NEW PRODUCT ANNOUNCEMENT

GT Series
PIN Diode Attenuators

AEROFLEX
A passion for performance.

Description:

The GT-0618 Series PIN Diode Attenuator is an 8/10 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:

- ❑ Covers 6-18 GHz Frequency Range
- ❑ Unsurpassed Attenuation Linearity over Frequency and Temperature.
- ❑ 8 or 10 bit Control
- ❑ Smooth transition between states.
- ❑ Available in 32 or 64 dB Attenuation Range
- ❑ Remotely programmable parallel or serial interface.

Specifications:

PARAMETER	MODEL: GT-0618-32	MODEL: GT-0618-64	COMMENTS
Frequency Range	6-18 GHz	6-18 GHz	
Attenuation Range	0-32 dB	0-64 dB	
Step Size (LSB)	0.125 dB	0.250 dB	
Number of Bits	8 or 10	8 or 10	8 is standard
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	+/-2.25 dB	+/-2.25 dB to 32 dB +/-3.00 dB to 50 dB +/-3.75 dB to 64 dB	Deviation from Mean Attenuation (Note)
Attenuation Stability over Temperature	+/- 0.02 dB/°C	+/-0.02 dB/°C	Operating temperature range
Insertion Loss	3.3 dB	3.3 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 µsec	2.5 µsec	Other options available:contact factory
Control	8 bits command 1 Strobe line Positive edge latched	8 bits command 1 Strobe line Positive edge latched	10 bits optional Free-run optional Other options available:contact factory
Logic Levels	TTL/HMOS	TTL/HMOS	
DC Supply	+/-5 VDC +/-5%	+/-5 VDC +/-5%	+5V @ +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 of maximum and minimum values over the frequency range at constant command.

AEROFLEX
KDI-INTEGRATED PRODUCTS

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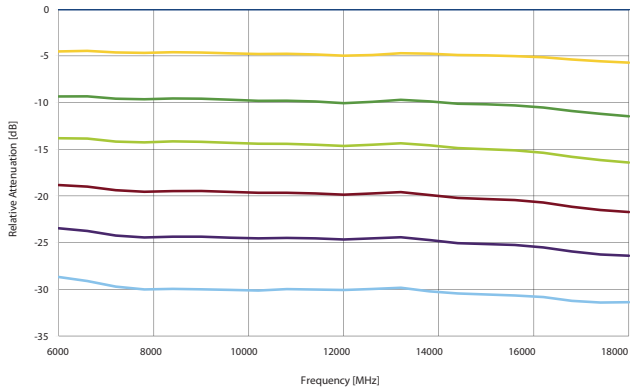
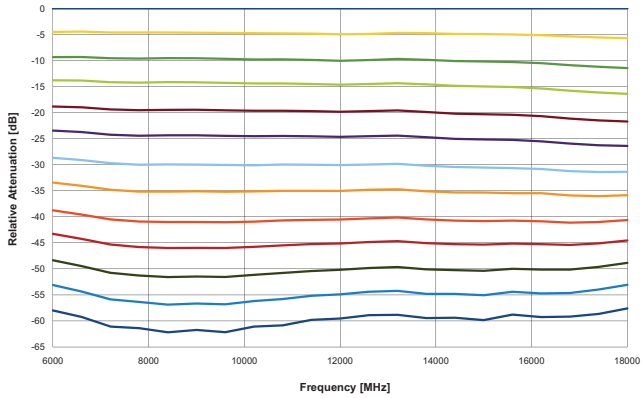
Rev. 12-14-09

GT-0618-32
ATTENUATION RESPONSE OVER FREQUENCY



GT-0618-64
ATTENUATION RESPONSE OVER FREQUENCY

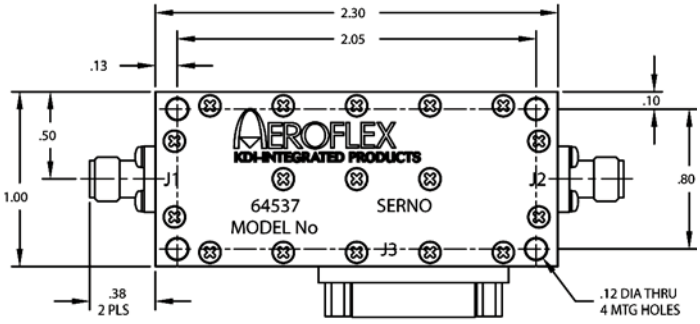


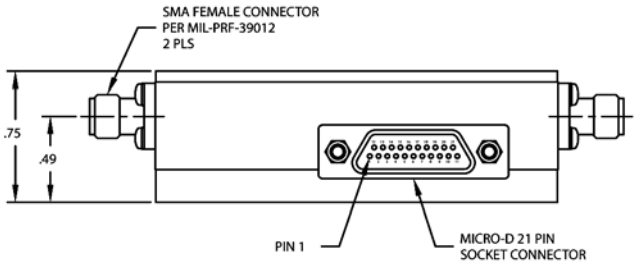
CONNECTOR WIRING CHART

J3	FUNCTION	J3	FUNCTION
1	RETURN	12	b9 (10 bit option)
2	STROBE	13	N/C
3	b0	14	N/C
4	b1	15	+5 Volts
5	b2	16	RETURN
6	b3	17	-5 Volts
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.

GT OUTLINE





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.

Ordering Key:

GT-0618 - Attenuation Range(dB) - #Bits - Trigger
Range= 32 or 64
#Bits= 8 Standard (leave blank) or 10
Trigger= Strobe (leave blank) or F (Free-run)

ex: GT-0618 -64 6-18 GHz, 64 dB Range, 8 bits, Strobed
GT-0618 -64-F 6-18 GHz, 64 dB Range, 8 bits, Free-run (No Strobe)
GT-0618 -32-10-F 6-18 GHz, 32 dB Range, 10 bits, Free-run (No Strobe)

Application Note:

Refer to AN-GT-0618 For Application Information

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AEROFLEX
A passion for performance.

Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.

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