

Power Splitter/Combiner

JEPS-ED7680

12 Way-0°

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : BL372

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		10		1000 MHz
Isolation	10 - 100 MHz		32	dB
	100 - 500 MHz		23	dB
	500 - 1000 MHz		21	dB
Insertion Loss Above 10.8 dB	10 - 100 MHz		1.20	dB
	100 - 500 MHz		1.54	dB
	500 - 1000 MHz		2.00	dB
Phase Unbalance	10 - 100 MHz		1.123	deg.
	100 - 500 MHz		2.839	deg.
	500 - 1000 MHz		6.251	deg.
Amplitude Unbalance	10 - 100 MHz		0.142	dB
	100 - 500 MHz		0.278	dB
	500 - 1000 MHz		0.465	dB
VSWR	SUM Port		1.26	(:1)
	OUT Ports		1.15	(:1)

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

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
GND EXT	1, 6, 7, 12, 13, 16, 17, 19, 20, 21, 24

Functional Diagram



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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB) S-1	AMP. UNBAL. (dB)	ISOLATION (dB)		PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)	
			1-2	3-4			S	4
10.0	12.30	0.17	30.69	29.51	2.39	10.0	1.66	1.61
30.0	11.98	0.13	35.28	34.80	0.88	30.0	1.27	1.30
40.0	11.93	0.14	34.57	34.21	0.58	40.0	1.21	1.26
50.0	11.92	0.15	33.34	33.13	0.65	50.0	1.17	1.23
75.0	11.93	0.13	30.27	30.30	0.99	75.0	1.14	1.20
100.0	11.95	0.13	27.92	28.16	1.25	100.0	1.15	1.18
130.0	12.02	0.15	25.83	26.20	1.57	130.0	1.19	1.17
160.0	12.09	0.15	24.26	24.90	1.96	160.0	1.24	1.16
190.0	12.19	0.20	23.06	24.11	2.25	190.0	1.29	1.15
220.0	12.24	0.25	22.16	23.93	2.54	220.0	1.32	1.15
250.0	12.31	0.26	21.42	23.83	2.72	250.0	1.34	1.15
280.0	12.41	0.31	20.91	23.58	2.72	280.0	1.36	1.14
310.0	12.42	0.32	20.52	22.96	3.12	310.0	1.35	1.14
340.0	12.47	0.35	20.25	21.84	3.28	340.0	1.34	1.14
370.0	12.51	0.34	20.14	21.97	3.41	370.0	1.33	1.14
400.0	12.50	0.34	20.10	21.43	3.55	400.0	1.30	1.14
430.0	12.53	0.36	20.17	21.17	3.68	430.0	1.27	1.14
460.0	12.53	0.36	20.33	21.12	3.84	460.0	1.24	1.13
490.0	12.54	0.37	20.56	21.17	3.86	490.0	1.22	1.13
520.0	12.52	0.37	20.85	21.32	4.04	520.0	1.20	1.13
550.0	12.54	0.36	21.17	21.52	4.25	550.0	1.19	1.12
580.0	12.55	0.35	21.52	21.72	4.36	580.0	1.20	1.12
610.0	12.55	0.34	21.86	21.82	4.66	610.0	1.22	1.12
640.0	12.58	0.33	22.20	21.76	4.91	640.0	1.24	1.11
670.0	12.62	0.31	22.50	21.64	5.33	670.0	1.27	1.11
700.0	12.66	0.31	22.77	21.48	5.65	700.0	1.29	1.11
730.0	12.70	0.31	23.01	21.29	5.82	730.0	1.30	1.10
760.0	12.76	0.35	23.19	21.13	6.05	760.0	1.30	1.10
790.0	12.77	0.40	23.33	20.93	6.24	790.0	1.29	1.09
820.0	12.85	0.45	23.40	20.70	6.71	820.0	1.26	1.09
850.0	12.87	0.51	23.34	20.50	7.09	850.0	1.22	1.08
880.0	12.90	0.56	23.12	20.20	7.44	880.0	1.16	1.08
910.0	12.98	0.63	22.69	19.83	7.87	910.0	1.11	1.07
940.0	13.06	0.70	22.02	19.43	8.27	940.0	1.12	1.06
970.0	13.20	0.78	21.15	18.92	8.62	970.0	1.20	1.05
1000.0	13.42	0.85	20.13	18.28	8.95	1000.0	1.33	1.03

