

Surface Mount Attenuator/Switch

LRAS-2-75

75Ω Bi-Phase

10 to 1000 MHz

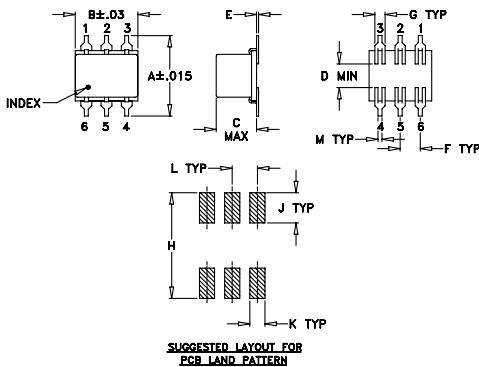
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Control Current	30mA

Pin Connections

INPUT	4
OUTPUT	1
CONTROL	5
GND EXT.	2,3,6

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.400	.31	.20	.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

Features

- wideband, 10 to 1000 MHz
- excellent phase and amplitude unbalance

Applications

- bi-phase modulator



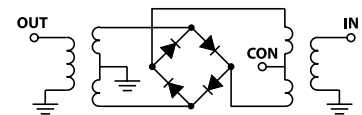
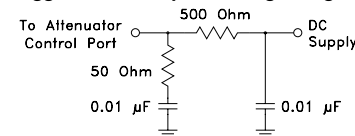
CASE STYLE: QQQ130
CONNECTORS: SMA
PRICE: \$9.95 ea. QTY (1-9)

Attenuator/Switch Electrical Specifications

FREQUENCY (MHz)		INSERTION LOSS (dB) ±20 mA		MAX. INPUT PWR (dBm) ±20 mA		IN-OUT ISOLATION (dB) 0 mA			BI-PHASE X (±20 mA) Typ.								
IN	CON	Mid-Band	Total	1 dB compr.	no damage	L	M	U	Δ AMP (dB)	Phase(deg) deviation from 180°							
f_L - f_U		m	Range			Typ. Min.	Typ. Min.	Typ. Min.	Total	Total							
		Typ. Max.	Typ. Max.						Range	Range							
10-1000	DC-0.05	4.1	6.0	4.5	7.5	20	25	58	40	42	28	39	20	0.15	0.3	1.5	3.0

L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U] m = mid band [2 f_L to $f_U/2$]
Performance specifications apply for input power up to 10 dB below stated 1dB compression.

suggested control port biasing configuration



Typical Performance Data

Freq. (MHz)	I. Loss (dB) at 20mA		±Control Δ Amp (dB)	20mA ΔPhase (deg.)	Isolation (dB) (in-out) (in-con)		Input R. Loss (dB)	Control Current (mA)	Attenuation (dB)			Phase Δ ref at 15mA Ctrl			Input VSWR		
	x	σ			x	x			x	x	10	500	1000	10	500	1000	10
10.00	3.85	0.03	0.02	179.90	67.88	41.14	10.10	0.00	72.9	42.4	27.4	77.0	123.7	-103.5	2.1	3.1	3.1
11.05	3.82	0.03	0.02	179.90	67.79	40.28	10.23	0.00	55.2	42.7	27.4	11.3	120.0	-102.9	2.1	3.1	3.1
18.88	3.74	0.03	0.02	179.90	63.46	35.60	10.64	0.00	53.2	42.9	27.5	7.8	118.9	-102.6	2.1	3.1	3.1
20.04	3.74	0.03	0.02	180.00	62.60	35.08	10.66	0.00	51.4	43.0	27.5	3.9	117.5	-102.4	2.1	3.1	3.1
31.63	3.76	0.02	0.02	180.00	59.62	31.14	10.66	0.00	48.6	43.5	27.5	-0.2	112.3	-101.5	2.1	3.1	3.1
88.76	3.89	0.03	0.02	179.90	51.37	22.58	10.25	0.01	43.1	45.3	27.5	1.3	90.0	-98.1	2.1	3.1	3.0
99.98	3.92	0.03	0.02	179.90	50.33	21.61	10.17	0.01	39.5	44.9	27.5	3.7	57.7	-94.3	2.0	3.1	3.0
249.09	4.03	0.04	0.03	179.80	42.22	15.70	8.91	0.02	36.4	42.4	27.5	5.1	30.2	-89.7	2.0	3.1	3.0
297.80	4.07	0.05	0.03	179.80	40.68	15.03	8.52	0.03	31.8	36.4	27.2	6.5	7.1	-79.2	2.0	3.0	2.9
417.28	4.11	0.07	0.05	179.60	38.35	15.08	7.90	0.04	28.2	32.0	26.8	7.2	-1.1	-68.6	1.9	2.9	2.8
498.88	4.00	0.08	0.06	179.20	37.36	15.99	7.87	0.07	24.6	27.7	25.4	7.4	-5.8	-54.2	1.8	2.8	2.7
596.42	3.94	0.09	0.08	178.50	36.58	18.04	8.46	0.10	21.8	24.5	23.6	7.5	-7.7	-43.6	1.7	2.7	2.6
699.03	3.81	0.10	0.11	177.78	36.03	20.13	10.04	0.19	17.4	19.7	20.0	7.0	-9.0	-27.2	1.5	2.5	2.4
756.78	3.86	0.12	0.11	177.50	35.57	19.20	11.05	0.31	14.2	16.2	16.9	6.3	-8.9	-17.7	1.4	2.3	2.2
787.42	3.89	0.14	0.15	177.38	35.34	17.98	11.95	0.43	12.2	14.0	14.9	5.7	-8.5	-12.5	1.2	2.1	2.0
886.98	4.40	0.24	0.24	176.36	34.78	13.08	13.72	0.71	9.7	11.2	12.3	4.5	-7.4	-6.6	1.1	2.0	1.8
941.39	4.82	0.31	0.39	175.63	34.89	10.71	15.64	1.00	8.3	9.6	10.9	3.7	-6.6	-3.4	1.2	1.9	1.6
979.50	5.15	0.36	0.39	175.05	34.55	9.30	15.23	1.74	6.5	7.4	9.2	2.5	-4.9	0.2	1.4	1.8	1.5
999.13	5.30	0.38	0.40	175.02	34.58	8.68	14.51	5.70	4.4	4.8	7.6	0.6	-1.6	1.8	1.8	1.8	1.2
1019.15	5.47	0.41	0.45	175.10	34.64	8.11	13.84	15.01	3.7	3.9	7.3	0.0	0.0	0.1	2.1	1.9	1.1

