.54	7.95	19.29	31.96	19.94	35.28	1.26	1.03	1.01
900	11.06	11.35	11.29	11.59	11.57	11.60	0.54	8.05	19.53	32.10	19.90	38.98	1.26	1.04	1.04
925	11.12	11.41	11.36	11.67	11.62	11.64	0.55	8.07	19.68	32.42	19.88	41.85	1.26	1.04	1.05
950	11.19	11.47	11.43	11.76	11.66	11.66	0.57	8.04	19.85	32.83	19.87	43.42	1.24	1.04	1.06
975	11.27	11.54	11.52	11.84	11.70	11.69	0.57	7.87	20.04	33.47	19.85	40.45	1.21	1.05	1.07
1000	11.37	11.62	11.61	11.93	11.74	11.71	0.56	7.71	20.21	34.37	19.82	36.40	1.17	1.05	1.08
1025	11.48	11.72	11.71	12.03	11.78	11.74	0.55	7.53	20.36	35.59	19.74	33.10	1.13	1.05	1.08
1050	11.63	11.83	11.83	12.14	11.83	11.78	0.51	7.27	20.44	37.13	19.59	30.40	1.07	1.05	1.09
1075	11.81	11.97	11.98	12.28	11.90	11.83	0.47	7.02	20.43	39.23	19.38	28.21	1.02	1.05	1.10
1100	12.03	12.14	12.15	12.43	11.99	11.90	0.53	6.84	20.33	41.93	19.09	26.36	1.04	1.05	1.10
1150	12.60	12.61	12.58	12.81	12.27	12.12	0.69	6.92	19.84	43.61	18.37	23.51	1.19	1.05	1.11
1200	13.38	13.22	13.14	13.29	12.67	12.45	0.92	7.34	19.24	38.64	17.66	21.51	1.34	1.05	1.13
1250	14.33	13.97	13.79	13.83	13.16	12.86	1.47	8.74	18.93	35.41	17.25	20.24	1.48	1.04	1.13
1300	15.41	14.81	14.47	14.37	13.71	13.30	2.11	12.58	19.21	34.11	17.46	19.58	1.54	1.05	1.13
1350	16.57	15.73	15.20	14.94	14.34	13.75	2.82	19.79	19.91	34.99	18.75	19.42	1.57	1.09	1.12
1400	17.76	16.81	16.14	15.74	15.17	14.38	3.38	31.32	19.12	40.17	21.98	19.47	1.71	1.16	1.12
1450	18.98	18.21	17.56	17.12	16.51	15.44	3.54	46.55	15.95	48.16	24.75	19.06	2.17	1.26	1.14
1500	20.23	19.83	19.42	19.08	18.30	16.90	3.34	61.88	13.24	35.10	20.57	18.18	2.91	1.36	1.18
1600	22.68	22.66	22.69	22.89	21.49	19.66	3.24	76.21	10.50	29.67	14.84	16.74	4.18	1.48	1.28
1700	24.46	24.45	24.57	25.18	23.43	21.51	3.67	65.51	9.13	29.47	11.97	16.18	4.67	1.57	1.39
1800	24.77	24.91	25.27	26.14	24.87	22.80	3.36	46.08	8.27	30.96	10.16	16.56	4.62	1.64	1.50
1900	24.55	24.80	25.36	26.37	26.20	23.85	3.44	40.15	7.67	33.04	9.06	17.76	4.22	1.68	1.59
2000	24.80	25.29	25.93	27.03	28.05	25.21	3.73	49.81	7.28	35.77	8.44	19.75	3.72	1.70	1.61

[1]Total Loss = Insertion Loss + 9dB Splitter Loss

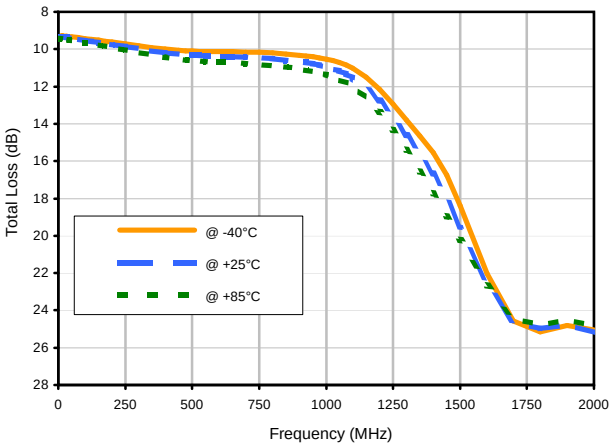
8 Way-0° Power Splitter/Combiner JCPS-8-10+

