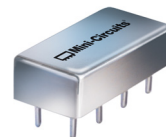


Plug-In Attenuator/Switch

PAS-2000+

50Ω Bi-Phase 100 to 2000 MHz



Generic photo used for illustration purposes only

CASE STYLE: A05

+RoHS Compliant

The + suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

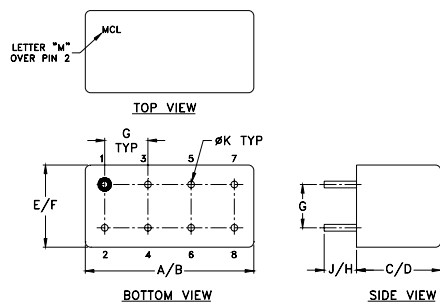
Maximum Ratings

Operating Temperature	-55°C to 100°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	1
OUTPUT	8
CONTROL	3
GROUND	2,5,6,7
CASE GROUND	2,5,6,7
NOT USED	4

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.240	.250	.370	.400
19.56	20.32	6.10	6.35	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	3.7	

Features

- wideband, 100 to 2000 MHz
- excellent amplitude and phase unbalance
- low profile, rugged shielded case

Applications

- bi-phase modulator

Attenuator/Switch Electrical Specifications

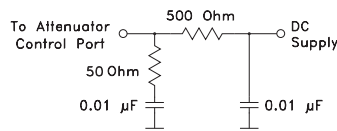
FREQUENCY (MHz)		INSERTION LOSS (dB) ±20 mA				MAX. INPUT PWR (dBm) ±20 mA		IN-OUT ISOLATION (dB) 0 mA				BI-PHASE \bar{X} (±20 mA) Typ. Δ AMP (dB) Phase (deg.) deviation from 180°					
IN	CON	Mid-Band m		Total Range		1 dB compr.	no damage	L	M	U	Total		Total				
f_L - f_U		Typ.	Max.	Typ.	Max.			Typ.	Min.	Typ.	Min.	m	Range	m	Range		
100-2000	DC-0.5	4.2	6.5	5.4	7.5	19*	25	30	22	—	—	26	20	0.3	0.4	5.0	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 = [2 f_L to $f_U/2$]

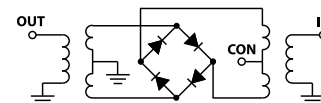
* 15 dBm from 100-800 MHz.

Performance specifications apply for input power up to 10 dB below stated 1 dB compression.

suggested control port biasing configuration

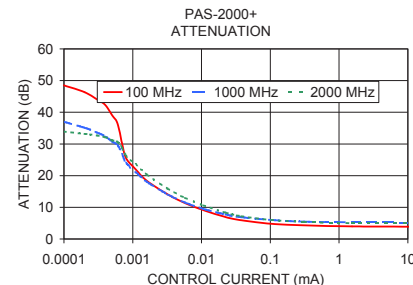
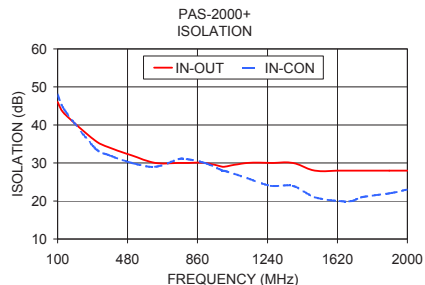
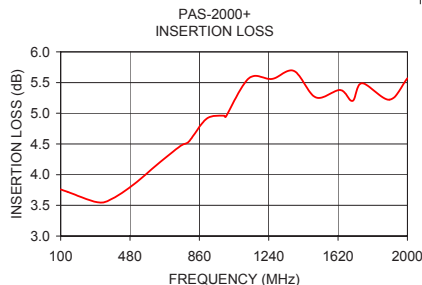


