NON-CATALOG

Surface Mount

Power Splitter/Combiner

JEPS-12-10

12 Way-0° 50Ω 50 to 1000 MHz

CASE STYLE: BL372

Maximum Ratings

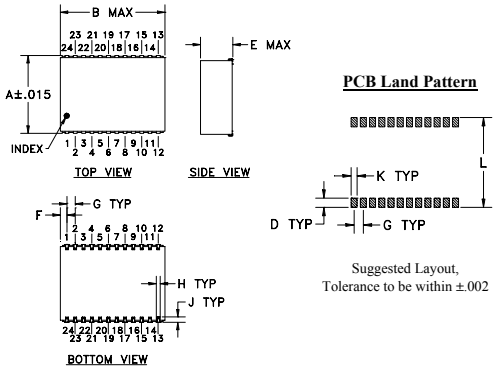
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.87W max.

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

Pin Connections

SUM PORT	18
PORT 1	2
PORT 2	3
PORT 3	4
PORT 4	5
PORT 5	8
PORT 6	9
PORT 7	10
PORT 8	11
PORT 9	14
PORT 10	15
PORT 11	22
PORT 12	23
GROUND	1,6,7,12,13,16,17,19,20,21,24

Outline Drawing

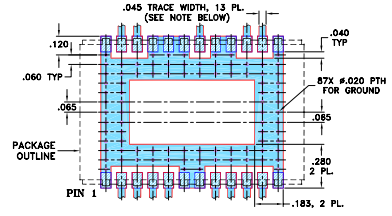


Outline Dimensions (inch / mm)

A	B	C	D	E	F
.940	1.426	--	.100	.250	.163
23.88	36.22	--	2.54	6.35	4.14

G	H	J	K	L	wt
.100	.047	.065	.065	.970	grams
2.54	1.19	1.65	1.65	24.64	6.4

Demo Board MCL P/N: TB-219
Suggested PCB Layout (PL-106)



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

Features

- good input VSWR, 1.22 typ.
- excellent output VSWR, 1.12 typ.
- aqueous washable
- shielded metal case
- solder plated J-leads for good solderability & strain relief

Applications

- CATV
- cellular
- instrumentation

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)				INSERTION LOSS (dB) ABOVE 10.8 dB				PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	
	L		U		L		U		L	U	L	U
f_L-f_U	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.
50-1000	25	16	23	14	1.6	2.5	2.2	4.0	10	23	0.7	1.4

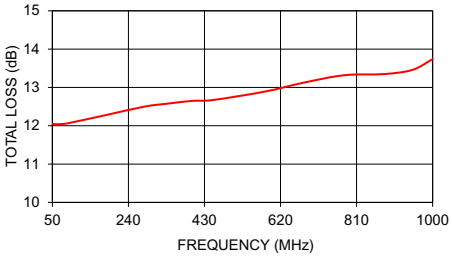
L = 50-500 MHz U = 500-1000 MHz

Typical Performance Data

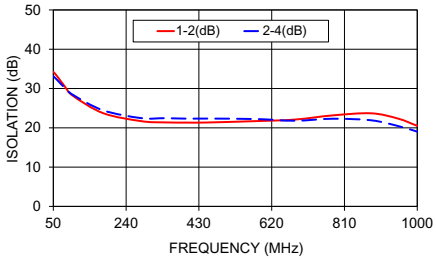
Freq. (MHz)	Total Loss[1] (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 12
			1-2	2-4			
50.00	12.05	0.10	34.24	33.14	0.72	1.40	1.24
60.00	12.04	0.11	33.12	32.18	0.97	1.39	1.22
80.00	12.05	0.10	30.51	30.14	1.21	1.35	1.20
100.00	12.09	0.11	28.23	28.46	1.20	1.35	1.18
180.00	12.27	0.14	23.73	24.45	2.11	1.44	1.16
280.00	12.50	0.21	21.69	22.46	2.78	1.45	1.15
340.00	12.58	0.25	21.38	22.45	3.11	1.41	1.14
400.00	12.65	0.32	21.33	22.33	3.50	1.31	1.13
450.00	12.67	0.34	21.35	22.35	3.60	1.17	1.11
580.00	12.89	0.47	21.71	22.23	4.39	1.17	1.10
680.00	13.13	0.56	22.09	21.80	5.34	1.37	1.09
780.00	13.32	0.60	23.17	22.31	6.19	1.49	1.08
880.00	13.35	0.73	23.69	21.91	7.47	1.37	1.06
950.00	13.46	0.83	22.34	20.45	9.07	1.27	1.04
1000.00	13.74	0.91	20.50	19.03	10.45	1.36	1.01