Typical Performance Curves

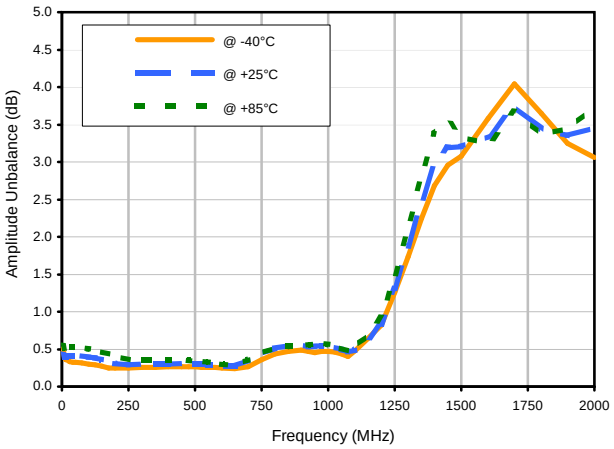
Total Loss



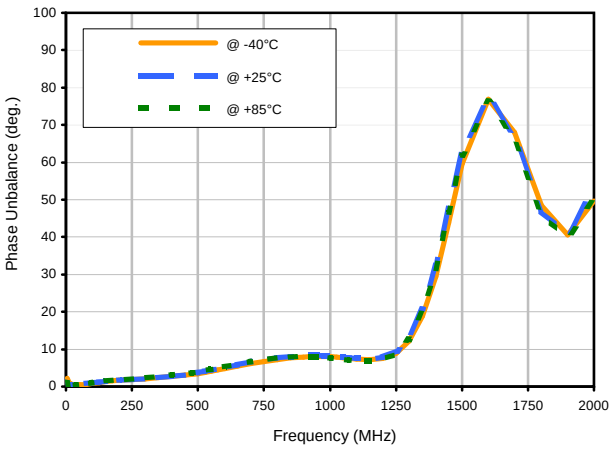
Total Loss S-1 vs. TEMPERATURE



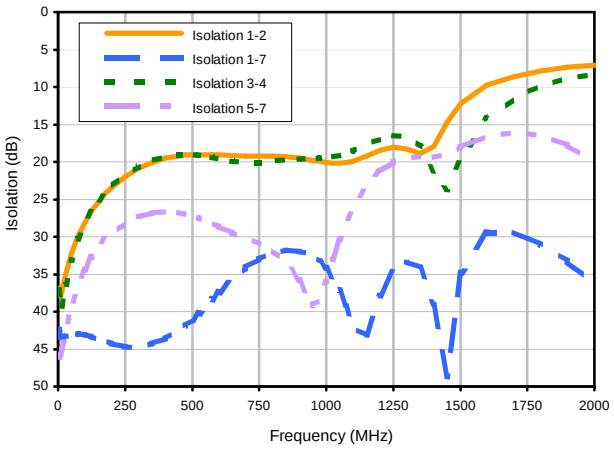
Amplitude Unbalance vs. TEMPERATURE



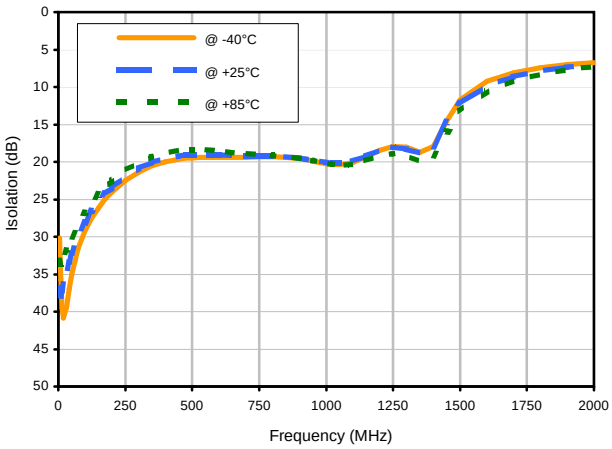
Phase Unbalance vs. TEMPERATURE



Isolation

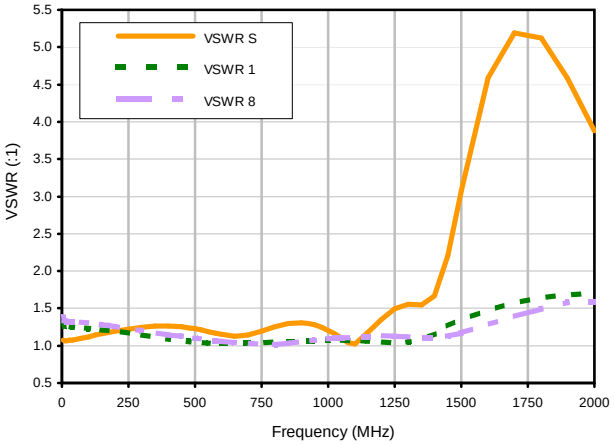


Isolation 1-2 vs. TEMPERATURE

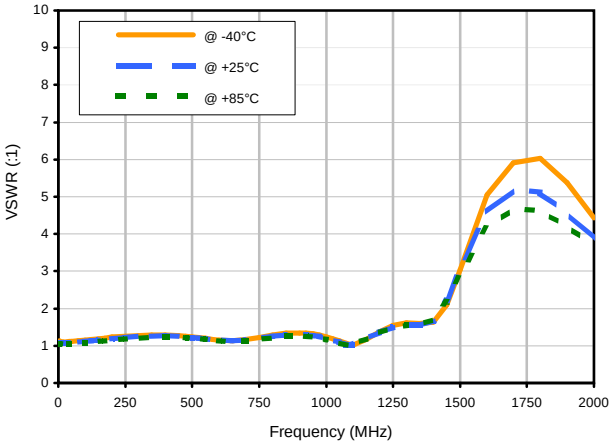


