DIGITALLY CONTROLLED ATTENUATORS

G.T. Microwave Features:

**** Monotonic Attenuation Performance ****

Frequency Ranges: From 250 MHz to 20 GHz any optimized bandwidth is available.

TTL Compatable Logic: G.T.M.I.'s binary logic Digital to Analog Converter with 8 inputs; Logic '1'/BIT = 256 discrete values of attenuation or all Logic '0' = Insertion Loss. 10 Bit models have 1024 steps.

High Speed Switching: Attenuators listed are measured from any set value to any value. Switching speeds to 250 nSEC on request.

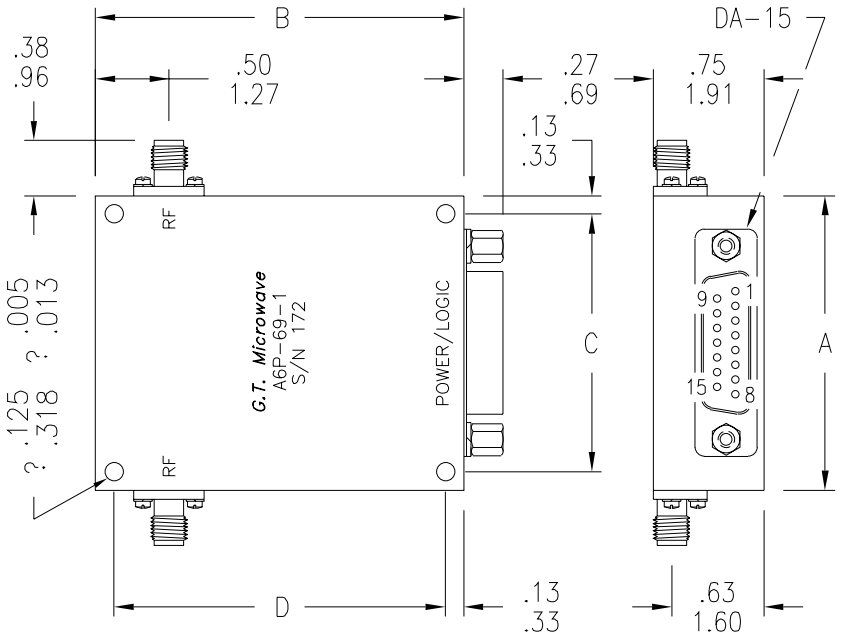
Low DC Power Consumption: Attenuators require ?15VDC, ?1% @ +100/−50mA.

Stable Attenuation: Variation vs Temperature from −55? to 85?C is typically ?10% of the set value. Temperature Compensated models are ?2%.

High RF Power Handling: For power levels greater than listed, please consult factory.

Standard Interfaces: RF port connectors are 'SMA', female per MIL−C−39012. Call factory for optional connectors.

Life Time Integrity: G.T.M.I.'s attenuators are designed to meet MIL−E−16400, Range 1 and MIL−E−5400, Class 2 environments operating within the −55? to +85?C temperature range. MIL−STD−883 screening, −90 dBc RFI/EMI shielding, video filtering and 10^{-6}cc/SEC hermeticity are available. Page 2 has Environmental Ratings.



DIMENSIONS ARE EXPRESSED IN / CM TOLERANCES ? .02 / .05 ? .010 / .025

SIZE	'A' DIM. IN/CM	'B' DIM. IN/CM	'C' DIM. IN/CM	'D' DIM. IN/CM
1	3.00/7.62	2.50/6.35	2.750/6.985	2.250/5.715
2 & 3	2.00/5.08	2.50/6.35	1.750/4.445	2.250/5.715

POWER/LOGIC Connections

No. of BITS	LOGIC PIN ASSIGNMENTS	+15V PIN	−15V PIN	GND PIN
8	L.S.B. @ 1 to M.S.B. @ 8	13	14	15
10	L.S.B. @ 1 to M.S.B. @ 10			

ALL UN−USED PINS HAVE NO INTERNAL CONNECTIONS

Electrical Specifications for − ALL − ANALOG ABSORPTIVE attenuators

FREQUENCY RANGE GHz	ATTENUATION dB	FLATNESS Vs FREQ. MAX	INSERTION LOSS dB	V.S.W.R. MAX	SWITCHING SPEED HARMONIC DISTORT. INPUT POWER	SWITCHING SPEED HARMONIC DISTORT. INPUT POWER	OUTLINE SIZE
0.5−2.0	32	± 1.75	2.50	1.8:1	7.0 uSEC MAX 50 dBc MAX +20 dBm MAX	1.0 uSEC MAX 30 dBc MAX +10 dBm MAX	1
	64	± 2.00					
	80	± 2.25					
2.0−8.0	32	± 2.00	2.50	1.9:1	7.0 uSEC MAX 50 dBc MAX +20 dBm MAX	1.0 uSEC MAX 35 dBc MAX +13 dBm MAX	2
	64	± 2.25					
	80	± 2.50					
6.0−18.0	32	± 2.00	3.25	1.9:1	7.0 uSEC MAX 50 dBc MAX +20 dBm MAX	1.0 uSEC MAX 35 dBc MAX +15 dBm MAX	3
	64	± 2.25					
	80	± 2.50	3.50	2.0:1			
2.0−18.0	32	± 2.50	3.75	2.1:1	7.0 uSEC MAX 50 dBc MAX +20 dBm MAX	1.0 uSEC MAX 35 dBc MAX +13 dBm MAX	2
	64	± 3.50					
	80	± 4.00	4.00				

For substantial improvement in performance; ask for OPTIMIZED NARROWBAND models