1. Total Loss = Insertion Loss + 10.8dB splitter loss.

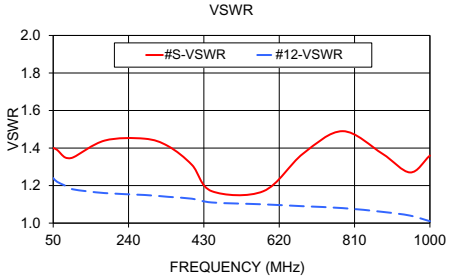
TOTAL LOSS



ISOLATION



VSWR



electrical schematic

Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

12 Way-0° Power Splitter/Combiner JEPS-12-10

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-3	S-5	S-7	S-9	S-12			1-3	1-5	2-3	6-7	11-12	S	1	12
10	12.15	12.07	12.14	12.16	12.13	12.19	0.12	0.69	33.39	37.57	33.23	33.20	28.94	1.52	1.61	1.58
20	12.03	11.97	12.03	12.06	12.03	12.06	0.09	0.32	35.79	39.30	35.26	35.06	34.33	1.38	1.43	1.41
30	11.95	11.89	11.95	11.98	11.95	11.97	0.08	0.28	36.24	39.96	35.45	35.25	35.84	1.33	1.36	1.35
40	11.91	11.85	11.91	11.93	11.91	11.93	0.08	0.32	36.21	40.44	35.21	34.98	35.48	1.30	1.33	1.31
50	11.89	11.84	11.89	11.91	11.89	11.91	0.08	0.40	35.93	40.83	34.74	34.53	34.41	1.29	1.30	1.29
60	11.89	11.83	11.89	11.91	11.88	11.91	0.07	0.47	35.54	41.18	34.22	33.98	33.18	1.28	1.29	1.28
70	11.89	11.84	11.89	11.91	11.89	11.90	0.07	0.55	35.09	41.52	33.66	33.43	31.98	1.27	1.27	1.26
80	11.90	11.84	11.89	11.91	11.89	11.91	0.07	0.68	34.62	41.79	33.11	32.87	30.88	1.26	1.26	1.25
90	11.91	11.85	11.90	11.92	11.90	11.92	0.07	0.73	34.16	42.09	32.59	32.33	29.90	1.26	1.24	1.24
100	11.92	11.86	11.91	11.93	11.91	11.93	0.07	0.81	33.70	42.35	32.10	31.81	29.01	1.26	1.23	1.23
150	12.01	11.94	12.00	12.01	12.01	12.01	0.07	1.22	31.63	43.72	29.98	29.65	25.73	1.26	1.18	1.19
200	12.12	12.05	12.11	12.11	12.13	12.12	0.08	1.61	29.95	45.12	28.45	28.09	23.63	1.29	1.15	1.15
250	12.25	12.17	12.25	12.23	12.27	12.26	0.10	1.94	28.66	46.26	27.45	27.05	22.25	1.35	1.10	1.12
300	12.41	12.31	12.40	12.37	12.43	12.41	0.12	2.32	27.76	46.63	26.89	26.46	21.38	1.43	1.09	1.10
350	12.56	12.45	12.56	12.52	12.59	12.57	0.14	2.71	27.19	45.95	26.76	26.29	20.92	1.51	1.09	1.10
400	12.72	12.59	12.71	12.65	12.74	12.72	0.15	3.06	26.94	44.52	27.04	26.52	20.80	1.58	1.12	1.12
425	12.78	12.65	12.77	12.71	12.80	12.79	0.16	3.27	26.95	43.66	27.36	26.80	20.87	1.60	1.14	1.13
450	12.84	12.70	12.83	12.75	12.85	12.84	0.16	3.45	27.03	42.78	27.80	27.18	21.01	1.62	1.15	1.14
475	12.89	12.74	12.87	12.79	12.89	12.89	0.16	3.61	27.19	41.82	28.37	27.70	21.23	1.62	1.17	1.16
500	12.93	12.77	12.91	12.81	12.92	12.92	0.16	3.78	27.43	40.87	29.11	28.35	21.53	1.62	1.18	1.17
525	12.95	12.79	12.93	12.82	12.94	12.94	0.16	3.95	27.75	39.92	30.03	29.17	21.92	1.60	1.19	1.18
550	12.96	12.80	12.94	12.83	12.94	12.96	0.16	4.15	28.16	38.96	31.18	30.17	22.37	1.57	1.20	1.18
575	12.97	12.80	12.95	12.82	12.94	12.96	0.17	4.32	28.66	38.06	32.62	31.39	22.92	1.52	1.21	1.19
600	12.96	12.80	12.94	12.81	12.93	12.95	0.17	4.50	29.25	37.19	34.45	32.89	23.53	1.47	1.22	1.19
650	12.96	12.79	12.94	12.78	12.90	12.94	0.17	4.88	30.74	35.59	40.06	36.95	24.97	1.34	1.22	1.20
700	12.97	12.81	12.97	12.78	12.89	12.94	0.19	5.27	32.59	34.33	47.17	41.48	26.59	1.20	1.22	1.19
750	13.02	12.87	13.04	12.82	12.91	12.98	0.22	5.69	34.69	33.44	40.00	39.46	28.25	1.08	1.20	1.18
800	13.11	12.98	13.17	12.91	12.98	13.07	0.26	6.15	36.62	33.07	35.58	35.58	29.93	1.10	1.19	1.17
850	13.25	13.13	13.33	13.03	13.09	13.18	0.30	6.67	37.67	33.08	33.18	32.97	31.60	1.19	1.17	1.15
900	13.40	13.29	13.53	13.19	13.22	13.33	0.34	7.20	37.12	33.80	31.46	30.98	32.35	1.27	1.14	1.14
925	13.50	13.38	13.64	13.28	13.30	13.42	0.36	7.51	36.25	34.41	30.60	30.05	31.69	1.30	1.13	1.13
950	13.60	13.49	13.75	13.37	13.38	13.52	0.38	7.81	35.13	35.32	29.75	29.12	30.14	1.34	1.11	1.12
975	13.72	13.61	13.89	13.49	13.49	13.64	0.40	8.15	33.84	36.55	28.72	28.15	28.13	1.39	1.09	1.12
1000	13.88	13.76	14.06	13.63	13.63	13.79	0.43	8.42	32.50	38.18	27.64	27.18	26.06	1.46	1.08	1.12