Typical Performance Curves

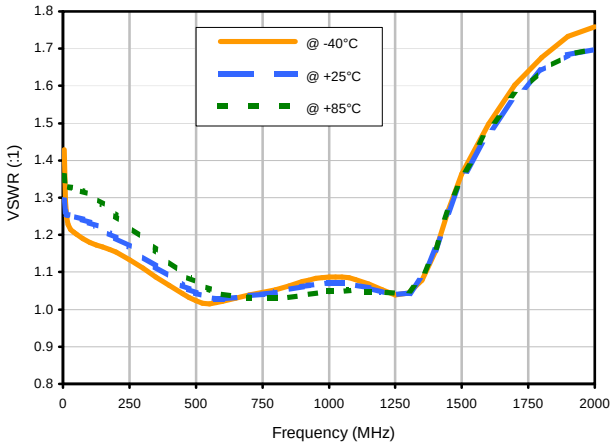
VSWR



VSWR SUM vs. TEMPERATURE

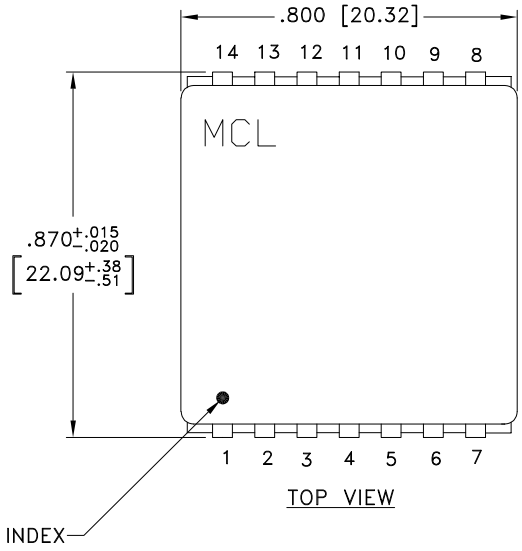


VSWR OUT2 vs. TEMPERATURE

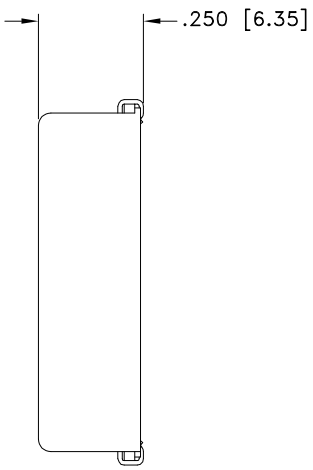


Case Style BG

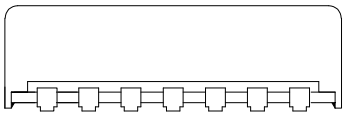
Outline Dimensions BG291



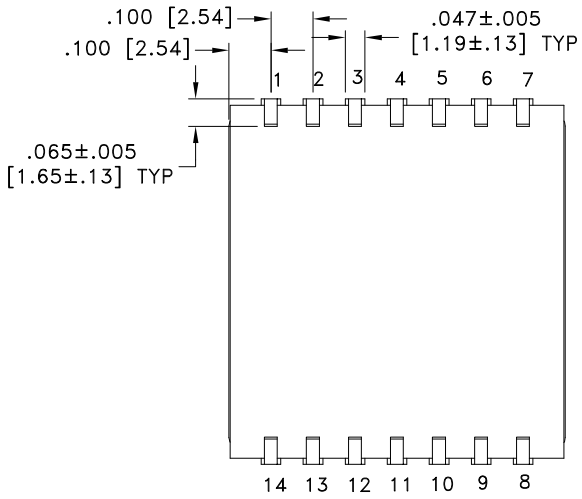
TOP VIEW



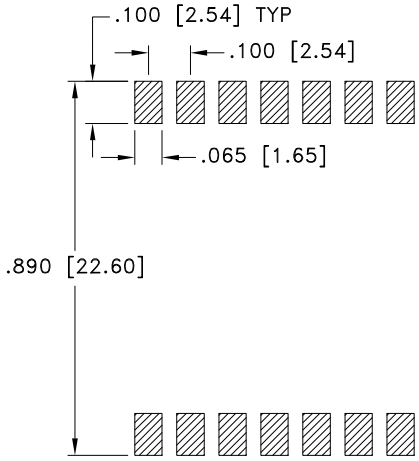
SIDE VIEW



