Surface Mount

Power Splitter/Combiner

RPQ-820

2 Way-90° 50Ω 760 to 860 MHz

CASE STYLE: TT240
PRICE: $13.95 ea. QTY (1-9)

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

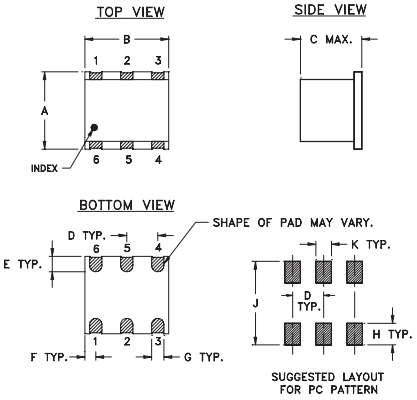
Features

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

Applications

- UHF
- modulators
- image rejection mixers

Outline Drawing

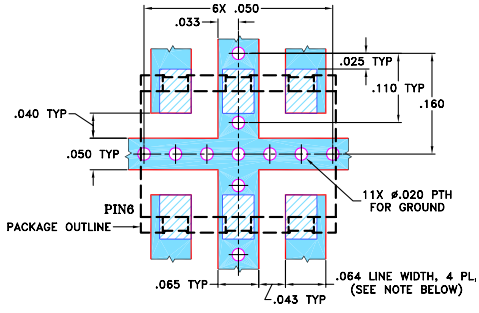


Outline Dimensions (inch / mm)

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

Electrical Specifications

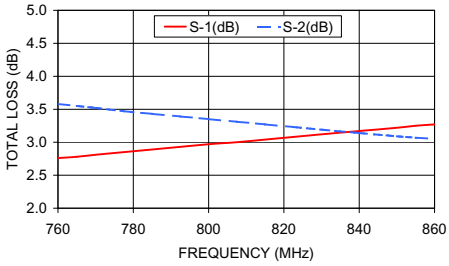
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.
760-860	22	15	0.15	0.7	4	1

Typical Performance Data

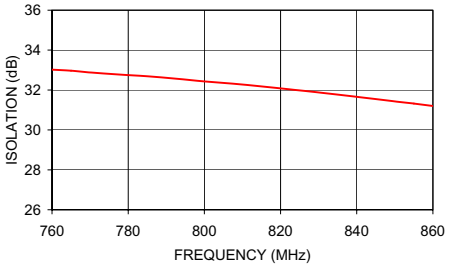
Frequency (MHz)	Total Loss[1] (dB) S-1	Total Loss[1] (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
760.00	2.76	3.58	0.82	33.02	90.78	1.072	1.094	1.061
765.00	2.78	3.55	0.76	32.97	90.77	1.073	1.094	1.061
770.00	2.81	3.52	0.71	32.88	90.78	1.073	1.094	1.061
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.

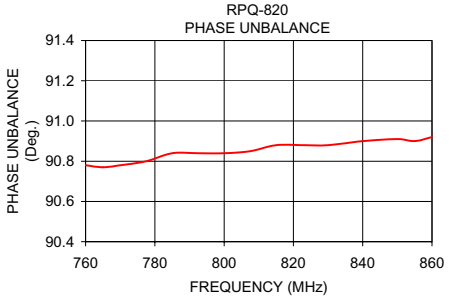
RPQ-820
TOTAL LOSS



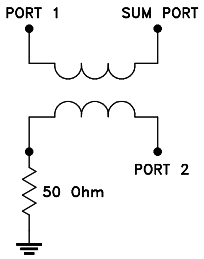
RPQ-820
ISOLATION



RPQ-820
PHASE UNBALANCE



electrical schematic



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