

Power Splitter/Combiner 2 Way-90°

ZAPDQ-ED13209/1

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.



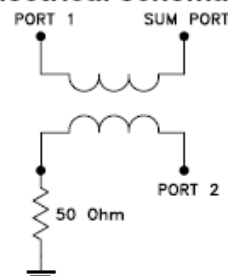
CASE STYLE : 99-01-1321

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		10		16 MHz
Isolation	10-16 MHz		28	dB
Insertion Loss Average of Coupled Outputs above 3.0 dB	10-16 MHz		0.60	dB
Phase Unbalance	10-16 MHz		3.10	deg.
Amplitude Unbalance	10-16 MHz		0.20	dB
VSWR	SUM Port		1.07	(:1)
	OUT Ports		1.06	(:1)

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

COAXIAL CONNECTIONS	
SUM PORT	SUM
PORT 1 (0°)	1
PORT 2 (90°)	2

electrical schematic



2 Way-90° Power Splitter/Combiner

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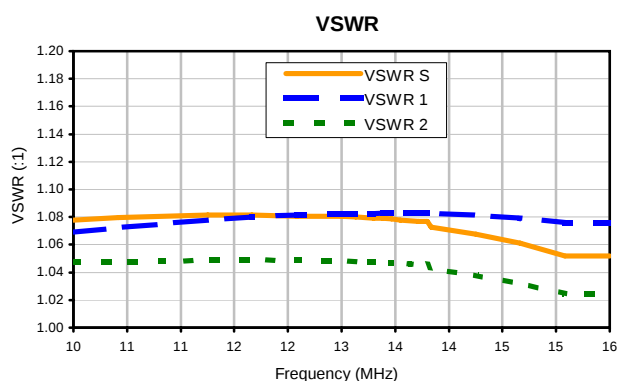
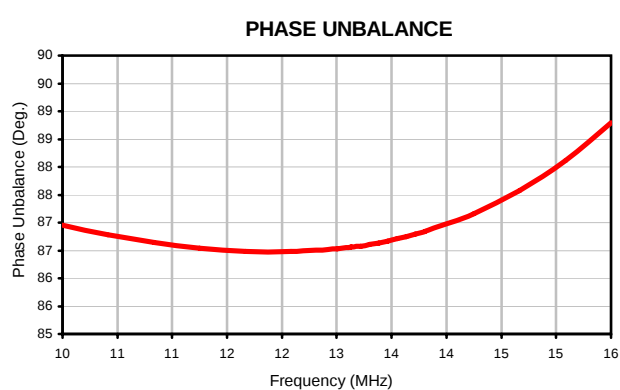
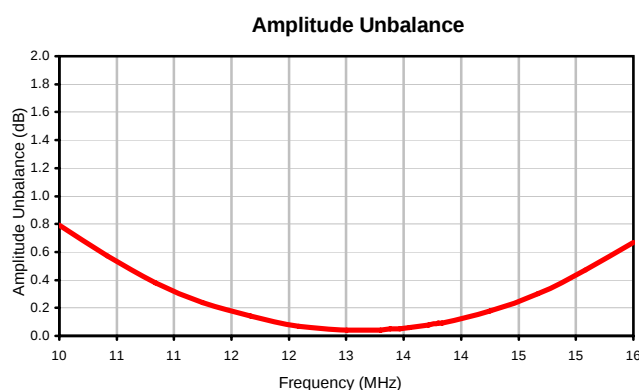
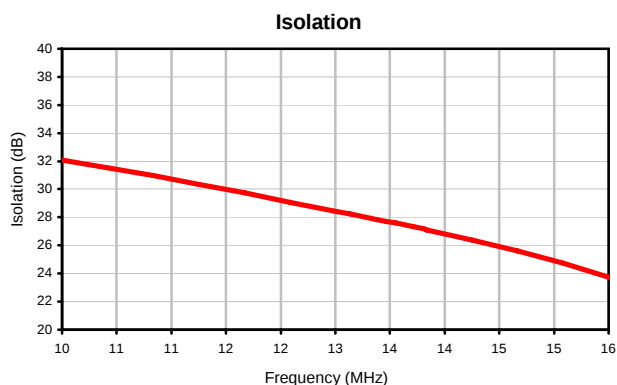
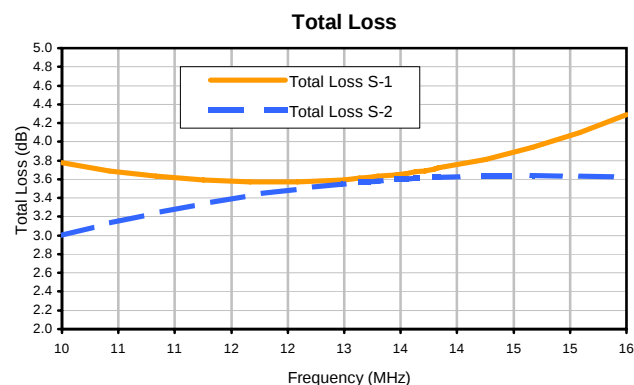
Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBAL (Deg.)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
10.00	3.78	3.00	0.79	32.08	86.95	10.00	1.08	1.07	1.05
10.50	3.69	3.13	0.57	31.54	86.78	10.50	1.08	1.07	1.05
11.00	3.63	3.24	0.38	30.96	86.64	11.00	1.08	1.07	1.05
11.50	3.59	3.34	0.24	30.34	86.54	11.50	1.08	1.08	1.05
12.00	3.57	3.43	0.14	29.73	86.48	12.00	1.08	1.08	1.05
12.50	3.57	3.50	0.07	29.07	86.48	12.50	1.08	1.08	1.05
13.00	3.59	3.55	0.04	28.44	86.53	13.00	1.08	1.08	1.05
13.16	3.61	3.57	0.04	28.25	86.56	13.16	1.08	1.08	1.05
13.26	3.62	3.57	0.04	28.11	86.58	13.26	1.08	1.08	1.05
13.36	3.63	3.58	0.04	27.99	86.61	13.36	1.08	1.08	1.05
13.46	3.64	3.59	0.05	27.84	86.63	13.46	1.08	1.08	1.05
13.56	3.65	3.60	0.05	27.72	86.67	13.56	1.08	1.08	1.05
13.66	3.66	3.60	0.06	27.59	86.71	13.66	1.08	1.08	1.05
13.76	3.68	3.61	0.07	27.45	86.75	13.76	1.08	1.08	1.05
13.86	3.69	3.61	0.08	27.32	86.79	13.86	1.08	1.08	1.05
13.96	3.71	3.62	0.09	27.18	86.84	13.96	1.08	1.08	1.05
14.00	3.72	3.62	0.09	27.12	86.86	14.00	1.07	1.08	1.04
14.50	3.81	3.64	0.18	26.39	87.16	14.50	1.07	1.08	1.04
15.00	3.94	3.64	0.30	25.59	87.57	15.00	1.06	1.08	1.03
15.50	4.10	3.63	0.47	24.72	88.11	15.50	1.05	1.08	1.02
16.00	4.29	3.62	0.67	23.75	88.79	16.00	1.05	1.08	1.02

