

Surface Mount

# Power Splitter/Combiner

NON-CATALOG

**HPQ-06W+**  
**HPQ-06W**

2 Way-90° 50Ω 480 to 600 MHz



## Maximum Ratings

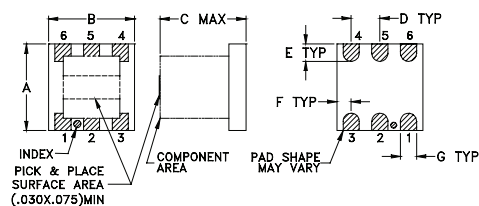
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

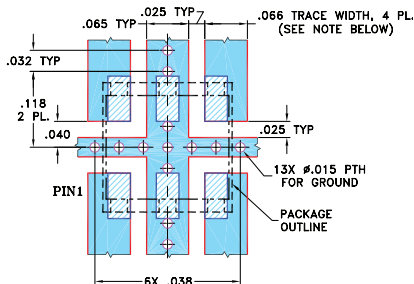
## Outline Drawing



## Outline Dimensions (inch/mm)

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.
- aqueous washable

## Applications

- UHF
- image reject mixers
- modulators

CASE STYLE: AT577  
PRICE: Contact Sales Dept.

## +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

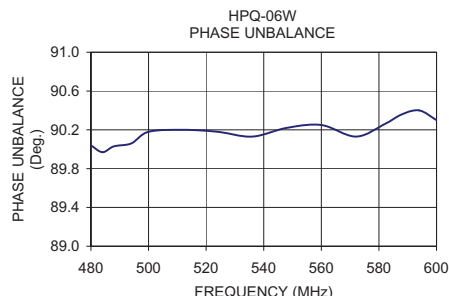
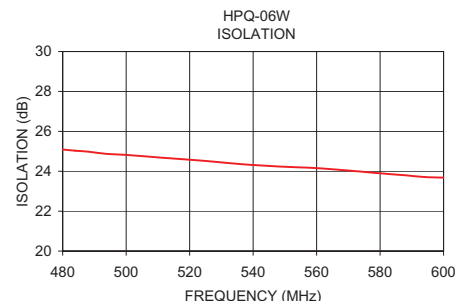
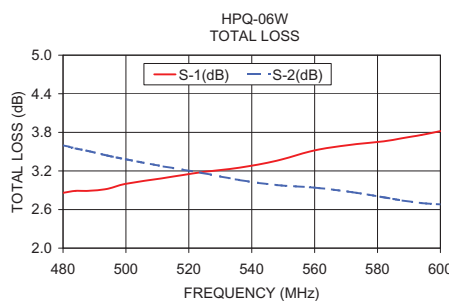
## Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		VSWR (:1)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	S-Port Typ.	Output Typ.
$f_L$ - $f_U$										
480-600	26	18	0.2	0.4	0.6	3.0	0.9	1.6	1.10	1.12

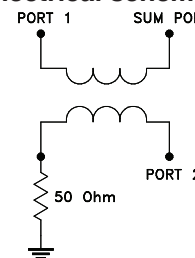
## Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
480.00	2.86	3.60	0.74	25.09	90.04	1.13	1.13	1.11
484.00	2.89	3.55	0.67	25.03	89.97	1.13	1.13	1.11
488.00	2.89	3.51	0.62	24.98	90.03	1.13	1.13	1.12
494.00	2.92	3.44	0.51	24.87	90.06	1.14	1.13	1.12
500.00	3.00	3.38	0.39	24.82	90.18	1.14	1.13	1.12
512.00	3.09	3.27	0.19	24.67	90.20	1.14	1.14	1.12
524.00	3.18	3.17	0.00	24.53	90.18	1.14	1.14	1.13
536.00	3.25	3.06	0.19	24.36	90.13	1.15	1.14	1.13
548.00	3.36	2.98	0.38	24.24	90.22	1.15	1.15	1.13
560.00	3.52	2.94	0.58	24.16	90.25	1.16	1.15	1.14
572.00	3.61	2.87	0.74	24.01	90.13	1.16	1.15	1.14
582.00	3.66	2.79	0.87	23.87	90.26	1.16	1.16	1.14
588.00	3.71	2.74	0.97	23.80	90.36	1.16	1.16	1.14
594.00	3.76	2.70	1.06	23.71	90.40	1.17	1.16	1.15
600.00	3.82	2.68	1.14	23.68	90.30	1.17	1.16	1.15

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

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

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