

Plug-In Attenuator/Switch

GAS-2+

50Ω Bi-Phase 10 to 1000 MHz

Maximum Ratings

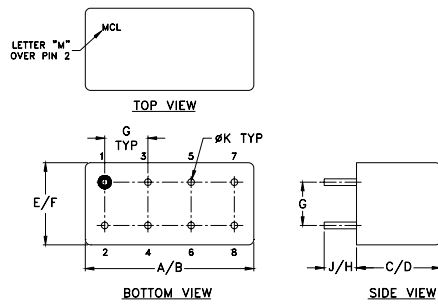
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Control Current	30mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

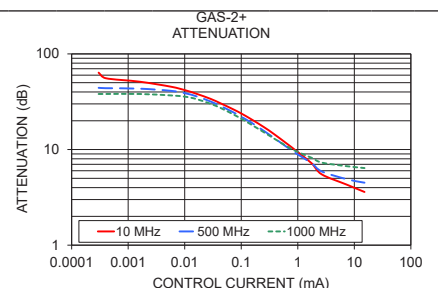
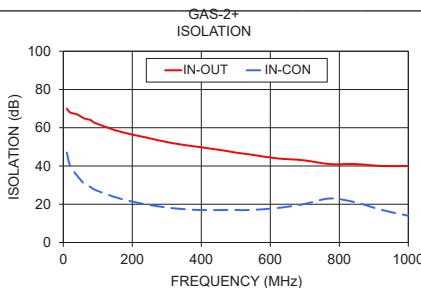
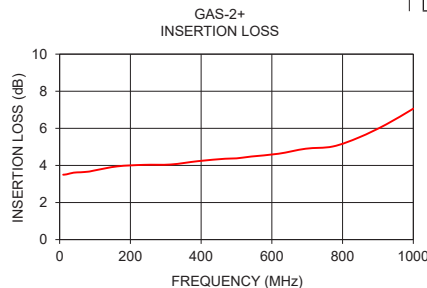
^ pins must be connected together externally

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, 10 to 1000 MHz
- rugged shielded case

Applications

- bi-phase modulator
- electronic attenuator



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

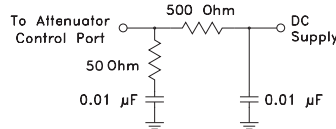
Attenuator/Switch Electrical Specifications

FREQUENCY (MHz)	INSERTION LOSS (dB) ±20 mA	MAX. INPUT PWR (dBm) ±20 mA	IN-OUT ISOLATION (dB) 0 mA						BI-PHASE X̄ (±20 mA) Typ.									
			Mid-Band m		Total Range		L		M		U		Δ AMP (dB)		Phase (deg.) deviation from 180°			
IN f _L -f _U	CON		Typ.	Max.	Typ.	Max.	1 dB compr.	no damage	Typ.	Min.	Typ.	Min.	Typ.	Min.	m	Range	m	Range
10-1000	DC-0.05		4.3	6	5.2	8.5	20	25	55	40	35	25	28	20	0.10	0.3	1.5	3.0

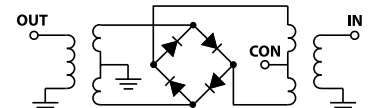
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U] m = [2 f_L to f_U/2]

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, 20mA		Isolation (dB)		Input R. Loss (dB)	Control Current (mA)	Attenuation (dB)			Phase Δ ref at 15mA Ctrl			Input VSWR				
		ΔAMP (dB)	ΔPhase (deg.)	(in-out)	(in-con)			10 MHz	500 MHz	1000 MHz	10 MHz	500 MHz	1000 MHz	10 MHz	500 MHz	1000 MHz		
	X̄	σ	X̄	X̄	X̄	X̄												
10.0	3.50	0.025	0.01	180.00	70	47	12.3	0.0000	71.8	43.8	38.2	-37.1	96.0	63.6	3.6	2.9	7.5	
19.9	3.52	0.015	0.01	180.00	68	40	12.7	0.0003	63.7	44.2	38.1	-34.3	93.2	62.4	3.6	2.9	7.5	
39.7	3.61	0.008	0.01	179.90	67	35	12.6	0.0004	55.7	43.8	38.1	-12.5	86.0	57.8	3.6	2.9	7.5	
59.5	3.63	0.006	0.01	179.90	65	31	12.5	0.0016	51.2	43.3	38.1	-8.5	80.1	52.8	3.6	2.8	7.4	
79.3	3.66	0.006	0.01	179.90	64	29	12.5	0.0057	45.4	41.1	36.8	-4.6	55.5	35.7	3.6	2.8	7.3	
86.7	3.68	0.006	0.01	179.90	63	28	12.5	0.0105	41.5	38.6	35.6	-1.2	42.6	23.4	3.5	2.8	7.1	
99.1	3.73	0.006	0.01	179.90	62	27	12.4	0.0161	38.3	36.0	33.7	1.5	34.4	12.9	3.5	2.8	6.9	
163.5	3.95	0.006	0.01	179.80	58	23	12.3	0.0286	33.9	31.8	30.1	3.6	24.5	0.6	3.4	2.7	6.6	
237.7	4.03	0.007	0.01	179.70	55	20	12.1	0.0437	30.3	28.4	27.1	4.3	20.7	-5.6	3.3	2.6	6.2	
314.4	4.05	0.008	0.01	179.37	52	18	12.0	0.0734	26.2	24.4	23.2	5.1	16.3	-9.9	3.1	2.4	5.6	
391.2	4.23	0.012	0.02	179.60	50	17	12.1	0.1029	23.6	21.8	20.8	5.0	14.4	-11.4	2.9	2.3	5.2	
467.9	4.36	0.017	0.04	179.60	48	17	12.3	0.1510	20.7	19.1	18.2	5.0	12.8	-11.9	2.7	2.1	4.7	
500.1	4.38	0.021	0.04	179.60	47	17	12.4	0.2540	17.1	15.6	15.1	4.6	10.4	-11.1	2.4	1.8	4.0	
542.1	4.48	0.027	0.06	179.50	46	17	12.5	0.3743	14.6	13.3	13.1	4.3	9.0	-9.9	2.1	1.6	3.6	
618.9	4.63	0.040	0.10	179.50	44	18	12.6	0.6438	11.5	10.6	10.8	3.5	6.9	-7.5	1.7	1.3	3.1	
695.6	4.90	0.053	0.13	179.60	43	20	12.1	0.9350	9.7	9.1	9.6	3.0	5.4	-6.0	1.5	1.2	2.9	
772.3	5.02	0.064	0.16	179.38	41	23	10.8	1.7496	7.2	7.2	8.2	2.0	3.6	-3.6	1.2	1.1	2.7	
846.6	5.51	0.073	0.16	179.70	41	21	9.1	2.6537	5.5	5.9	7.3	1.3	1.9	-1.8	1.2	1.3	2.7	
923.3	6.21	0.087	0.21	179.80	40	17	7.5	7.3045	4.3	4.9	6.7	0.5	0.6	-0.7	1.4	1.5	2.6	
1000.0	7.06	0.093	0.36	180.40	40	14	6.3	15.1437	3.6	4.5	6.4	0.1	0.1	-0.1	1.5	1.6	2.6	

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.
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