

# Coaxial Attenuator/Switch

## ZFAS-2000

50Ω Bi-Phase

100 to 2000 MHz



### Maximum Ratings

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

### Coaxial Connections

INPUT	2
OUTPUT	1
CONTROL	3

### Features

- wideband, 100 to 2000 MHz
- rugged shielded case

### Applications

- bi-phase modulator

CASE STYLE: K18

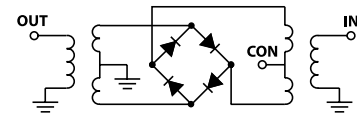
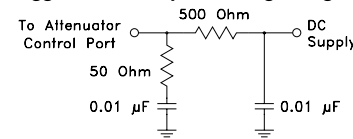
Connectors	Model	Price	Qty.
SMA	ZFAS-2000	\$64.95	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

### Attenuator/Switch Electrical Specifications

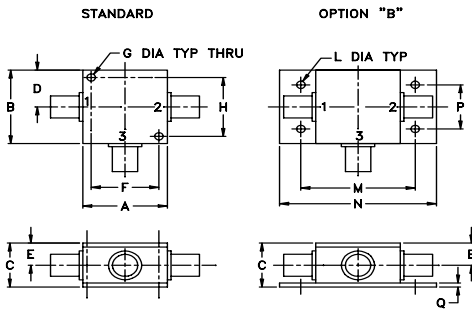
FREQUENCY (MHz)	INSERTION LOSS (dB) ±20 mA	MAX. INPUT PWR (dBm) ±20 mA	IN-OUT ISOLATION (dB) 0 mA			BI-PHASE X (±20 mA) Typ.	
			L	M	U	Δ AMP (dB)	Phase(deg) deviation from 180°
100-2000	DC-0.5	19* 25	30	22	-	0.3	8.0

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 [ $2f_L$  to  $f_U/2$ ]  
 \*15 dBm from 100-800 MHz.  
 Performance specifications apply for input power up to 10 dB below stated 1dB compression.

### suggested control port biasing configuration



### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40

J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

### 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 (deg.)			Input VSWR			
				100 MHz	1000 MHz			2000 MHz	100 MHz	1000 MHz	2000 MHz	100 MHz	1000 MHz	2000 MHz			
100.0	3.76	0.006	0.02	179.4	46	48	9.5	0.0000	51.0	38.9	34.4	89.6	18.6	46.6	1.6	4.7	2.9
137.1	3.72	0.003	0.01	179.0	43	44	10.2	0.0001	48.5	37.0	33.9	91.3	12.9	42.2	1.6	4.7	2.9
301.5	3.55	0.001	0.03	178.2	36	34	11.0	0.0002	46.3	35.1	33.2	89.8	8.7	35.1	1.6	4.6	2.9
383.8	3.61	0.001	0.04	177.7	34	32	10.5	0.0003	44.1	33.6	32.7	85.5	5.8	31.0	1.5	4.6	2.9
503.4	3.85	0.010	0.08	177.1	32	30	9.3	0.0004	42.3	32.4	32.1	84.8	2.4	27.0	1.5	4.6	2.9
630.4	4.17	0.027	0.18	176.4	30	29	7.9	0.0005	39.1	30.8	31.2	78.5	-1.4	21.2	1.5	4.6	2.9
757.5	4.47	0.059	0.21	176.3	30	31	6.9	0.0006	36.5	29.7	30.6	71.5	-4.8	16.8	1.5	4.5	2.9
802.4	4.54	0.061	0.22	176.4	30	31	6.7	0.0007	30.2	26.8	28.7	53.5	-12.0	6.9	1.5	4.4	2.8
899.5	4.91	0.107	0.27	176.1	30	30	6.3	0.0008	25.5	24.0	26.3	43.0	-15.6	-0.9	1.4	4.2	2.7
996.7	4.96	0.114	0.28	175.9	29	28	6.2	0.0011	22.0	21.2	23.6	36.6	-16.4	-5.9	1.4	4.0	2.6
1004.2	4.94	0.118	0.28	175.8	29	28	6.2	0.0016	18.4	18.1	20.3	31.0	-16.0	-8.8	1.3	3.7	2.4
1131.3	5.57	0.162	0.36	175.7	30	26	6.4	0.0032	14.1	14.1	15.9	24.3	-13.7	-9.8	1.2	3.3	2.0
1258.3	5.56	0.105	0.36	175.5	30	24	7.0	0.0058	11.3	11.5	13.0	19.5	-11.1	-8.9	1.2	3.1	1.8
1377.9	5.69	0.045	0.37	175.5	30	24	7.7	0.0106	9.1	9.5	10.6	14.8	-8.6	-7.5	1.3	3.0	1.6
1497.5	5.26	0.053	0.33	175.2	28	21	8.7	0.0226	6.9	7.7	8.3	9.5	-5.5	-5.4	1.5	2.9	1.4
1632.1	5.38	0.045	0.27	174.7	28	20	10.0	0.0381	5.9	6.9	7.2	6.7	-4.0	-4.0	1.6	2.9	1.4
1699.4	5.20	0.068	0.29	174.2	28	20	10.8	0.1031	4.8	6.0	6.0	3.2	-2.0	-2.1	1.8	3.0	1.5
1751.7	5.49	0.068	0.27	174.2	28	21	11.3	0.3098	4.3	5.5	5.4	1.3	-0.9	-1.0	1.9	3.0	1.6
1901.2	5.22	0.090	0.23	173.0	28	22	12.4	1.5487	4.0	5.3	5.0	0.4	-0.4	-0.4	2.0	3.0	1.7
2000.0	5.57	0.156	0.25	172.7	28	23	12.5	15.1120	3.9	5.2	4.9	0.1	-0.1	0.0	2.0	3.1	1.7

