

### Voltage-Controlled Attenuator Module 100 to 2000 MHz

#### Features

- FAST SWITCHING: < 0.2 μsec, 10 TO 90% (TYP.)</li>
  < 1 μsec, 0 TO 100% (TYP.)</li>
- HIGH DYNAMIC RANGE: 40 dB TO 1000 MHz (TYP.)
- LOW VSWR: 1.4:1 (TYP.)

#### Description

The G30 attenuator is a discrete hybrid design, which uses thin film manufacturing processes for accurate performance and high reliability.

This design uses three pin diodes to provide a non linear attenuation response across a broadband frequency range. Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available.

#### **Ordering Information**

Part Number	Package
G30	TO-8
SMG30	Surface Mount
CG30 **	SMA Connectorized

\*\* The connectorized version is not RoHs compliant.

#### Electrical Specifications: $Z_0 = 50\Omega$ , $V_{CC} = +15 V_{DC}$

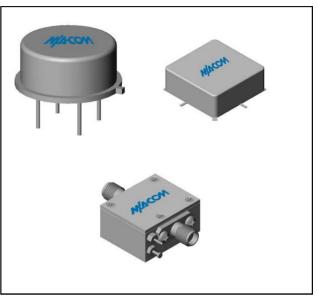
#### Typical Guaranteed Units Parameter 25°C 0° to 50°C -54° to +85°C\* Frequency MHz 5-2200 100-2000 100-2000 Maximum Attenuation Available (min) dB >50 40 37 100-500 MHz 500-1000 MHz dB >44 35 32 1000-2000 MHz dB >38 30 27 Insertion Loss (Vctrl = +15 V) (max) dB 2.8 3.0 100-500 MHz <2.1 500-1000 MHz dB <2.3 3.0 3.2 1000-2000 MHz 35 38 dB <3.0 VSWR (worst case in attenuation range) 0-25 dB Attenuation dB 1.4:1 2.0:1 2.0:1 >25 dB Attenuation dB <1.7:1 2.2:1 2.2:1 Flatness Over Frequency (max) (Attenuation = min to 15 dB, 100-1000 MHz) 100-1000 MHz dB ±0.5 ±1.0 ±1.0 1000-2000 MHz dB ±1.0 ±1.5 ±1.7 Switching Speed (max.) 10% - 90% usec < 0.2 0.4 0.6 0% - 100% usec <1 2 3 **Bias Voltage** Volts +15 +15 +15 7 Bias Current (max) mΑ 10 12 Control Voltage Volts 0 to +15 0 to +15 0 to +15 Control Current (max) mΑ 7 10 10

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\*Over temperature performance limits for part number CG30, guaranteed from 0°C to +50°C only.

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### **Product Image**

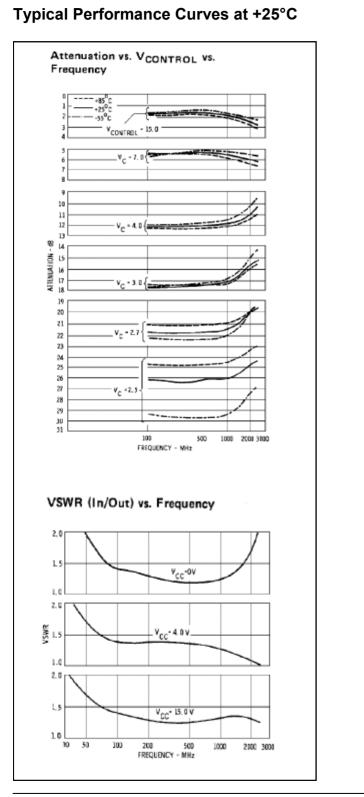


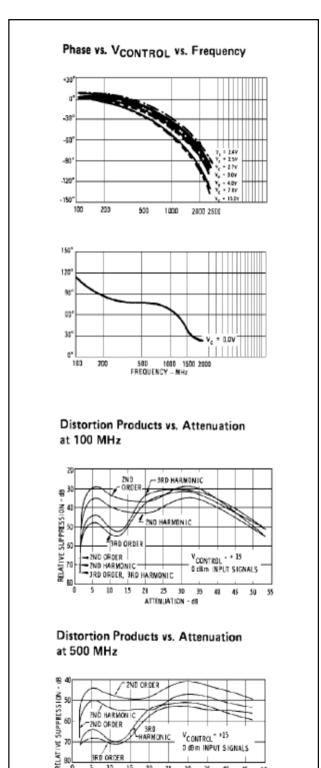
Rev. V3



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BRD ORDER

ATTENUATION - dB

5 10 15 20 25 30 35 40 45 50

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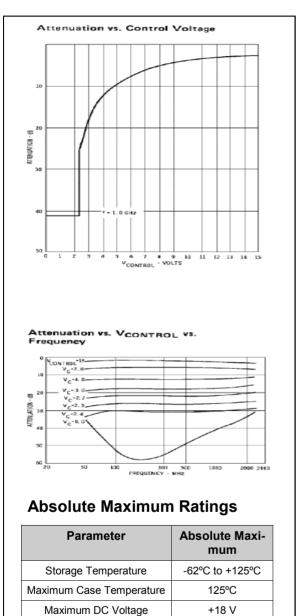
2

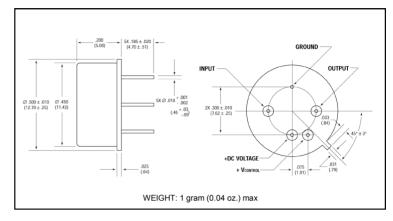


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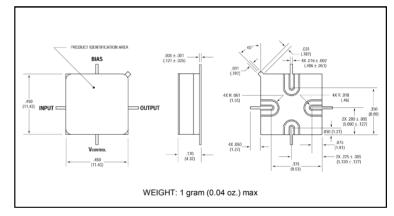
### Typical Performance Curves at +25°C



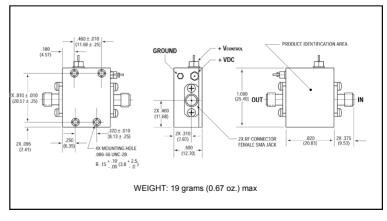




### Outline Drawing: Surface Mount



### Outline Drawing: SMA Connectorized \*



\* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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Maximum DC Bias Voltage

Maximum Short Term RF

Input power

(1 minute max.)

Maximum Peak Power

(3 µsec max.) "S" Series Burn-In

Temperature (case)

+20 V

200 mW

1 W

+125°C

Rev. V3

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<sup>4</sup> 

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