

Surface Mount

Power Splitter/Combiner

HPQ-04+
HPQ-04

2 Way-90° 50Ω 315 to 395 MHz



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

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

Features

- excellent amplitude and phase unbalance
- good insertion loss, 0.2 dB typ.
- good isolation, 24 dB typ.
- aqueous washable
- small size

Applications

- UHF
- image rejection mixers
- balanced amplifiers
- I&Q modulators

+ 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

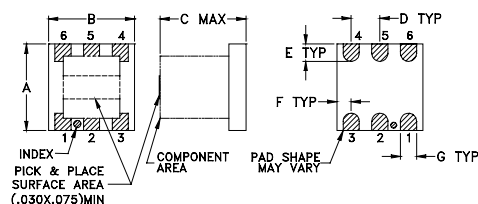
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		VSWR (:1)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	S-Port Typ.	Output Typ.
f_L - f_U										
315-395	24	18	0.20	0.45	0.7	3.0	1.0	1.6	1.17	1.15
332-367	27	19	0.17	0.40	0.5	3.0	0.5	1.0	1.17	1.15

Typical Performance Data

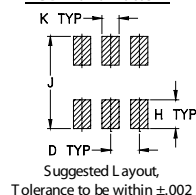
Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
300.25	2.52	3.89	1.38	26.99	90.25	1.13	1.11	1.13
325.00	2.81	3.53	0.71	26.37	90.37	1.13	1.11	1.14
330.25	2.89	3.45	0.55	26.27	90.34	1.13	1.11	1.14
335.50	2.95	3.38	0.43	26.14	90.30	1.13	1.11	1.14
340.00	3.01	3.31	0.30	26.01	90.39	1.13	1.11	1.14
344.50	3.07	3.27	0.21	25.86	90.29	1.14	1.11	1.14
346.75	3.09	3.23	0.14	25.80	90.40	1.14	1.11	1.14
349.00	3.12	3.21	0.09	25.70	90.32	1.14	1.11	1.14
350.50	3.14	3.19	0.05	25.68	90.50	1.14	1.12	1.14
352.00	3.15	3.18	0.03	25.60	90.37	1.14	1.12	1.14
355.00	3.19	3.13	0.06	25.48	90.42	1.14	1.12	1.14
364.75	3.32	3.02	0.30	25.06	90.33	1.14	1.12	1.15
370.00	3.39	2.97	0.42	24.85	90.42	1.14	1.12	1.15
376.00	3.46	2.90	0.55	24.63	90.48	1.14	1.12	1.15
399.25	3.75	2.67	1.08	24.00	90.59	1.15	1.13	1.15

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

Outline Drawing



PCB Land Pattern

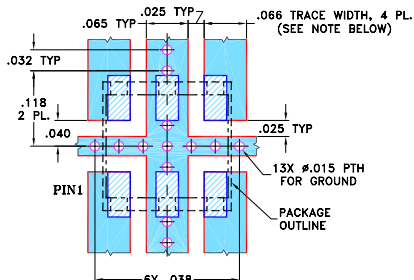


Outline Dimensions (inch)

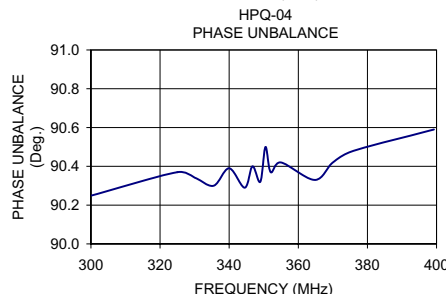
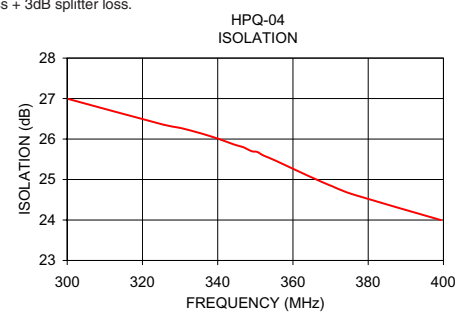
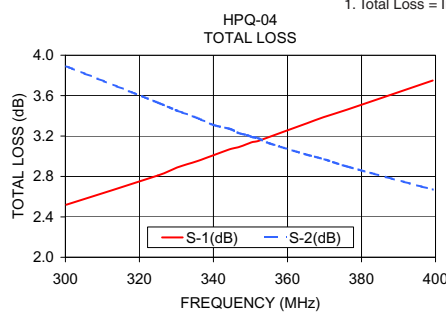
A	B	C	D	E	F
.200	.200	.200	.075	.050	.025
5.08	5.08	5.08	1.91	1.27	0.64

G	H	J	K	wt
.026	.070	.220	.035	grams
0.66	1.78	5.59	0.89	0.15

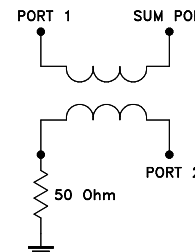
Demo Board MCL P/N: TB-43 Suggested PCB Layout (PL-114)



- 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.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK



electrical schematic



For detailed performance specs & shopping online see web site



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