electrical schematic



Typical Performance Data

Freq. (MHz)	I. Loss (dB) at 20mA	±Control Δ AMP (dB)	20mA Δ Phase (deg.)	Isolation (dB)		Input R. Loss (dB)	Control Current (mA)	Attenuation (dB)			Phase Δ ref at 15mA Ctrl			Input VSWR			
				(in-out)	(in-con)			100 MHz	1000 MHz	2000 MHz	100 MHz	1000 MHz	2000 MHz	100 MHz	1000 MHz	2000 MHz	
100.0	3.76	0.01	0.02	179.40	46.00	48.00	9.50	0.00	51.00	38.90	34.40	89.60	18.60	46.60	1.60	4.70	2.90
137.1	3.72	0.00	0.01	179.00	43.00	44.00	10.20	0.00	48.50	37.00	33.90	91.30	12.90	42.20	1.60	4.70	2.90
301.5	3.55	0.00	0.03	178.20	36.00	34.00	11.00	0.00	46.30	35.10	33.20	89.80	8.70	35.10	1.60	4.60	2.90
383.8	3.61	0.00	0.04	177.70	34.00	32.00	10.50	0.00	44.10	33.60	32.70	85.50	5.80	31.00	1.50	4.60	2.90
503.4	3.85	0.01	0.08	177.10	32.00	30.00	9.30	0.00	42.30	32.40	32.10	84.80	2.40	27.00	1.50	4.60	2.90
630.4	4.17	0.03	0.18	176.40	30.00	29.00	7.90	0.00	39.10	30.80	31.20	78.50	-1.40	21.20	1.50	4.60	2.90
757.5	4.47	0.06	0.21	176.30	30.00	31.00	6.90	0.00	36.50	29.70	30.60	71.50	-4.80	16.80	1.50	4.50	2.90
802.4	4.54	0.06	0.22	176.40	30.00	31.00	6.70	0.00	30.20	26.80	28.70	53.50	-12.00	6.90	1.50	4.40	2.80
899.5	4.91	0.11	0.27	176.10	30.00	30.00	6.30	0.00	25.50	24.00	26.30	43.00	-15.60	-0.90	1.40	4.20	2.70
996.7	4.96	0.11	0.28	175.90	29.00	28.00	6.20	0.00	22.00	21.20	23.60	36.60	-16.40	-5.90	1.40	4.00	2.60
1004.2	4.94	0.12	0.28	175.80	29.00	28.00	6.20	0.00	18.40	18.10	20.30	31.00	-16.00	-8.80	1.30	3.70	2.40
1131.3	5.57	0.16	0.36	175.70	30.00	26.00	6.40	0.00	14.10	14.10	15.90	24.30	-13.70	-9.80	1.20	3.30	2.00
1258.3	5.56	0.11	0.36	175.50	30.00	24.00	7.00	0.01	11.30	11.50	13.00	19.50	-11.10	-8.90	1.20	3.10	1.80
1377.9	5.69	0.05	0.37	175.50	30.00	24.00	7.70	0.01	9.10	9.50	10.60	14.80	-8.60	-7.50	1.30	3.00	1.60
1497.5	5.26	0.05	0.33	175.20	28.00	21.00	8.70	0.02	6.90	7.70	8.30	9.50	-5.50	-5.40	1.50	2.90	1.40
1632.1	5.38	0.05	0.27	174.70	28.00	20.00	10.00	0.04	5.90	6.90	7.20	6.70	-4.00	-4.00	1.60	2.90	1.40
1699.4	5.20	0.07	0.29	174.20	28.00	20.00	10.80	0.10	4.80	6.00	6.00	3.20	-2.00	-2.10	1.80	3.00	1.50
1751.7	5.49	0.07	0.27	174.20	28.00	21.00	11.30	0.31	4.30	5.50	5.40	1.30	-0.90	-1.00	1.90	3.00	1.60
1901.2	5.22	0.09	0.23	173.00	28.00	22.00	12.40	1.55	4.00	5.30	5.00	0.40	-0.40	-0.40	2.00	3.00	1.70
2000.0	5.57	0.16	0.25	172.70	28.00	23.00	12.50	15.11	3.90	5.20	4.90	0.10	-0.10	0.00	2.00	3.10	1.70



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