[1]Total Loss = Insertion Loss + 10.8dB Splitter Loss

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12 Way-0° Power Splitter/Combiner JEPS-12-10

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-3	S-5	S-7	S-9	S-12			1-3	1-5	2-3	6-7	11-12	S	1	12
10	11.77	11.75	11.80	11.81	11.78	11.80	0.06	3.23	28.23	36.86	28.52	31.04	27.52	1.57	1.59	1.56
20	11.75	11.76	11.85	11.87	11.83	11.80	0.12	1.18	33.19	39.71	32.97	34.17	33.12	1.40	1.38	1.37
30	11.76	11.76	11.83	11.85	11.81	11.80	0.09	0.73	34.49	40.59	33.90	34.60	34.96	1.34	1.31	1.30
40	11.73	11.72	11.79	11.82	11.78	11.77	0.09	0.63	34.86	41.06	34.04	34.49	35.10	1.31	1.27	1.26
50	11.71	11.70	11.77	11.79	11.76	11.74	0.09	0.61	34.89	41.47	33.89	34.16	34.44	1.29	1.25	1.24
60	11.71	11.70	11.76	11.78	11.75	11.73	0.08	0.61	34.74	41.80	33.56	33.72	33.51	1.27	1.23	1.22
70	11.71	11.70	11.76	11.78	11.75	11.73	0.08	0.63	34.48	42.21	33.16	33.22	32.52	1.26	1.21	1.21
80	11.71	11.70	11.76	11.78	11.75	11.73	0.08	0.67	34.17	42.53	32.72	32.71	31.58	1.26	1.20	1.20
90	11.72	11.71	11.76	11.78	11.76	11.74	0.07	0.71	33.81	42.88	32.28	32.22	30.70	1.26	1.19	1.18
100	11.72	11.71	11.77	11.79	11.77	11.74	0.07	0.78	33.43	43.23	31.84	31.73	29.91	1.26	1.18	1.18
150	11.77	11.77	11.83	11.84	11.83	11.79	0.07	1.13	31.61	44.96	29.90	29.65	26.83	1.27	1.14	1.14
200	11.86	11.85	11.93	11.92	11.93	11.87	0.07	1.51	30.03	46.90	28.45	28.12	24.75	1.31	1.10	1.11
250	11.97	11.96	12.05	12.03	12.06	11.99	0.09	1.86	28.75	48.28	27.47	27.10	23.37	1.38	1.08	1.09
300	12.10	12.08	12.19	12.15	12.20	12.12	0.11	2.27	27.82	48.22	26.91	26.50	22.50	1.46	1.09	1.09
350	12.24	12.21	12.34	12.28	12.34	12.26	0.13	2.65	27.21	46.85	26.75	26.31	22.03	1.55	1.11	1.11
400	12.37	12.33	12.47	12.40	12.47	12.39	0.14	3.01	26.93	44.96	26.98	26.50	21.93	1.62	1.14	1.14
425	12.43	12.38	12.53	12.45	12.53	12.44	0.14	3.22	26.91	43.91	27.27	26.74	22.00	1.64	1.16	1.15
450	12.47	12.43	12.58	12.49	12.57	12.49	0.15	3.43	26.97	42.90	27.68	27.11	22.16	1.66	1.18	1.17
475	12.51	12.46	12.62	12.52	12.60	12.53	0.15	3.61	27.12	41.91	28.22	27.61	22.40	1.66	1.20	1.18
500	12.54	12.48	12.64	12.54	12.63	12.55	0.16	3.77	27.35	40.89	28.91	28.23	22.72	1.65	1.21	1.19
525	12.55	12.49	12.66	12.54	12.63	12.56	0.17	3.93	27.67	39.87	29.80	29.02	23.14	1.63	1.22	1.20
550	12.55	12.50	12.66	12.54	12.63	12.56	0.17	4.12	28.07	38.89	30.90	30.00	23.63	1.60	1.23	1.21
575	12.56	12.49	12.66	12.53	12.62	12.56	0.17	4.33	28.58	37.94	32.28	31.19	24.21	1.55	1.24	1.22
600	12.54	12.48	12.65	12.51	12.60	12.54	0.17	4.52	29.18	37.02	34.05	32.66	24.86	1.49	1.24	1.22
650	12.52	12.46	12.64	12.47	12.55	12.50	0.18	4.88	30.76	35.36	39.57	36.69	26.31	1.35	1.25	1.22
700	12.51	12.46	12.65	12.45	12.52	12.48	0.20	5.25	32.74	34.01	50.00	41.94	27.70	1.20	1.24	1.22
750	12.54	12.50	12.71	12.47	12.53	12.50	0.23	5.64	35.12	33.05	41.25	40.62	28.79	1.08	1.23	1.21
800	12.62	12.60	12.82	12.55	12.59	12.57	0.26	6.06	37.45	32.57	36.32	36.41	29.48	1.10	1.22	1.20
850	12.73	12.73	12.97	12.66	12.67	12.66	0.31	6.51	38.85	32.53	33.86	33.66	29.94	1.19	1.20	1.18
900	12.87	12.88	13.15	12.80	12.79	12.79	0.36	7.05	38.33	33.14	32.29	31.61	29.82	1.28	1.18	1.17
925	12.94	12.95	13.24	12.88	12.85	12.86	0.39	7.30	37.33	33.69	31.48	30.65	29.23	1.31	1.16	1.16
950	13.03	13.04	13.34	12.96	12.92	12.94	0.42	7.54	36.05	34.51	30.66	29.68	28.09	1.35	1.15	1.16
975	13.13	13.15	13.47	13.06	13.01	13.04	0.46	7.78	34.57	35.62	29.61	28.63	26.55	1.40	1.13	1.15
1000	13.26	13.28	13.63	13.20	13.13	13.16	0.50	8.10	33.06	37.12	28.44	27.59	24.84	1.47	1.11	1.15

