

Surface Mount Power Splitter/Combiner

2 Way-90° 50Ω 510 to 570 MHz

HPQ-06+
HPQ-06



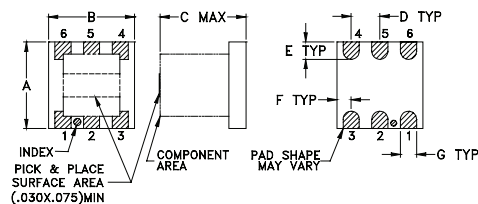
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Permanent damage may occur if any of these limits are exceeded.	

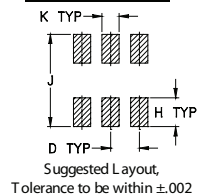
Pin Connections

SUM PORT	3
PORT 1 (0°)	6
PORT 2 (+90°)	4
GROUND	2,5
50 OHM TERM EXTERNAL	1

Outline Drawing



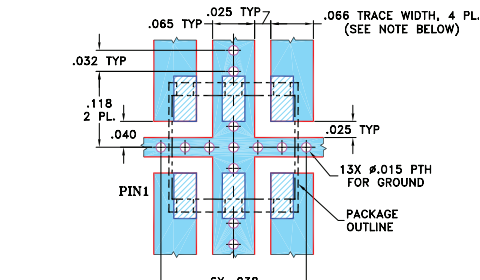
PCB Land Pattern



Outline Dimensions (inch)

A	B	C	D	E	F
.200	.200	.200	.075	.050	.025
5.08	5.08	5.08	1.91	1.27	0.64
G	H	J	K	wt	
.026	.070	.220	.035	grams	
0.66	1.78	5.59	0.89	0.15	

Demo Board MCL P/N: TB-43 Suggested PCB Layout (PL-114)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; 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

- low insertion loss, 0.2 dB typ.
- good isolation, 26 dB typ.
- excellent input VSWR, 1.1:1 typ.; output VSWR, 1.12 typ.
- aqueous washable

Applications

- UHF
- image reject mixers
- balanced amplifiers
- modulators

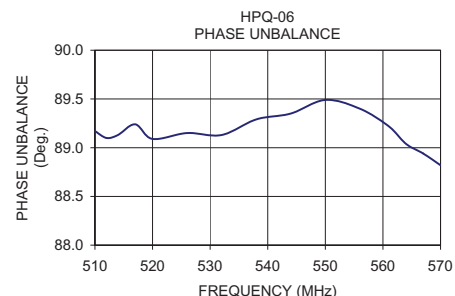
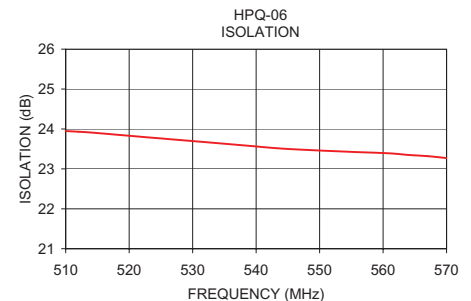
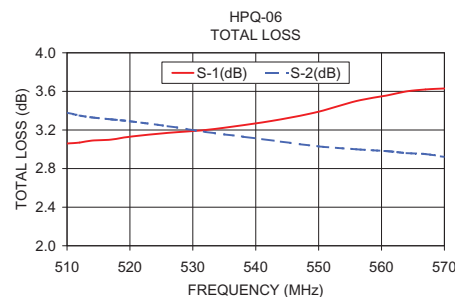
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)
f _L -f _U	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	S-Port Typ. Output Typ.
510-570	26 18	0.2 0.4	0.6 3.0	0.5 1.2	1.10 1.12

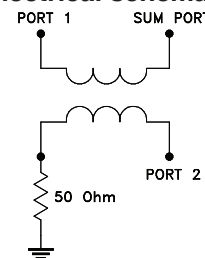
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1 S-2						
510.00	3.06 3.38	0.32	23.95	89.17	1.14	1.12	1.12
512.00	3.07 3.35	0.28	23.93	89.10	1.14	1.12	1.12
514.00	3.09 3.33	0.24	23.91	89.13	1.14	1.12	1.12
517.00	3.10 3.31	0.21	23.87	89.24	1.14	1.13	1.12
520.00	3.13 3.29	0.16	23.83	89.09	1.14	1.13	1.12
526.00	3.17 3.24	0.06	23.75	89.15	1.14	1.13	1.13
532.00	3.20 3.18	0.02	23.67	89.13	1.15	1.13	1.13
538.00	3.25 3.13	0.12	23.59	89.29	1.15	1.13	1.13
544.00	3.31 3.08	0.23	23.51	89.35	1.15	1.13	1.13
550.00	3.39 3.03	0.36	23.46	89.49	1.15	1.13	1.13
556.00	3.50 3.00	0.49	23.42	89.40	1.15	1.14	1.14
561.00	3.56 2.98	0.58	23.39	89.22	1.16	1.14	1.14
564.00	3.60 2.96	0.64	23.35	89.04	1.16	1.14	1.14
567.00	3.62 2.95	0.67	23.32	88.94	1.16	1.14	1.14
570.00	3.63 2.92	0.71	23.27	88.82	1.16	1.14	1.14

1. Total Loss = Insertion Loss + 3dB splitter loss.



electrical schematic



For detailed performance specs & shopping online see web site

Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED
The Design Engineers Search Engine **minicircuits.com** Provides ACTUAL Data Instantly at **minicircuits.com**
IF/RF MICROWAVE COMPONENTS

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine **minicircuits.com** Provides ACTUAL Data Instantly at **minicircuits.com**
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-Circuits' 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
HPQ-06
ED-7075
RVN/TD/CP/AM
130313