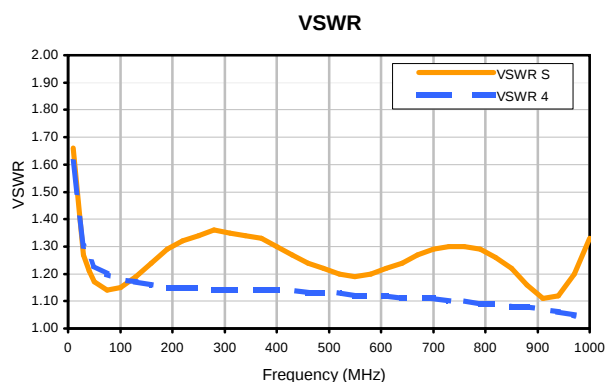
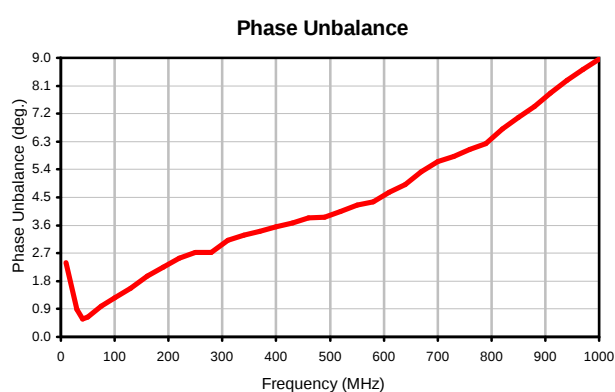
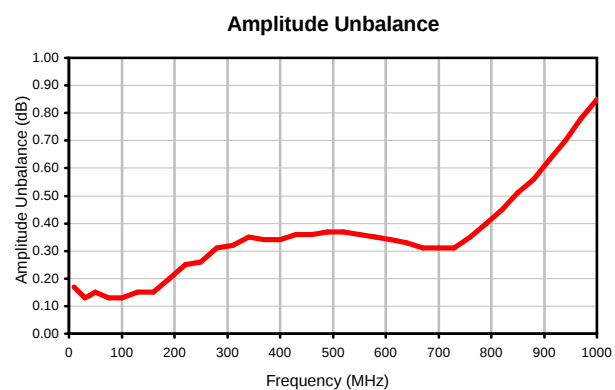
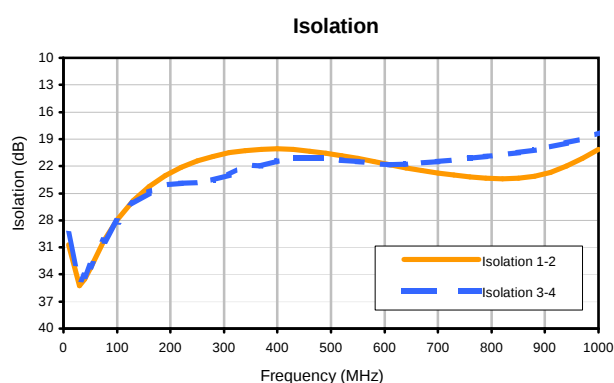
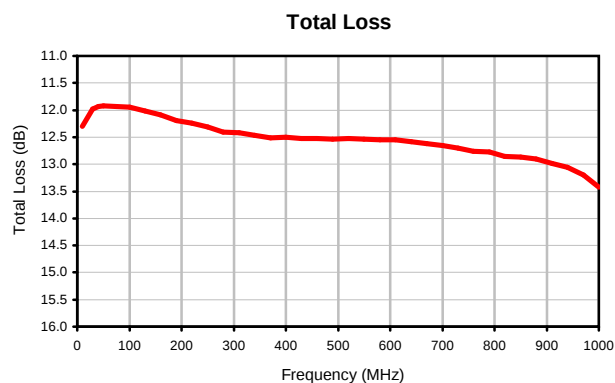
¹ Total Loss = Insertion Loss + 10.8dB Splitter Loss