[1]Total Loss = Insertion Loss + 10.8dB Splitter Loss

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12 Way-0° Power Splitter/Combiner JEPS-12-10

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-3	S-5	S-7	S-9	S-12			1-3	1-5	2-3	6-7	11-12	S	1	12
10	12.31	12.23	12.33	12.36	12.32	12.34	0.13	0.82	34.36	37.01	33.65	33.62	28.24	1.99	1.81	1.78
20	12.13	12.06	12.16	12.18	12.15	12.16	0.13	0.66	36.48	38.52	35.46	35.45	33.53	1.47	1.37	1.36
30	12.08	11.98	12.10	12.12	12.09	12.10	0.14	0.64	36.94	39.26	35.63	35.68	35.75	1.38	1.28	1.28
40	12.06	11.96	12.08	12.11	12.06	12.08	0.15	0.69	36.79	39.75	35.33	35.37	35.69	1.33	1.24	1.24
50	12.06	11.95	12.08	12.11	12.07	12.07	0.16	0.69	36.39	40.16	34.86	34.84	34.48	1.31	1.21	1.21
60	12.07	11.96	12.09	12.12	12.07	12.08	0.16	0.71	35.86	40.48	34.29	34.18	33.00	1.29	1.19	1.19
70	12.08	11.97	12.11	12.13	12.09	12.09	0.16	0.74	35.30	40.70	33.73	33.54	31.61	1.28	1.17	1.18
80	12.09	11.98	12.12	12.14	12.10	12.10	0.17	0.82	34.75	40.97	33.17	32.91	30.38	1.27	1.16	1.16
90	12.11	11.99	12.14	12.16	12.12	12.12	0.17	0.88	34.19	41.21	32.63	32.32	29.30	1.27	1.15	1.16
100	12.12	12.00	12.16	12.17	12.13	12.13	0.17	0.91	33.67	41.41	32.11	31.75	28.34	1.27	1.14	1.15
150	12.23	12.10	12.26	12.27	12.24	12.23	0.17	1.29	31.40	42.54	29.97	29.48	24.90	1.29	1.11	1.11
200	12.35	12.21	12.38	12.39	12.38	12.35	0.18	1.69	29.68	43.71	28.44	27.89	22.78	1.35	1.09	1.10
250	12.49	12.34	12.53	12.52	12.53	12.50	0.20	2.05	28.43	44.73	27.43	26.86	21.41	1.43	1.09	1.10
300	12.66	12.49	12.70	12.67	12.71	12.67	0.22	2.43	27.57	45.27	26.88	26.31	20.54	1.51	1.11	1.11
350	12.84	12.64	12.87	12.83	12.88	12.84	0.25	2.82	27.07	44.98	26.75	26.20	20.09	1.60	1.14	1.14
400	13.00	12.78	13.03	12.97	13.04	13.00	0.26	3.18	26.88	43.99	27.06	26.50	19.96	1.67	1.17	1.17
425	13.07	12.84	13.10	13.04	13.11	13.07	0.27	3.38	26.91	43.26	27.38	26.80	20.02	1.70	1.19	1.18
450	13.13	12.90	13.15	13.09	13.17	13.14	0.27	3.55	27.01	42.49	27.83	27.22	20.15	1.71	1.21	1.20
475	13.19	12.94	13.20	13.13	13.22	13.19	0.28	3.72	27.18	41.64	28.42	27.78	20.36	1.71	1.22	1.21
500	13.23	12.98	13.25	13.16	13.25	13.23	0.28	3.89	27.43	40.77	29.16	28.46	20.64	1.70	1.24	1.22
525	13.26	13.00	13.27	13.18	13.28	13.26	0.28	4.03	27.77	39.87	30.09	29.31	20.99	1.68	1.25	1.23
550	13.27	13.01	13.29	13.19	13.29	13.27	0.28	4.22	28.17	39.00	31.26	30.35	21.42	1.64	1.26	1.24
575	13.29	13.02	13.31	13.20	13.29	13.29	0.28	4.38	28.66	38.13	32.71	31.60	21.93	1.59	1.27	1.24
600	13.29	13.02	13.31	13.19	13.29	13.29	0.29	4.57	29.23	37.30	34.57	33.13	22.50	1.53	1.27	1.25
650	13.30	13.03	13.34	13.19	13.28	13.29	0.30	4.97	30.62	35.80	40.25	37.09	23.88	1.38	1.27	1.25
700	13.33	13.06	13.38	13.20	13.29	13.31	0.32	5.42	32.28	34.57	46.54	40.45	25.52	1.22	1.27	1.24
750	13.40	13.14	13.47	13.26	13.32	13.36	0.33	5.88	34.07	33.78	39.67	37.93	27.39	1.08	1.26	1.23
800	13.50	13.25	13.60	13.36	13.41	13.46	0.35	6.39	35.59	33.38	35.36	34.42	29.60	1.09	1.25	1.22
850	13.64	13.41	13.79	13.49	13.53	13.59	0.38	6.92	36.33	33.48	32.97	31.92	32.36	1.20	1.24	1.21
900	13.81	13.59	14.00	13.66	13.68	13.75	0.41	7.47	35.85	34.29	31.25	29.97	34.97	1.28	1.21	1.20
925	13.91	13.68	14.12	13.76	13.77	13.85	0.44	7.80	35.11	34.96	30.37	29.10	34.55	1.32	1.20	1.19
950	14.02	13.80	14.24	13.86	13.86	13.97	0.44	8.15	34.20	35.92	29.52	28.24	32.49	1.35	1.18	1.19
975	14.16	13.93	14.39	13.99	13.98	14.10	0.47	8.54	33.12	37.21	28.52	27.37	29.87	1.40	1.17	1.18
1000	14.33	14.09	14.58	14.15	14.14	14.27	0.49	8.82	31.99	38.94	27.46	26.52	27.38	1.46	1.15	1.18

