



Series SA-618 Switched-Bit Attenuators 6-18 GHz Specifications



Application Notes for [Microwave Attenuators](#)

PERFORMANCE CHARACTERISTICS

MODEL	SA-618-2-5	SA-618-3-1	SA-618-6-1
Frequency Range, min (GHz)	6-18 ⁽¹⁾	6-18 ⁽¹⁾	6-18 ⁽¹⁾
Attenuation Range, min (dB)	15.0 ⁽²⁾	7.0 ⁽²⁾	63 ⁽²⁾
Insertion Loss, max (dB)	4.5	6.5	13
VSWR, max	2.0:1	2.0:1	2.0:1
Number of Bits	2	3	6
LSB, max (dB)	5	1	1
Monotonicity	Guaranteed		
Accuracy of Mean Attenuation, max (dB)	± 1.0	± 0.5	± 0.6 @ 0dB to 15dB ± 1.0 @ >15dB to 32dB ± 1.5 @ >32dB to 63dB
Attenuation Flatness, max (dB)	± 0.6 @ 5 dB ± 1.0 @ 10 dB ± 1.5 @ 15 dB	± 0.75	± 1.5
Power Handling, max (dBm)	+ 23		
Switching Time, max (nsec)	30		
Rise and Fall Time, max (nsec)	20		
Switching Rate, max (MHz)	4.0		
Control Logic	'1' = I.Loss '0' = Att.		
Control Input	True TTL Gate		
Power Supply Requirements	+5V ± 2% @ 110 mA -12V ± 2% @ 75 mA	+5V ± 2% @ 200 mA -12V ± 5% @ 150 mA	+5V ± 2% @ 450 mA -12V ± 2% @ 250 mA
Environmental Conditions			
Package Type	DC 12	DC 13	DC 22

NOTES


1. Performance can be optimized for a narrower bandwidth
2. Attenuation range can be customized.

PIN FUNCTIONS			
PIN Designations	SA-618-2-5	SA-618-3-1	SA-218-6-1
E1	5 dB	1 dB	1 dB
E2	10 dB	2 dB	2 dB
E3	-	4 dB	4 dB
E4	-	-	8 dB
E5	-	-	16 dB
E6	-	-	32 dB
E7	-	-	-
E8	-	-	-
+ V	+ 5V	+ 5V	+ 5V
- V	- 12V	- 12V	- 12V
G	GND	GND	GND

