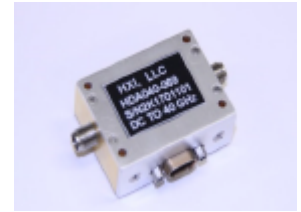
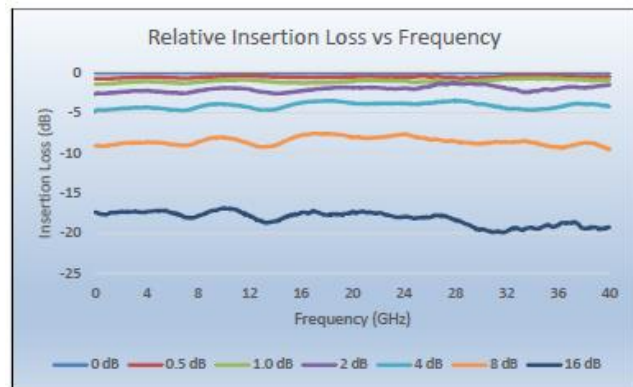


Model HDA040-069 Broadband Digital Attenuator DC to 40 GHz



The HDA040-069 Digital Attenuator covers the range from DC to 40 GHz in 6-bit operation. Attenuation bit values are 0.5 dB (LSB), 1, 2, 4, 8 and 16 dB for total attenuation of 31.5 dB above the attenuator insertion loss. Low bit errors and RMS phase errors are characteristics of this attenuator. The attenuator is useful for communication systems, radars and in test equipment.



Attenuator Bias Voltage = +5 volts

Parameter	Test Conditions	Units	Typical
Insertion Loss (at minimum attenuation)	DC	dB	4.0
	1 GHz		5.1
	3 GHz		6.0
	10 GHz		7.3
	20 GHz		8.4
	30 GHz		9.2
	40 GHz		11.5
Return Loss	DC-40 GHz	dB	10
Attenuation Bits @ 20 GHz	LSB: 0.5 dB	dB	0.4
	Bit 2: 1 dB	dB	0.9
	Bit 3: 2 dB	dB	1.8
	Bit 4: 4 dB	dB	3.8
	Bit 5: 8 dB	dB	8.0
	Bit 6: 16 dB	dB	17.4
Input P1dB	DC-40 GHz	dBm	23
Input IP3	DC-40 GHz	dBm	37
Switching Time	DC-40 GHz	nS	45
Control Logic	DC-40 GHz	V	0/+5
Control Current	Each control bit @ +5V	mA	6
Supply Current	DC-40 GHz	mA	17 (45 max)
Absolute Maximum Input Power	DC-40 GHz	dBm	35

Operating Temperature Range (absolute maximum): -40°C to +85°C
Storage Temperature Range (absolute maximum): -65°C to +150°C