[1]Total Loss = Insertion Loss + 10.8dB Splitter Loss

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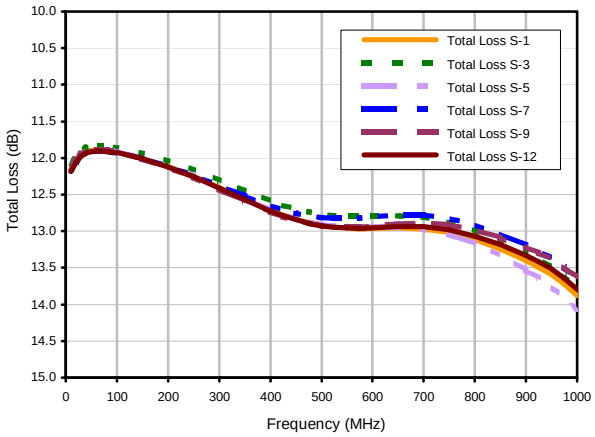
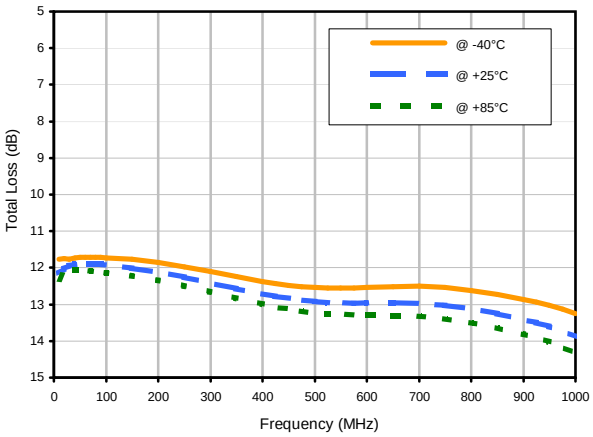
12 Way-0° Power Splitter/Combiner JEPS-12-10

