

# Surface Mount Power Splitter/Combiner

## HPQ-07+ HPQ-07

2 Way-90° 50Ω 580 to 690 MHz



### Maximum Ratings

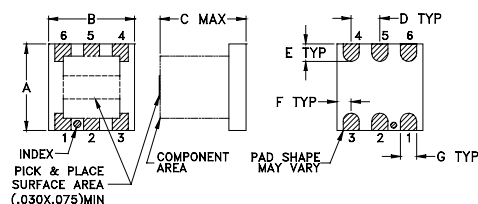
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

Permanent damage may occur if any of these limits are exceeded.

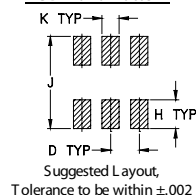
### Pin Connections

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

### Outline Drawing



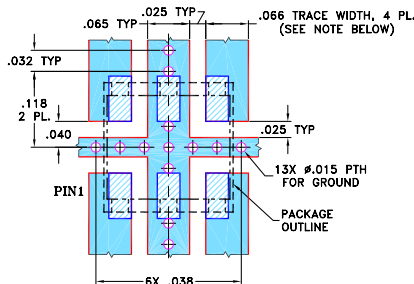
### PCB Land Pattern



### 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:**
- 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.
  - 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

### Features

- low insertion loss, 0.2 dB typ.
- good isolation, 24 dB typ.
- excellent input & output VSWR, 1.17 typ.
- aqueous washable

### Applications

- UHF
- balanced amplifiers
- modulators

CASE STYLE: AT577  
PRICE: \$6.95 ea. QTY (10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

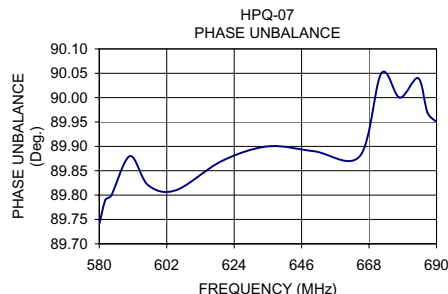
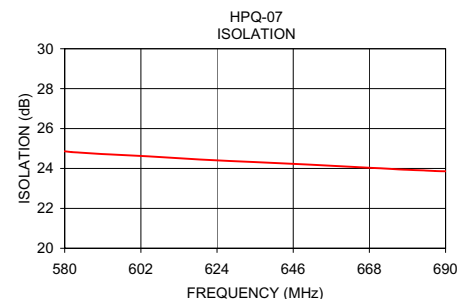
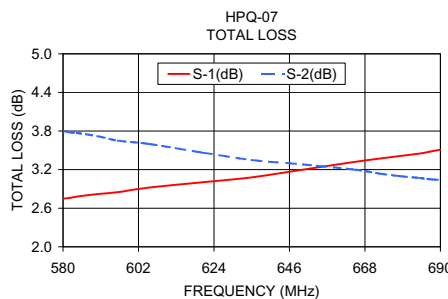
### Electrical Specifications

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 <sub>L</sub> -f <sub>U</sub>	24	18	0.2	0.4	0.5	3.0	0.8	1.6	1.17	1.17

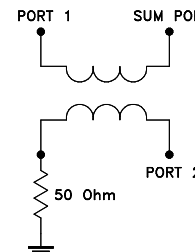
### Typical Performance Data

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						
580.00	2.75	3.80	1.05	24.86	89.74	1.17	1.14	1.16
582.00	2.76	3.78	1.02	24.82	89.79	1.17	1.14	1.16
584.00	2.78	3.77	0.98	24.80	89.80	1.17	1.14	1.16
590.00	2.82	3.72	0.90	24.73	89.88	1.17	1.14	1.16
596.00	2.85	3.65	0.80	24.68	89.82	1.18	1.14	1.17
605.00	2.92	3.60	0.68	24.60	89.81	1.18	1.15	1.17
620.00	3.00	3.47	0.47	24.44	89.87	1.19	1.15	1.17
635.00	3.08	3.35	0.27	24.32	89.90	1.19	1.15	1.18
650.00	3.20	3.28	0.09	24.20	89.89	1.20	1.16	1.18
665.00	3.32	3.20	0.13	24.06	89.88	1.20	1.16	1.18
672.00	3.37	3.14	0.23	24.00	90.05	1.21	1.17	1.19
678.00	3.41	3.10	0.30	23.94	90.00	1.21	1.17	1.19
684.00	3.45	3.07	0.38	23.90	90.04	1.21	1.17	1.19
687.00	3.48	3.05	0.43	23.87	89.97	1.21	1.17	1.19
690.00	3.51	3.04	0.47	23.86	89.95	1.21	1.17	1.19

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

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