

CASE STYLE: A01

Maximum Ratings

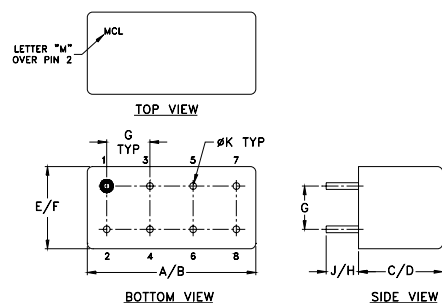
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Control Current	30mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

INPUT	1
OUTPUT	8
CONTROL	3,4^
GROUND	2,5,6,7
CASE GROUND	2

^ pins must be connected together externally

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K		
.200	.20	.14	.031		
5.08	5.08	3.56	0.79		
					wt
					grams
					5.2

Features

- wideband, 1 to 200 MHz
- hermetic case
- low insertion loss, 1.6 typ.
- excellent amplitude and phase unbalance

Applications

- military hi-rel applications
- bi-phase modulator
- electronic attenuator

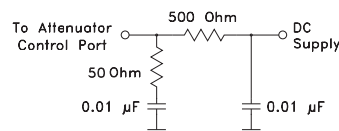
Attenuator/Switch Electrical Specifications

FREQUENCY (MHz)	CON	INSERTION LOSS (dB)				MAX. INPUT PWR (dBm)		IN-OUT ISOLATION (dB)						BI-PHASE $\bar{X}$ (± 20 mA) Typ.			
		± 20 mA		Total Range		1 dB compr.	no damage	L	M	U				Δ AMP (dB)	Phase (deg.) deviation from 180°	Total Range	Total Range
IN f_L to f_U		Typ.	Max.	Typ.	Max.			Typ.	Min.	Typ.	Min.	Typ.	Min.	m		m	m
1-200	DC-0.05	1.4	2.0	1.6	2.5	15	29	65	50	50	40	50	35	0.1	0.1	0.5	1.0

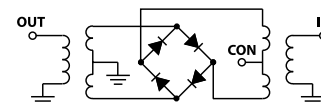
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U] m = [$2 f_L$ to $f_U/2$]

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

suggested control port biasing configuration

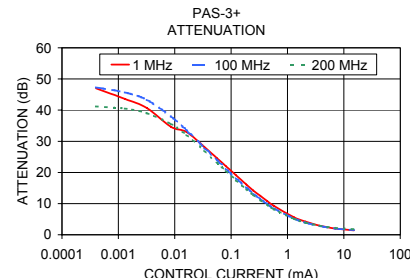
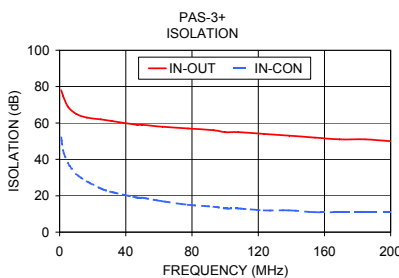
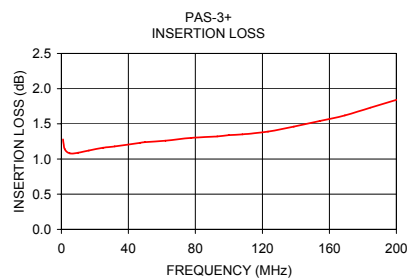


electrical schematic



Typical Performance Data

Freq. (MHz)	I. Loss (dB) at 20mA		±Control ΔΔAMP (dB)	20mA ΔΔPhase (deg.)	Isolation (dB) (in-out) (in-con)		Input R. Loss (dB)	Control Current (mA)	Attenuation (dB)			Phase Δ ref at 15mA Ctrl			Input VSWR		
									1 MHz	100 MHz	200 MHz	1 MHz	100 MHz	200 MHz	1 MHz	100 MHz	200 MHz
	$\bar{x}$	σ	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$					deg.	deg.	deg.			
1.0	1.28	0.002	0.01	180.0	78	52	23.5	0.0000	50.3	47.8	41.7	26.3	69.1	69.7	13.6	11.6	8.1
2.0	1.14	0.002	0.01	180.0	75	45	28.1	0.0004	47.0	47.3	41.2	19.0	65.6	65.4	13.5	11.6	8.1
5.0	1.08	0.002	0.01	180.0	69	38	35.4	0.0013	43.6	45.7	40.5	10.3	50.0	58.2	13.3	11.5	8.0
10.0	1.09	0.002	0.01	180.0	65	32	43.0	0.0032	40.7	43.3	39.0	5.7	36.8	46.4	12.9	11.3	7.9
16.4	1.12	0.002	0.01	179.9	63	28	42.7	0.0085	34.7	38.0	35.6	6.3	20.9	29.7	12.5	10.9	7.7
24.9	1.16	0.002	0.01	179.9	62	24	37.5	0.0162	33.0	33.5	32.0	6.6	12.3	19.1	11.7	10.3	7.4
31.8	1.18	0.002	0.01	179.9	61	22	35.2	0.0336	28.2	27.9	27.0	7.2	7.0	10.3	10.5	9.2	6.8
46.8	1.23	0.001	0.02	179.8	59	19	31.6	0.0567	24.5	23.9	23.1	7.5	4.7	6.0	9.3	8.1	6.1
49.8	1.24	0.001	0.02	179.8	59	19	31.0	0.0807	22.0	21.2	20.5	7.7	3.9	4.3	8.3	7.3	5.6
62.2	1.26	0.002	0.02	179.8	58	17	28.7	0.1215	19.1	18.2	17.5	7.5	3.0	2.9	7.1	6.2	4.9
77.6	1.30	0.001	0.02	179.7	57	15	26.4	0.1860	16.1	15.2	14.6	7.1	2.4	1.8	5.8	5.1	4.2
93.0	1.32	0.001	0.02	179.6	56	14	24.4	0.2459	14.2	13.3	12.8	6.5	2.1	1.4	5.0	4.5	3.7
100.0	1.34	0.001	0.02	179.6	55	13	23.5	0.3285	12.5	11.5	11.1	6.3	1.8	1.1	4.3	3.8	3.2
108.0	1.35	0.001	0.02	179.6	55	13	22.6	0.4365	10.8	9.9	9.6	5.7	1.6	0.9	3.6	3.3	2.8
123.4	1.39	0.001	0.02	179.5	54	12	21.0	0.5714	9.3	8.5	8.2	5.1	1.4	0.7	3.1	2.8	2.5
138.8	1.46	0.001	0.02	179.5	53	12	19.5	1.3114	5.6	5.2	5.1	3.3	0.8	0.3	2.0	1.9	1.7
154.2	1.54	0.001	0.02	179.4	52	11	18.2	2.0989	4.2	3.9	3.9	2.3	0.6	0.3	1.6	1.6	1.5
169.2	1.62	0.001	0.02	179.5	51	11	17.0	3.7220	2.9	2.8	2.9	1.3	0.3	0.1	1.3	1.3	1.3
184.6	1.73	0.001	0.02	179.5	51	11	15.9	7.0357	2.0	2.0	2.2	0.5	0.2	0.0	1.2	1.2	1.2
200.0	1.84	0.002	0.03	179.6	50	11	14.8	15.1415	1.4	1.5	1.8	0.0	0.0	0.0	1.1	1.1	1.1



Notes

- A. 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.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
 C. 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