Typical Performance Curves

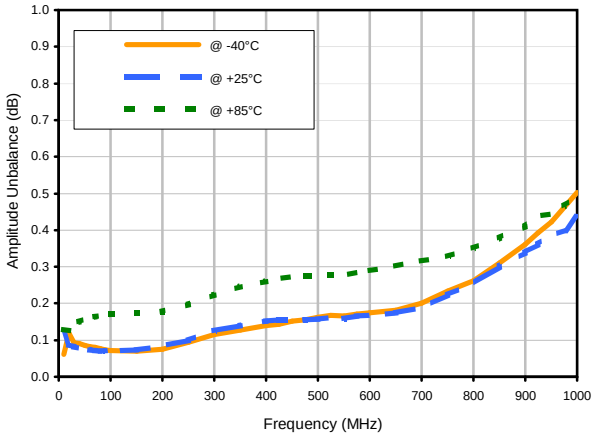
Total Loss



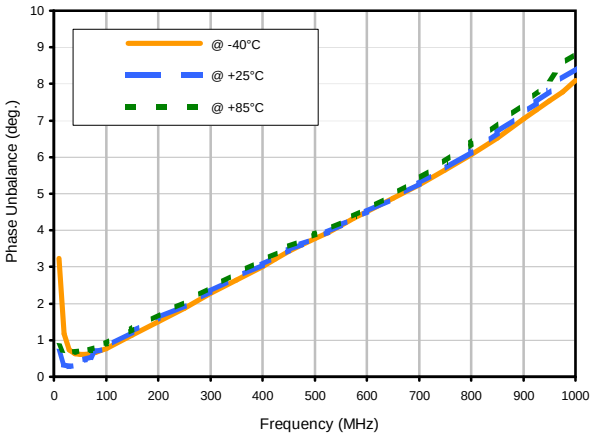
Total Loss S-1 vs. TEMPERATURE



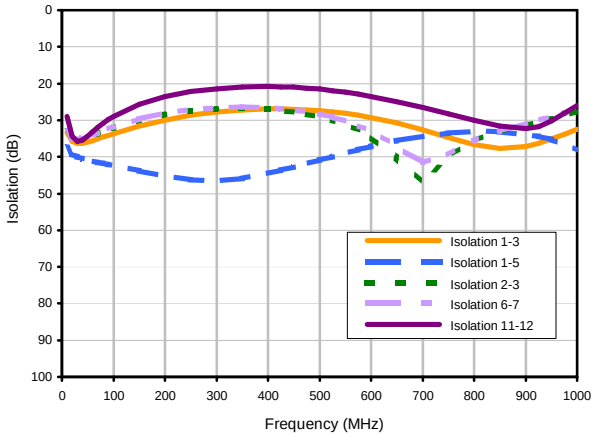
Amplitude Unbalance vs. TEMPERATURE



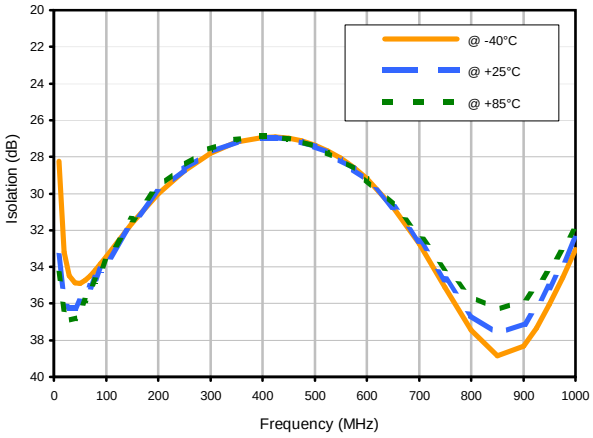
Phase Unbalance vs. TEMPERATURE



Isolation



Isolation 1-3 vs. TEMPERATURE



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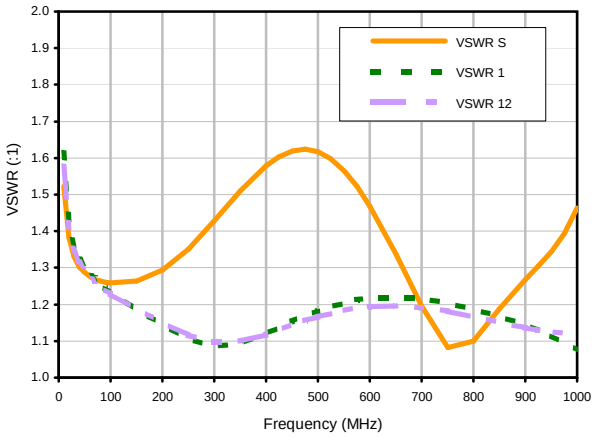
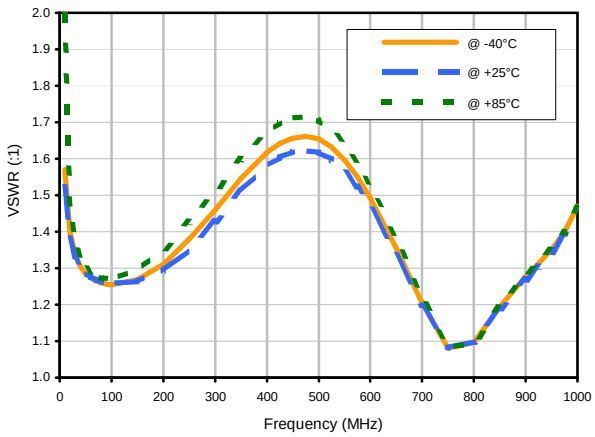
12 Way-0° Power Splitter/Combiner JEPS-12-10

