

# Surface Mount Attenuator/Switch

## RAS-2-75

75Ω Bi-Phase 10 to 1000 MHz



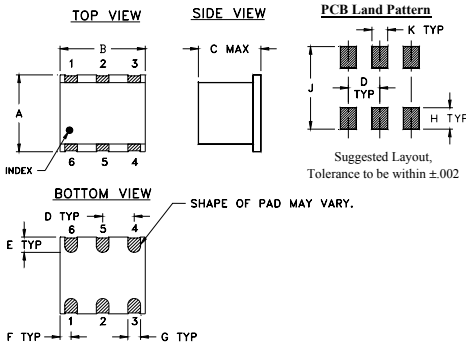
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Control Current	30mA
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

INPUT	4
OUTPUT	1
CONTROL	5
GROUND	2,3,6

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.250	.31	.275	.100	.050	.055
6.35	7.87	6.99	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	

### Features

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

### Applications

- bi-phase modulator

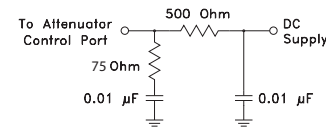
CASE STYLE: TT241  
PRICE: \$9.95 ea. QTY. (1-9)

### Attenuator/Switch Electrical Specifications

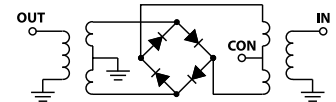
FREQUENCY (MHz)	INSERTION LOSS (dB) ±20 mA	MAX. INPUT PWR (dBm) ±20 mA	IN-OUT ISOLATION (dB) 0 mA						BI-PHASE X (±20 mA) Typ.						
			L		M		U		ΔAMP (dB)		Phase (deg.) deviation from 180°				
IN	CON	Mid-Band m	Total Range	1 dB compr.	no damage	Typ.	Min.	Typ.	Min.	Typ.	Min.	m	Total Range	m	Total Range
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 = [2  $f_L$  to  $f_U/2$ ]  
Performance specifications apply for input power up to 10 dB below stated 1 dB compression.

### suggested control port biasing configuration

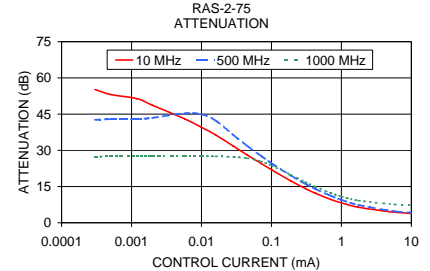
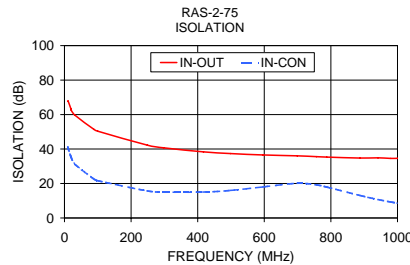
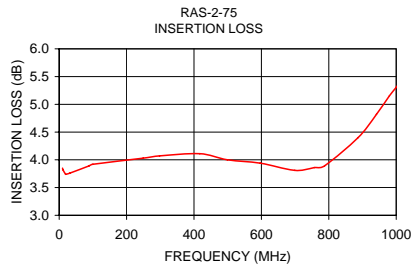


### electrical schematic



### Typical Performance Data

Freq. (MHz)	I. Loss (dB) at 20mA	±Control ΔAMP (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			
				10 MHz	500 MHz			1000 MHz	10 MHz	500 MHz	1000 MHz	10 MHz	500 MHz	1000 MHz			
10.0	3.85	0.03	0.02	179.9	68	41	10.1	0.0000	72.9	42.4	27.4	77.0	123.7	-103.5	2.1	3.1	3.1
11.1	3.82	0.03	0.02	179.9	68	40	10.2	0.0003	55.2	42.7	27.4	11.3	120.0	-102.9	2.1	3.1	3.1
18.9	3.74	0.03	0.02	179.9	63	36	10.6	0.0005	53.2	42.9	27.5	7.8	118.9	-102.6	2.1	3.1	3.1
20.0	3.74	0.03	0.02	180.0	63	35	10.7	0.0012	51.4	43.0	27.5	3.9	117.5	-102.4	2.1	3.1	3.1
31.6	3.76	0.02	0.02	180.0	60	31	10.7	0.0020	48.6	43.5	27.5	-0.2	112.3	-101.5	2.1	3.1	3.1
88.8	3.89	0.03	0.02	179.9	51	23	10.3	0.0057	43.1	45.3	27.5	1.3	90.0	-98.1	2.1	3.1	3.0
100.0	3.92	0.03	0.02	179.9	50	22	10.2	0.0100	39.5	44.9	27.5	3.7	57.7	-94.3	2.0	3.1	3.0
249.1	4.03	0.04	0.03	179.8	42	16	8.9	0.0159	36.4	42.4	27.5	5.1	30.2	-89.7	2.0	3.1	2.9
297.8	4.07	0.05	0.03	179.8	41	15	8.5	0.0285	31.8	36.4	27.2	6.5	7.1	-79.2	2.0	3.0	2.9
417.3	4.11	0.07	0.05	179.6	38	15	7.9	0.0446	28.2	32.0	26.8	7.2	-1.1	-68.6	1.9	2.9	2.8
498.9	4.00	0.08	0.06	179.2	37	16	7.9	0.0715	24.6	27.7	25.4	7.4	-5.8	-54.2	1.8	2.8	2.7
596.4	3.94	0.09	0.08	178.5	37	18	8.5	0.1020	21.8	24.5	23.6	7.5	-7.7	-43.6	1.7	2.7	2.6
699.0	3.81	0.10	0.11	177.8	36	20	10.0	0.1879	17.4	19.7	20.0	7.0	-9.0	-27.2	1.5	2.5	2.4
756.8	3.86	0.12	0.11	177.5	36	19	11.1	0.3050	14.2	16.2	16.9	6.3	-8.9	-17.7	1.4	2.3	2.2
787.4	3.89	0.14	0.15	177.4	35	18	12.0	0.4255	12.2	14.0	14.9	5.7	-8.5	-12.5	1.2	2.1	2.0
887.0	4.40	0.24	0.24	176.4	35	13	13.7	0.7057	9.7	11.2	12.3	4.5	-7.4	-6.6	1.1	2.0	1.8
941.4	4.82	0.31	0.39	175.6	35	11	15.6	0.9950	8.3	9.6	10.9	3.7	-6.6	-3.4	1.2	1.9	1.6
979.5	5.15	0.36	0.39	175.1	35	9	15.2	1.7446	6.5	7.4	9.2	2.5	-4.9	0.2	1.4	1.8	1.5
999.1	5.30	0.38	0.40	175.0	35	9	14.5	5.6985	4.4	4.8	7.6	0.6	-1.6	1.8	1.8	1.8	1.2
1019.2	5.47	0.41	0.45	175.1	35	8	13.8	15.0090	3.7	3.9	7.3	0.0	0.0	0.1	2.1	1.9	1.1



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