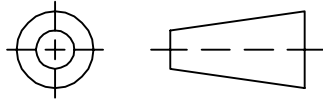
¹Total Loss = Insertion Loss + 3dB Splitter Loss



Typical Performance Curves



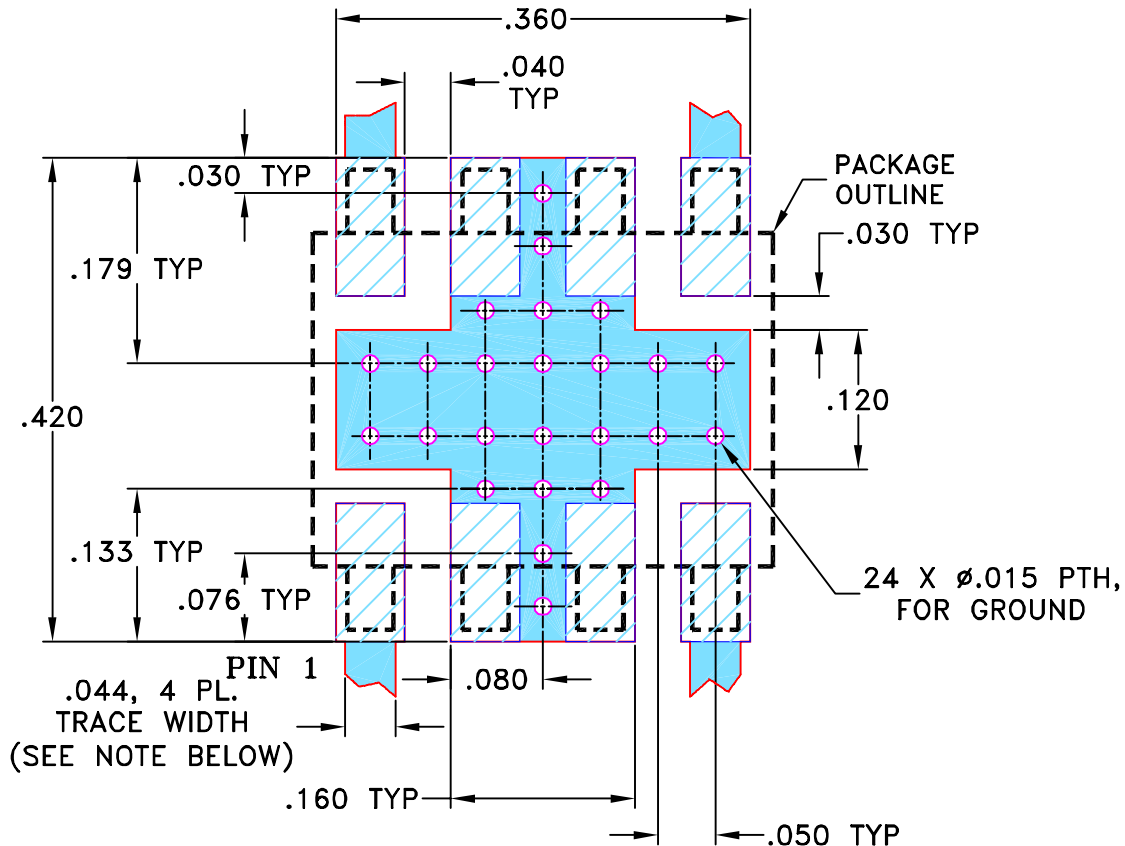
THIRD ANGLE PROJECTION



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 $0.020'' \pm 0.0015''$. 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

INITIALS

DATE

DIMENSIONS ARE IN INCHES

DRAWN

GF

07/18/02

TOLERANCES ON:

CHECKED

HY

08/01/02

2 PL DECIMALS $\pm$

APPROVED

DJ

08/06/02

3 PL DECIMALS $\pm$.005ANGLES $\pm$ FRACTIONS $\pm$