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100707
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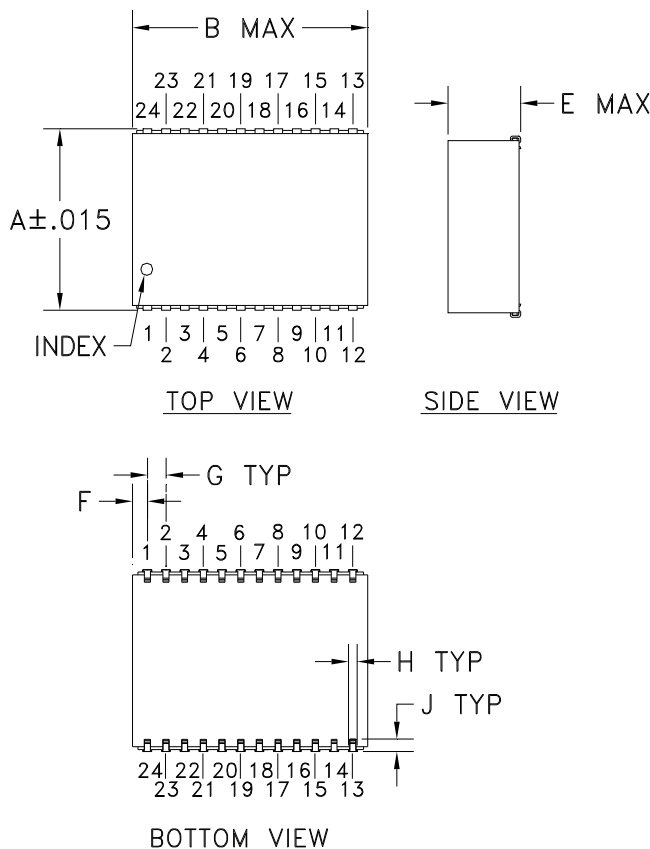
Typical Performance Curves



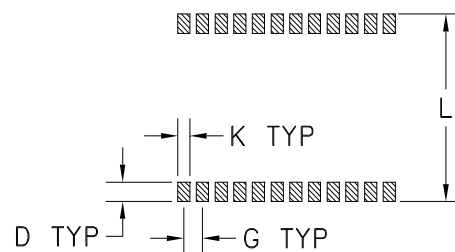
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Outline Dimensions

BL372



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm.002$

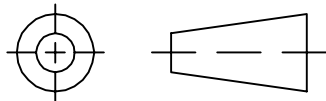
CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
BL372	.940 (23.88)	1.426 (36.22)	-- --	.100 (2.54)	.250 (6.35)	.163 (4.14)	.100 (2.54)	.047 (1.19)	.065 (1.65)	.065 (1.65)	.970 (24.64)	6.4

