

GT Series PIN Diode Attenuators



Description:

The GT-0206 series PIN Diode attenuator is an 8 bit digitally controlled voltage variable attenuator optimized for minimum insertion loss while maintaining maximum attenuation range. Using new linearization techniques and state of the art manufacturing practices, this attenuator family has unsurpassed attenuation linearity over temperature. Linearization over temperature is achieved using the latest microcontroller architecture.

With the highest performance density and most compact package available, this product family is ideally suited for high performance ESM, ECM, Instrumentation, Simulation and Synthesizer applications.

Features:

- Unsurpassed Attenuation Linearity over Frequency & Temperature
- 8 or 10 bit digital control
- Smooth transition between states
- Available in 32 or 64 dB Attenuation range
- Remotely programmable parallel or serial control interface

Specifications:

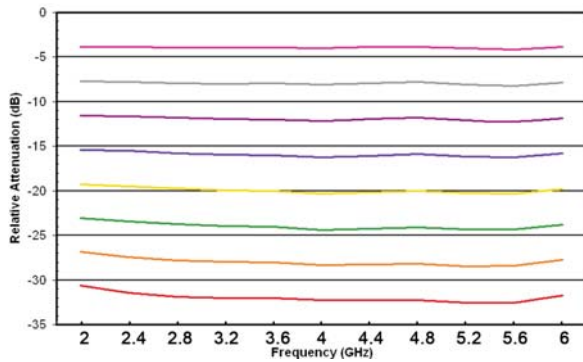
PARAMETER	MODEL: GT-0206-32	MODEL: GT-0206-64	COMMENTS
Frequency Range	2-6 GHz	2-6 GHz	
Attenuation Range	0-32 dB	0-64 dB	
Step Size (LSB)	0.125 dB	0.250 dB	
Number of Bits	8	8	
Attenuation Accuracy	+/-0.15 dB or +/- 1.5% whichever is greater	+/-0.15 dB or +/-1.5% whichever is greater	Mean Attenuation Accuracy (Note)
Attenuation Flatness	+/-1.5 dB	+/-1.5 dB to 32 dB +/-2.5 dB to 64 dB	Deviation from Mean Attenuation (Note)
Attenuation Stability over Temperature	+/- 0.025dB/°C	+/-0.025 dB/°C	Operating temperature range
Insertion Loss	2.3 dB	2.3 dB	Hermetic option 2.5 dB
VSWR	2.0:1	2.0:1	
P1dB Compression Point	+10 dBm	+10 dBm	
Operating Temperature Range	-30 to +70°C	-30 to +70°C	Other temperature ranges available
Storage Temperature Range	-55 to +125°C	-55 to +125°C	Other temperature ranges available
Switching Speed	2.5 usec	2.5 usec	1 usec upon request
Control	8 bits command 1 Strobe line Positive edge latched	8 bits command 1 Strobe line Positive edge latched	10 bit available 12C Serial Bus available
Logic Levels	TTL/HMOS	TTL/HMOS	
DC Supply	+/-5 VDC +/-5%	+/-5 VDC +/-5%	+5 V@+275 mA; -5V@-50 mA
RF Connectors	SMA(F)	SMA(F)	
Control/DC Connector	Micro-D 21 Pin	Micro-D 21 Pin	
Mechanical	Refer to O/L	Refer to O/L	

Note: Mean attenuation = average attenuation over the frequency range at constant command. Measurements at 0 dBm Input Power unless noted.

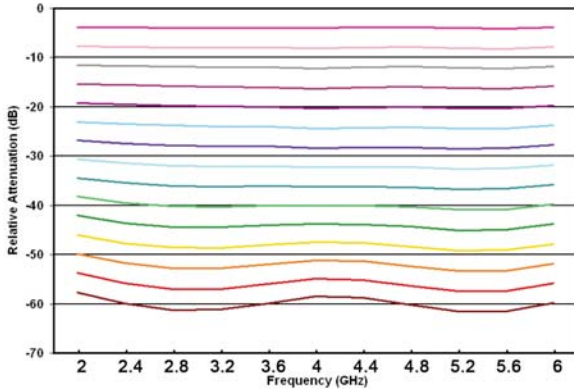


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GT-0206-32 ATTENUATION RESPONSE OVER FREQUENCY



GT-0206-64 ATTENUATION RESPONSE OVER FREQUENCY

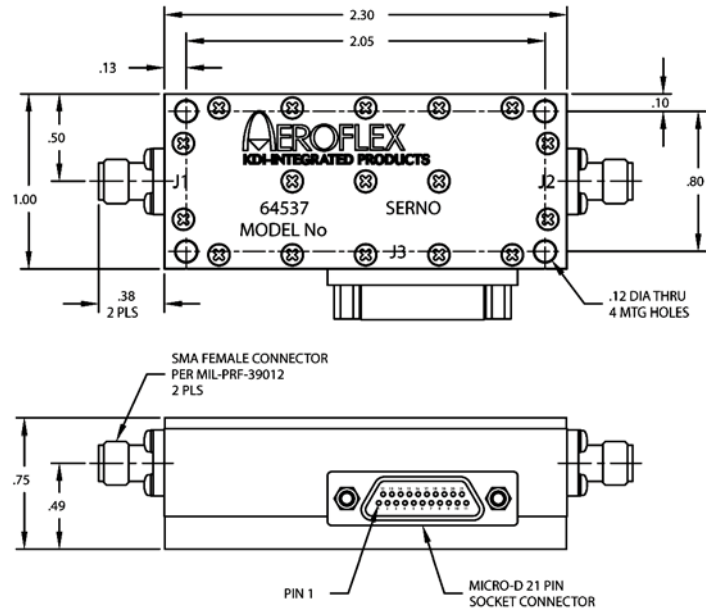


CONTROL LOGIC TABLE

Bit Size	0.25	0.5	1	2	4	8	16	32	
Logic	0	0	0	0	0	0	0	0	Ref. (Ins Loss)
Logic	0	0	0	1	0	1	0	0	10 dB
Logic	0	0	0	0	1	0	1	0	20 dB
Logic	0	0	0	1	1	1	1	0	30 dB
Logic	0	0	0	0	0	1	0	1	40 dB
Logic	0	0	0	1	0	0	1	1	50 dB
Logic	0	0	0	0	1	1	1	1	60 dB
Logic	1	1	1	1	1	1	1	1	63.75 dB

Note: Least Sig Bit for 32 dB unit is .125 dB. Most Sig Bit is 16 dB.

GT OUTLINE



CONNECTOR WIRING CHART

J3	FUNCTION	J3	FUNCTION
1	RETURN	12	N/C
2	STROBE	13	N/C
3	b0	14	N/C
4	b1	15	+V
5	b2	16	RETURN
6	b3	17	-V
7	b4	18	N/C
8	b5	19	RETURN
9	b6	20	N/C
10	b7	21	N/C
11	N/C		

Note: PINS N/C denote no connection in application.

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