Typical Performance Curves

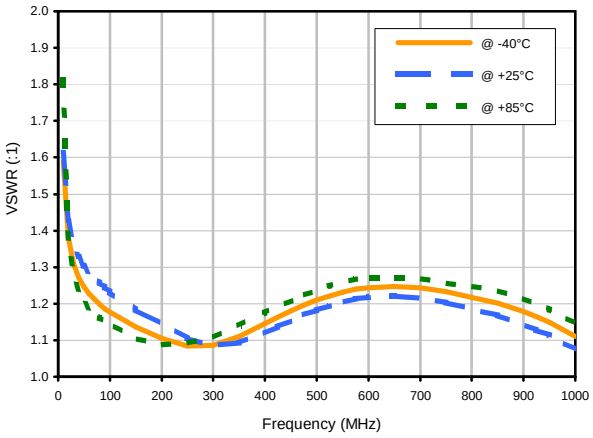
VSWR



VSWR SUM vs. TEMPERATURE



VSWR OUT2 vs. TEMPERATURE



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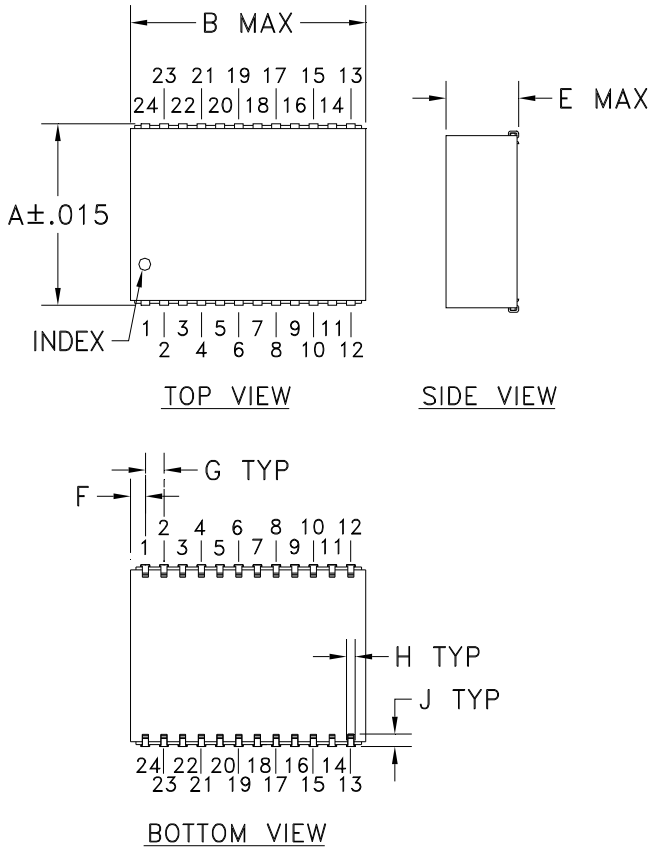
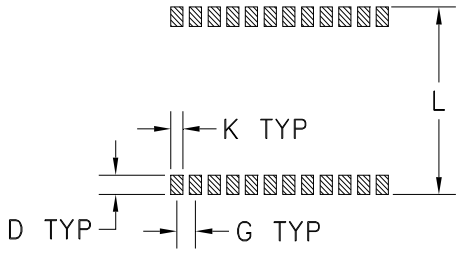
Outline Dimensions

BL372



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
BL372	.940 (23.88)	1.426 (36.22)	-- --	.100 (2.54)	.250 (6.35)	.163 (4.14)	.100 (2.54)	.047 (1.19)	.065 (1.65)	.065 (1.65)	.970 (24.64)	6.4

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

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.

