

Power Splitter/Combiner

RPQ-820

2 Way-90° 50Ω 760 to 860 MHz

Maximum Ratings

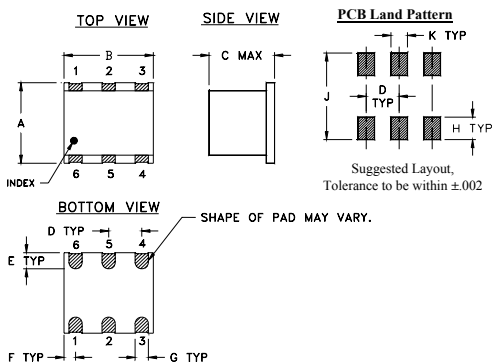
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

Pin Connections

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

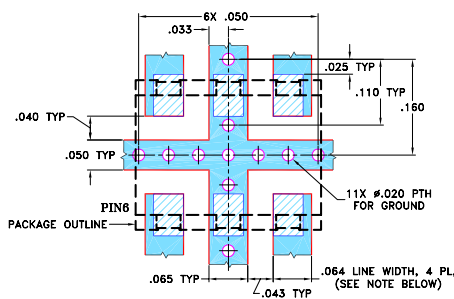
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.250	.31	.20	.100	.050	.055
6.35	7.87	5.08	2.54	1.27	1.40
G	H	J	K	wt	
.040	.070	.270	.050	grams	
1.02	1.78	6.86	1.27	0.50	

Demo Board MCL P/N: TB-210 Suggested PCB Layout (PL-111)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

- low insertion loss, 0.15 dB typ.
- good isolation, 22 dB typ.

Applications

- UHF
- modulators
- image rejection mixers



Generic photo used for illustration purposes only

CASE STYLE: TT240

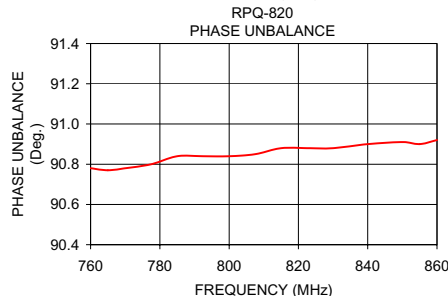
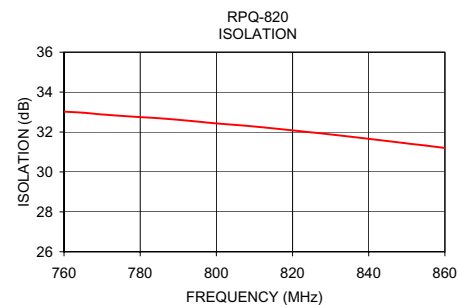
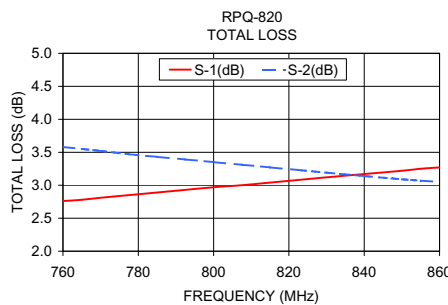
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.
760-860	22 15	0.15 0.7	4	1

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						
760.00	2.76	3.58	0.82	33.02	90.78	1.072	1.094	1.061
765.00	2.78	3.55	0.76	32.97	90.77	1.073	1.094	1.061
770.00	2.81	3.52	0.71	32.88	90.78	1.073	1.094	1.061
777.50	2.85	3.47	0.62	32.78	90.80	1.074	1.095	1.062
785.00	2.89	3.43	0.54	32.69	90.84	1.074	1.095	1.063
792.50	2.93	3.39	0.46	32.57	90.84	1.075	1.095	1.064
800.00	2.97	3.35	0.38	32.43	90.84	1.076	1.096	1.065
807.50	3.00	3.31	0.31	32.32	90.85	1.077	1.097	1.065
815.00	3.04	3.27	0.22	32.18	90.88	1.078	1.097	1.066
822.50	3.08	3.23	0.15	32.03	90.88	1.079	1.098	1.068
830.00	3.12	3.19	0.08	31.88	90.88	1.080	1.098	1.069
840.00	3.17	3.14	0.03	31.66	90.90	1.082	1.099	1.070
850.00	3.22	3.09	0.13	31.43	90.91	1.083	1.100	1.071
855.00	3.25	3.07	0.18	31.32	90.90	1.084	1.100	1.071
860.00	3.27	3.05	0.23	31.20	90.92	1.085	1.100	1.072

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



electrical schematic