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ASHEETA1.DWG REV:A DATE:01/12/95



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

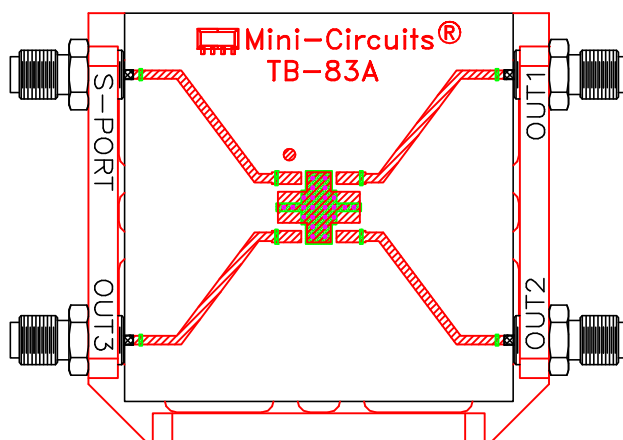
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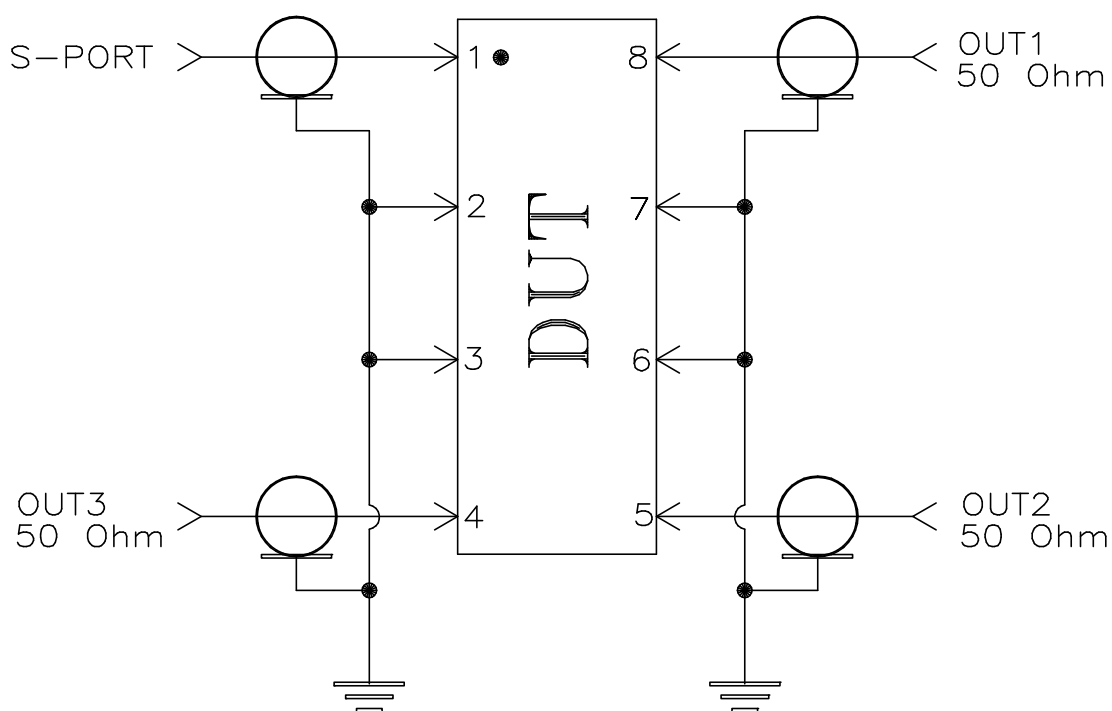
SCALE: 6:1

SHEET: 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	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
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	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I