Surface Mount

Power Splitter/Combiner

LRPQ-700

2 Way-90° 50Ω 500 to 700 MHz

CASE STYLE: QQQ130
PRICE: $9.95 ea. QTY (1-9)

Maximum Ratings

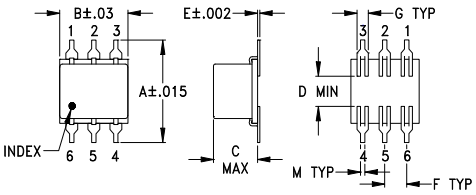
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

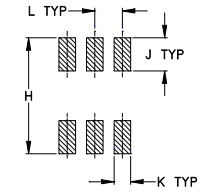
Pin Connections

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

Outline Drawing



PCB Land Pattern



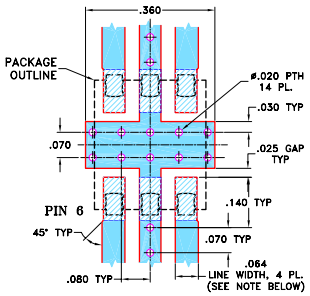
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.400	.31	.200	.10	.010	.100	.050
10.16	7.87	5.08	2.54	0.25	2.54	1.27

H	J	K	L	M		wt
.420	.120	.060	.100	.020		grams
10.67	3.05	1.52	2.54	0.51		0.55

Demo Board MCL P/N: TB-226
Suggested PCB Layout (PL-140)



NOTE: 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

Features

- low insertion loss, 0.2 dB typ.
- excellent phase unbalance 1 deg. typ.
- aqueous washable

Applications

- modulators
- UHF
- signal processing
- balanced amplifiers
- instrumentation

Electrical Specifications

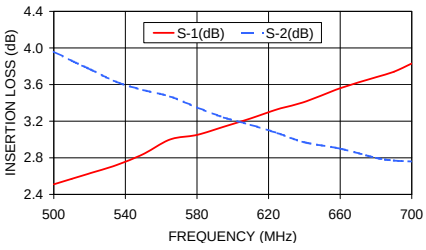
FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs less 3 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ. Min.	Typ.	Max.	Max.	Max.
500-700	23 18	0.2	0.6	3	1.8

LRPQ units have bottom barrier ground plane insulated with glass barrier.

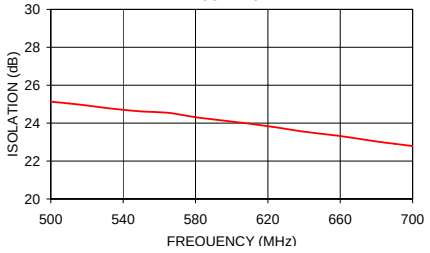
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) S-1	Insertion Loss (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
500.00	2.51	3.96	1.45	25.13	89.53	1.13	1.09	1.13
510.00	2.57	3.86	1.28	25.04	89.47	1.13	1.10	1.13
520.00	2.63	3.77	1.14	24.93	89.55	1.14	1.10	1.13
535.00	2.72	3.63	0.92	24.75	89.57	1.14	1.10	1.14
550.00	2.84	3.54	0.70	24.62	89.56	1.15	1.11	1.15
565.00	3.00	3.47	0.47	24.54	89.51	1.16	1.12	1.15
580.00	3.05	3.35	0.30	24.31	89.40	1.16	1.12	1.16
595.00	3.14	3.24	0.11	24.14	89.62	1.17	1.13	1.17
610.00	3.23	3.16	0.07	23.97	89.60	1.18	1.13	1.17
625.00	3.33	3.07	0.26	23.77	89.67	1.19	1.14	1.18
640.00	3.41	2.97	0.44	23.55	89.64	1.20	1.14	1.19
660.00	3.56	2.90	0.66	23.32	89.71	1.21	1.15	1.20
680.00	3.68	2.80	0.88	23.03	89.71	1.22	1.16	1.21
690.00	3.74	2.77	0.97	22.91	89.71	1.22	1.16	1.21
700.00	3.83	2.76	1.07	22.79	89.73	1.23	1.17	1.22

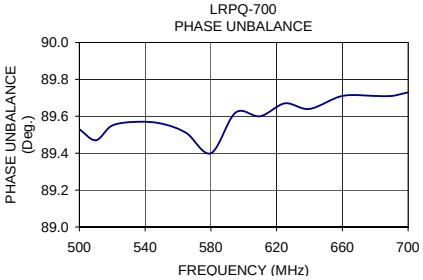
LRPQ-700
INSERTION LOSS



LRPQ-700
ISOLATION



LRPQ-700
PHASE UNBALANCE



electrical schematic