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

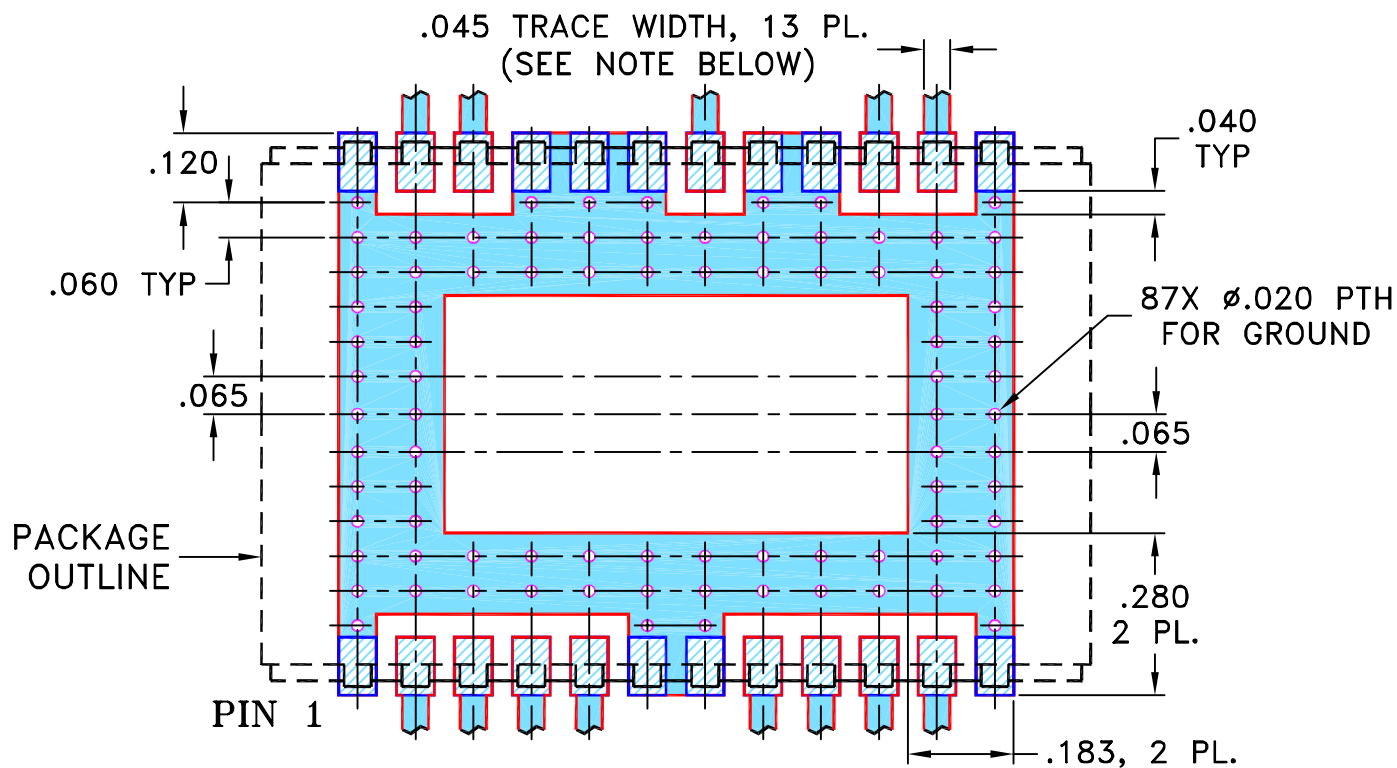
THIRD ANGLE PROJECTION



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, "1x" PIN CONNECTION.

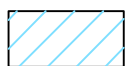


NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS $0.020'' \pm 0.0015''$; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

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

DIMENSIONS ARE IN INCHES

TOLERANCES ON:

2 PL DECIMALS $\pm$

3 PL DECIMALS $\pm$.005

ANGLES $\pm$

FRACTIONS $\pm$



INITIALS

DATE

DRAWN

MMG

09/23/05

CHECKED

AV

10/03/05

APPROVED

HY

10/03/05



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PL, 1x, BL372, JEPS-12-10, TB-219

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

SIZE

A

CODE IDENT

15542

DRAWING NO:

98-PL-106

REV:

A

FILE: 98PL106

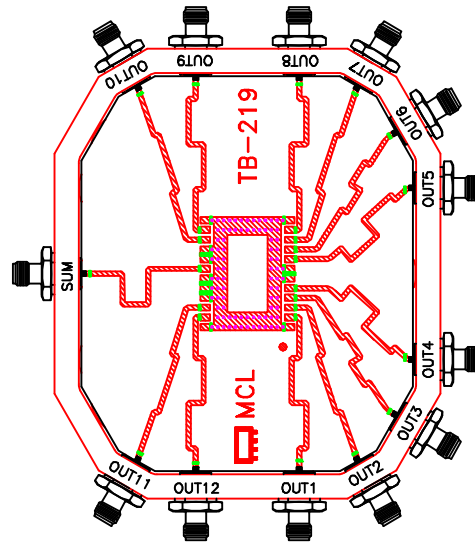
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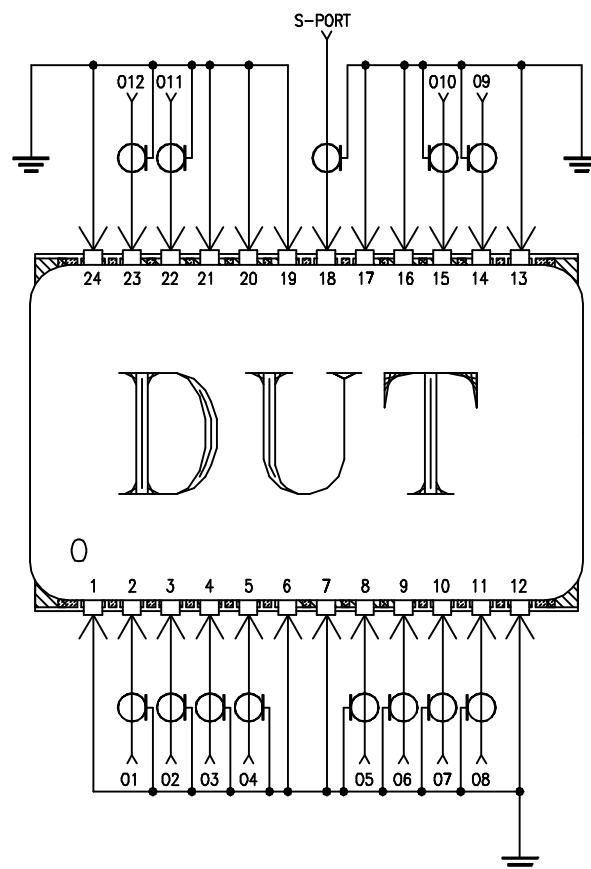
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Evaluation Board and Circuit



TB-219



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