Series SA-218 Switched-Bit Attenuators 2-18 GHz Specifications

PERFORMANCE CHARACTERISTICS

MODEL	SA-218-1-25
Frequency Range, min (GHz)	2-18 ⁽¹⁾

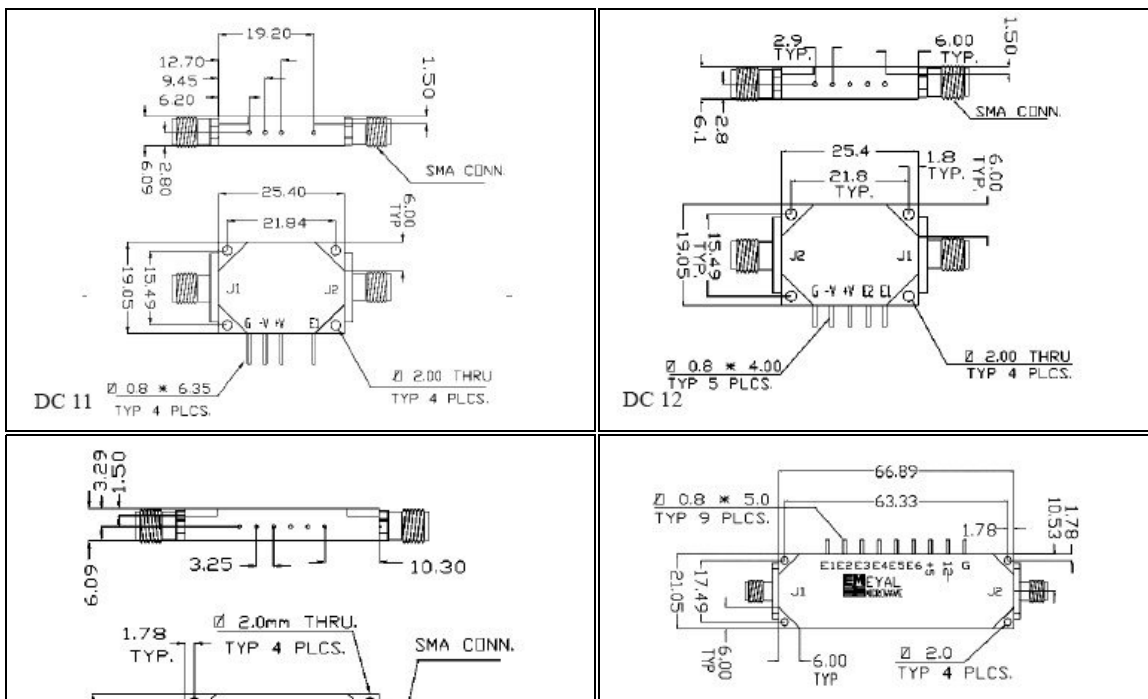
Attenuation Range, min (dB)	25 ⁽¹⁾
Insertion Loss, max (dB)	2.6
VSWR, max	2.0:1
Number of Bits	1
LSB, max (dB)	25
Monotonicity	Guaranteed
Accuracy of Mean Attenuation, max (dB)	± 0.5
Attenuation Flatness, max (dB)	± 1.5
Power Handling, max (dBm)	+ 23
Switching Time, max (nsec)	30
Rise and Fall Time, max (nsec)	20
Switching Rate, max (MHz)	4.0
Control Logic	'1' = I.Loss '0' = Att.
Control Input	TRUE TTL GATE
Power Supply Requirements	+5V ± 2% @ 60 mA -12V ± 2% @ 60 mA
Environmental Conditions	
Package Type	DC 11

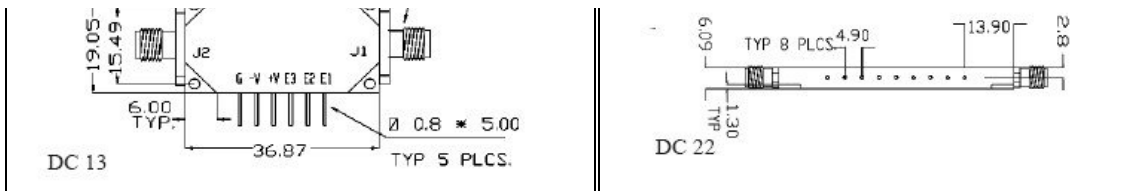
NOTES

1. Performance can be optimized for a narrower bandwidth
2. Attenuation range can be customized.

PIN FUNCTIONS	
PIN Designations	SA-218-6-1
E1	25 dB
E2	-
E3	-
E4	-
E5	-
E6	-
E7	-
E8	-
+ V	+ 5V
- V	- 12V
G	GND

PACKAGE TYPE & DIMENSIONS





[Contact us](#)

Herley - General Microwave specializes in developing and producing customized [microwave components](#) and [millimeter wave products](#) for the defense and aerospace industries as well as for non-defense applications such as communication systems. Herley General Microwave produces the industry standard General Microwave line of off-the-shelf catalog RF components. If you are looking for a [solid state power amplifier](#), [microwave synthesizer](#) or other [microwave oscillators](#), microwave receiver, [microwave switches](#), [microwave attenuator](#), microwave limiter, [microwave phase shifter](#), or [microwave IQ vector modulator](#); we can produce components meeting your requirements at a very competitive price. We also produce high quality customized [integrated microwave assemblies](#) such as up and down converters, DLVAs, beam forming networks, front ends, or switched bank filters, that can be used in a wide variety of demanding applications. [Herley General Microwave \(HGM\)](#), a subsidiary of [Herley Industries](#) provides solutions for electronic warfare systems, phased array radar systems, electronic warfare simulators, test equipment and test systems and other defense and non-defense systems. We look forward to working with you, so please [contact us](#) today.