SIDE VIEW



BOTTOM VIEW



SUGGESTED LAYOUT
FOR PCB LAND PATTERN
(TOL ±.002)

DENOTES METALLIZATION

Weight: 4 gram

Dimensions are in inches[mm]. Tolerances: 2PL.±0.03[0.76]; 3 Pl.± 0.015 [0.381] inches[mm], unless otherwise specified

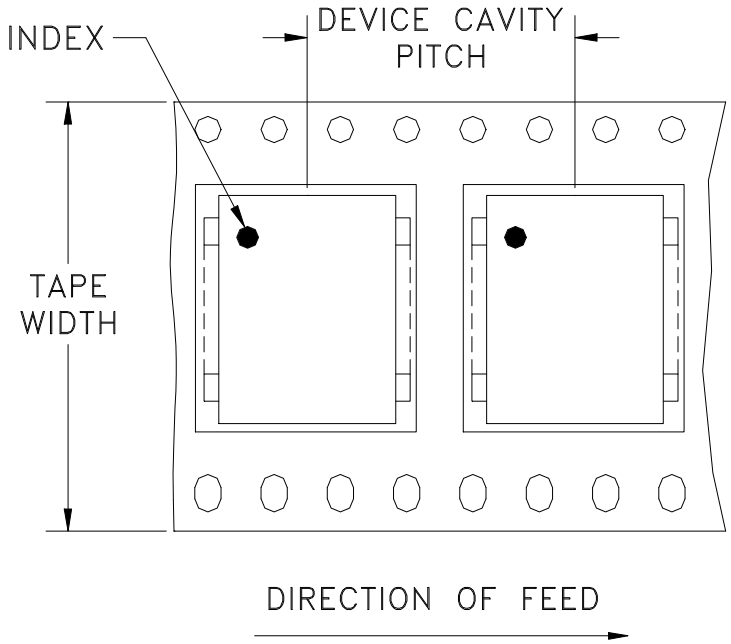
Notes:

1. Case material: Copper-Nickel alloy.
2. Base material: Printed wiring laminate.
3. 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.

