

12 Way-0° 50Ω 50 to 1000 MHz

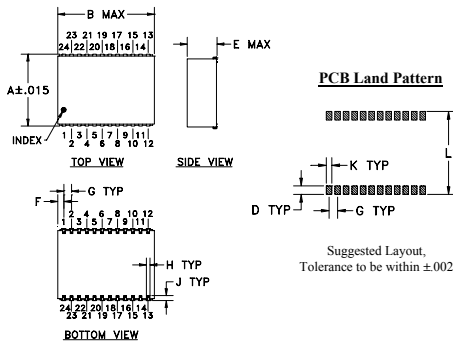
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.87W max.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

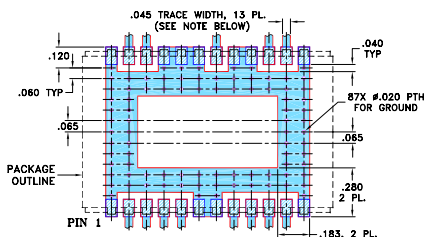
SUM PORT	18
PORT 1	2
PORT 2	3
PORT 3	4
PORT 4	5
PORT 5	8
PORT 6	9
PORT 7	10
PORT 8	11
PORT 9	14
PORT 10	15
PORT 11	22
PORT 12	23
GROUND	1,6,7,12,13,16,17,19,20,21,24

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 R04350B WITH DIELECTRIC THICKNESS .0020" ± 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. 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
	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

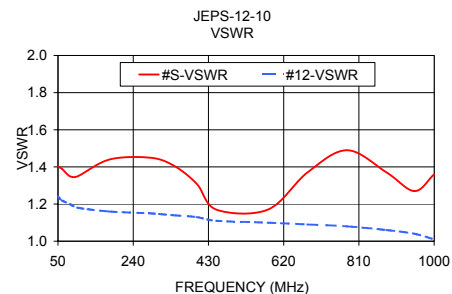
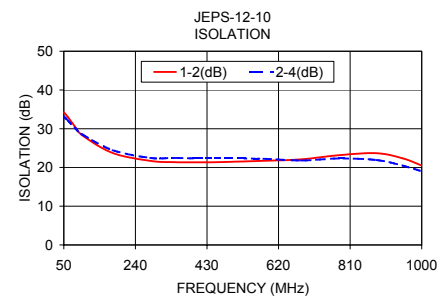
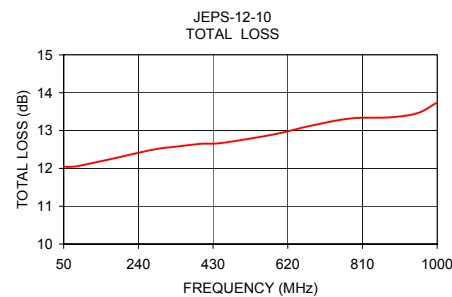
L = 50-500 MHz

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.



electrical schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine [minicircuits.com](http://www.minicircuits.com) Provides ACTUAL Data Instantly at [minicircuits.com](http://www.minicircuits.com)

IFIRF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

REV. C
M127604
JEPS-12-10
ED-7680
HY/TD/CP/AM
100518