

Surface Mount Power Splitter/Combiner

2 Way-90° 50Ω 690 to 830 MHz

HPQ-09W+
HPQ-09W



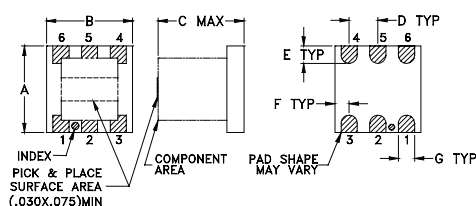
Maximum Ratings

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.	

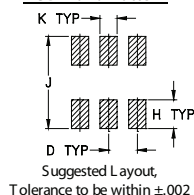
Pin Connections

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

Outline Drawing



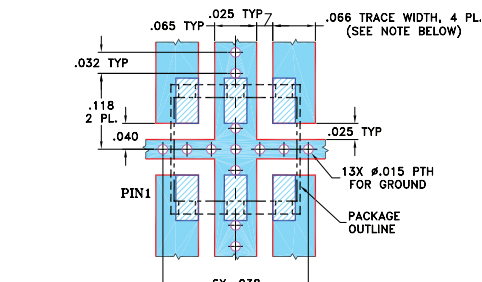
PCB Land Pattern



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, 24 dB typ.
- excellent input VSWR, 1.2:1 typ.; output VSWR, 1.1:1 typ.
- aqueous washable

Applications

- UHF
- matching amplifiers
- modulators

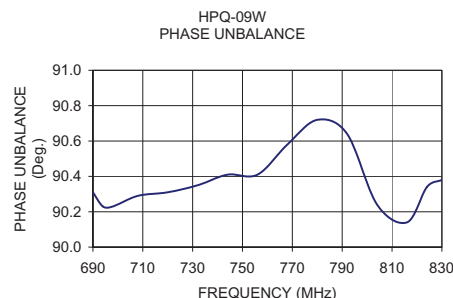
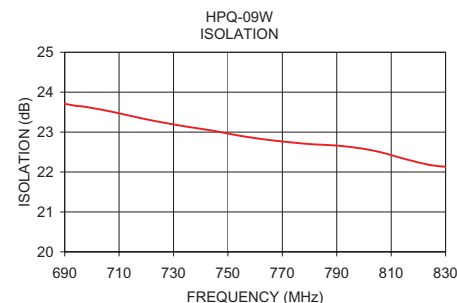
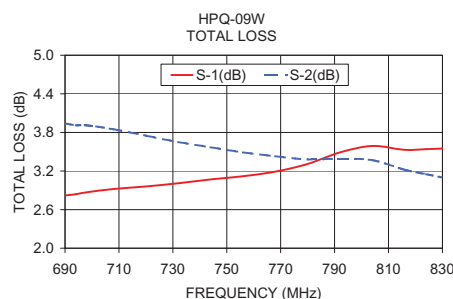
Electrical Specifications

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.
690-830	24 20	0.2 0.4	0.7 3.0	1.1 1.6	1.14 1.14

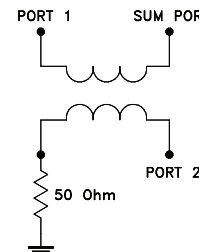
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2					
690.00	2.82	3.94	1.12	23.71	90.31	1.17	1.14
694.00	2.84	3.91	1.07	23.66	90.23	1.17	1.14
698.00	2.87	3.91	1.04	23.63	90.23	1.18	1.14
708.00	2.92	3.85	0.93	23.50	90.29	1.18	1.15
720.00	2.96	3.75	0.79	23.32	90.31	1.18	1.15
732.00	3.01	3.65	0.63	23.17	90.35	1.18	1.15
744.00	3.07	3.57	0.50	23.04	90.41	1.19	1.15
756.00	3.12	3.49	0.37	22.89	90.41	1.19	1.16
768.00	3.19	3.43	0.24	22.78	90.58	1.19	1.16
780.00	3.31	3.38	0.08	22.70	90.72	1.20	1.16
792.00	3.49	3.39	0.10	22.65	90.64	1.20	1.16
804.00	3.59	3.37	0.22	22.53	90.24	1.20	1.17
816.00	3.53	3.22	0.31	22.31	90.14	1.21	1.17
824.00	3.54	3.15	0.39	22.18	90.34	1.21	1.17
830.00	3.55	3.10	0.44	22.13	90.38	1.21	1.17

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



electrical schematic



For detailed performance specs & shopping online see web site

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