Tape & Reel Packaging TR-F21

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
32	32	13	200

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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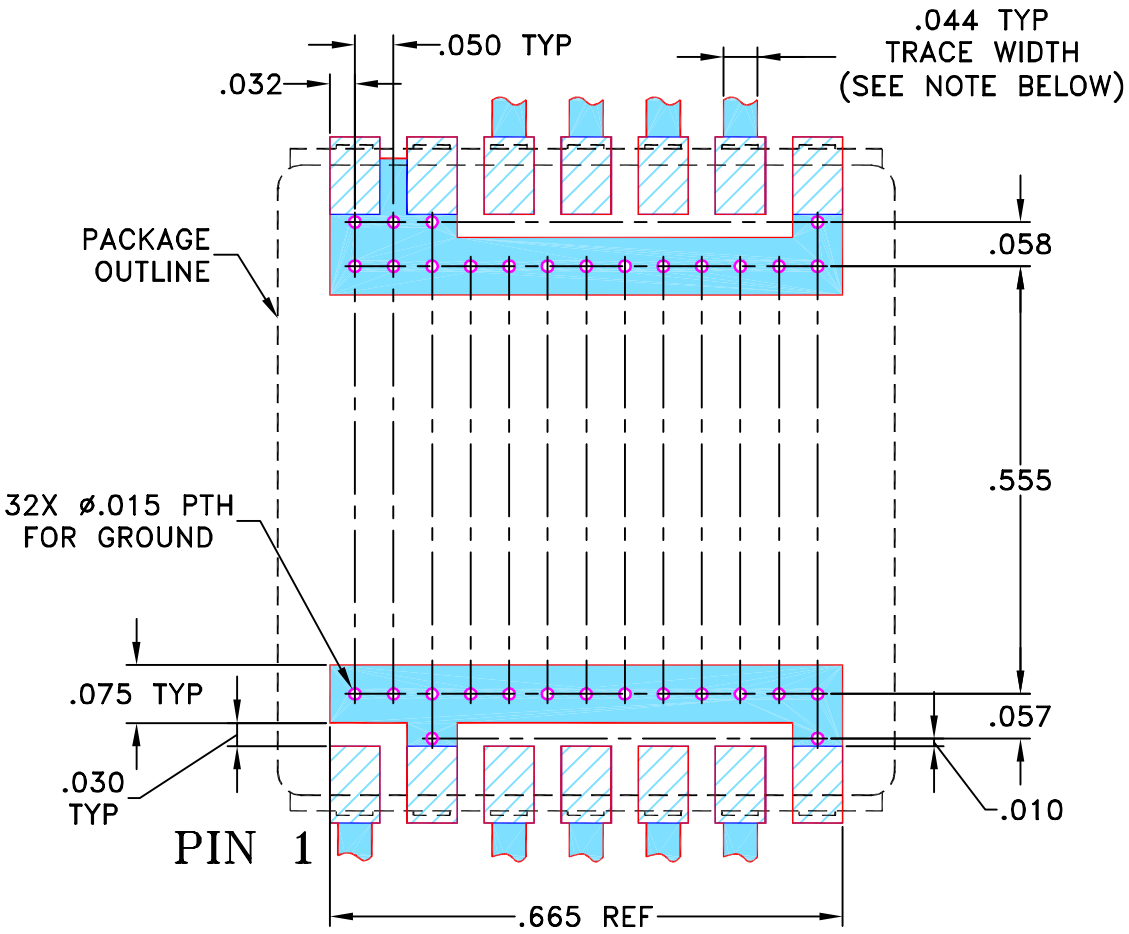
THIRD ANGLE PROJECTION

REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M77531	NEW RELEASE	07/01	MMG	CT
A	M82377	UPDATED DRAWING	07/31/02	AV	HY
B	M102713	UPDATED NOTES	01/12/06	GF	IL

SUGGESTED MOUNTING CONFIGURATION FOR BG291 CASE STYLE, "hn" PIN CONNECTION



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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	MMG	08/16/01
TOLERANCES ON:	CHECKED	WP	09/06/01
2 PL DECIMALS ±	APPROVED	CT	09/07/01
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

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

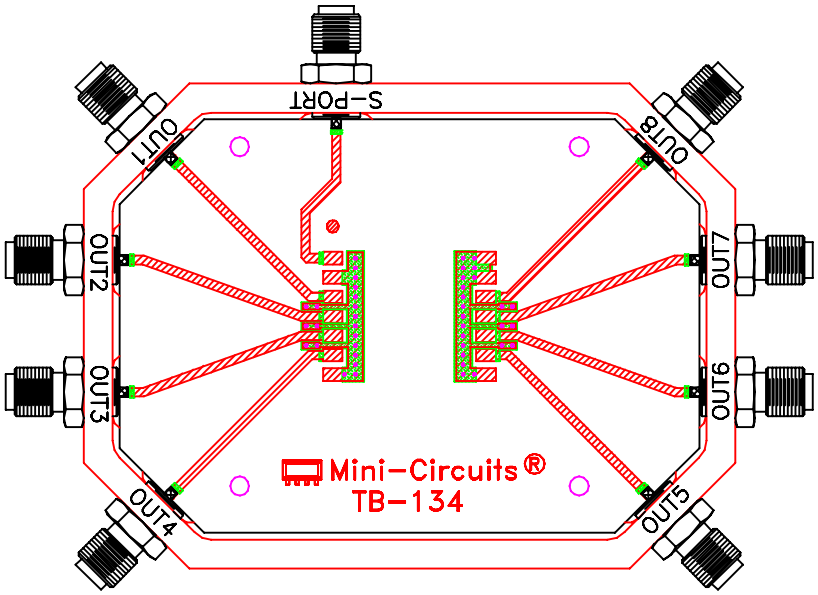
Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

PL, hn, BG291, JCPS-8, TB-134

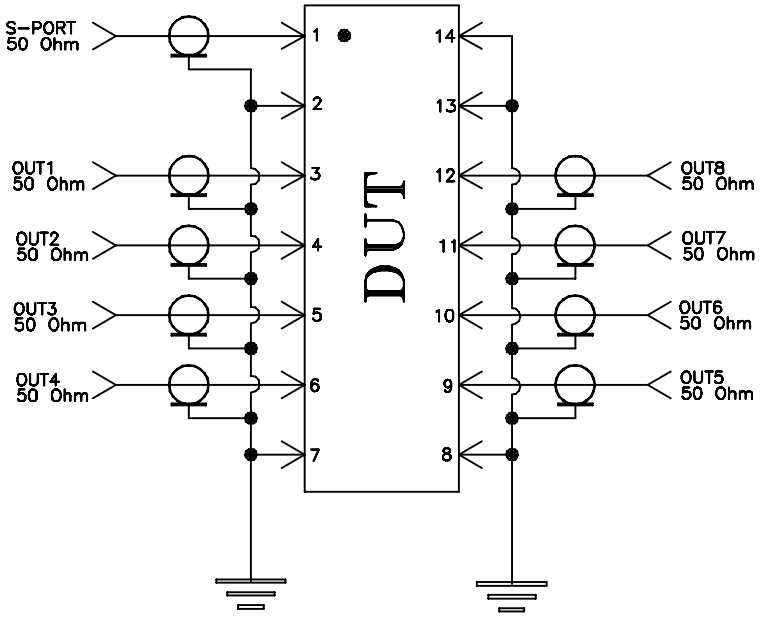
SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-037	B

FILE:	SCALE:	SHEET:
98PL037	4:1	1 OF 1

Evaluation Board and Circuit



TB-134



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