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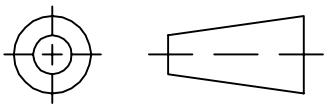
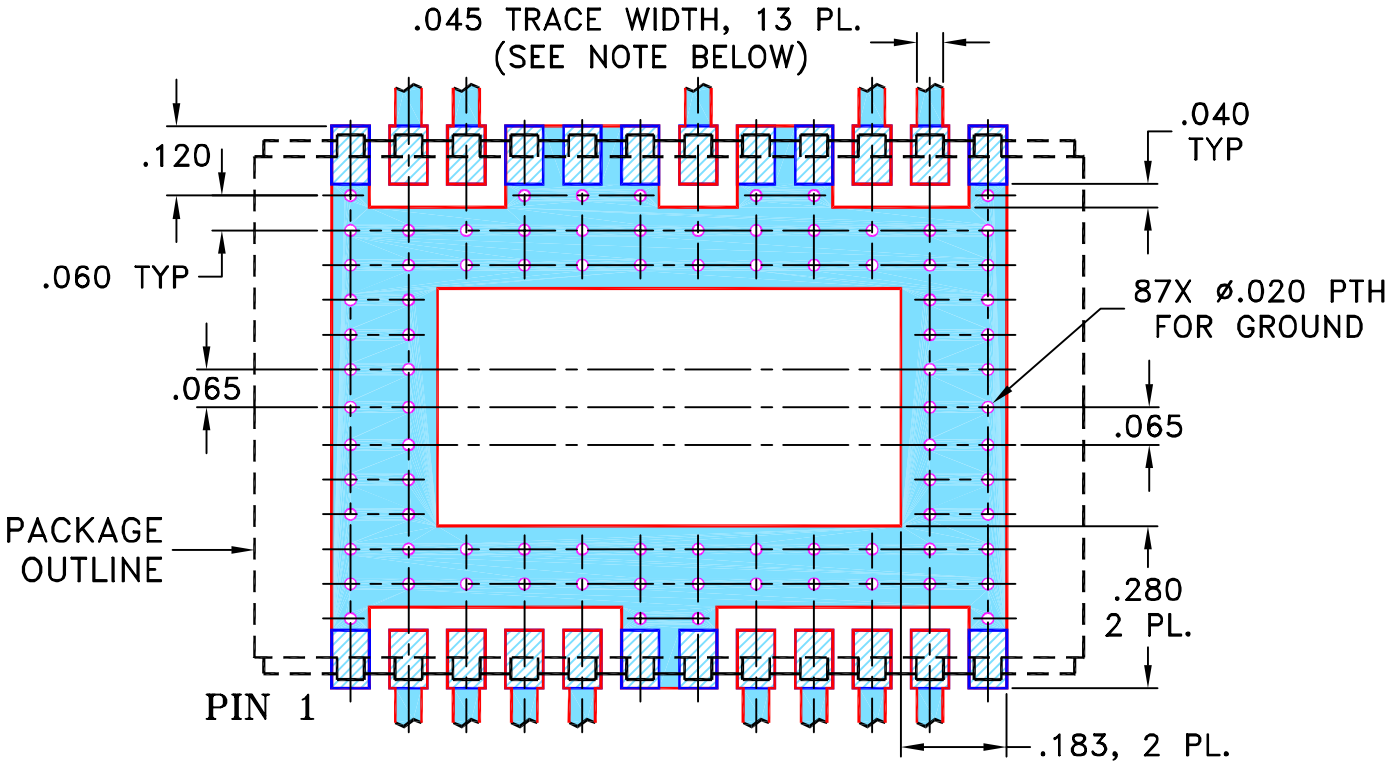
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M100957	NEW RELEASE	10/03/05	MMG	HY
A	M102713	ADDED "...WITH SMOBC"	01/14/06	GF	IL

SUGGESTED MOUNTING CONFIGURATION FOR BL372 CASE STYLE, "lx" 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	09/23/05
TOLERANCES ON:	CHECKED	AV	10/03/05
2 PL DECIMALS ±	APPROVED	HY	10/03/05
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

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

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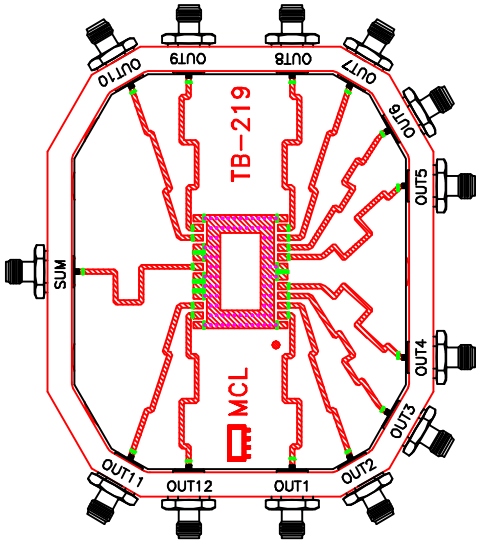
PL, lx, BL372, JEPS-12-10, TB-219

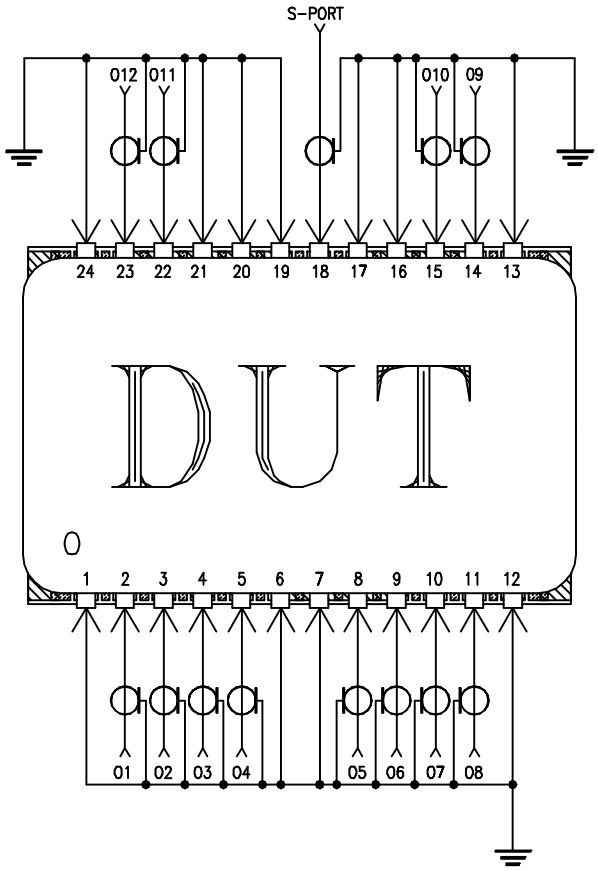
SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-106	A

FILE:	SCALE:	SHEET:
98PL106	3:1	1 OF 1

Evaluation Board and Circuit



TB-219



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

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