



G30 / SMG30



100 TO 2000 MHz TO-8 VOLTAGE-CONTROLLED ATTENUATOR MODULE

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

Specifications (Rev. Date: 3/02)*

Characteristic	Typical	Guaranteed	
		0° to 50°C	-54° to +85°C
Frequency	5-2200 MHz	100-2000 MHz	100-2000 MHz
Maximum Attenuation Available (min.)			
100-500 MHz	> 50 dB	40 dB	37 dB
500-1000 MHz	> 44 dB	35 dB	32 dB
1000-2000 MHz	> 38 dB	30 dB	27 dB
Insertion Loss (Vctrl = +15 V) (max.)			
100-500 MHz	< 2.1 dB	2.8 dB	3.0 dB
500-1000 MHz	< 2.3 dB	3.0 dB	3.2 dB
1000-2000 MHz	< 3.0 dB	3.5 dB	3.8 dB
VSWR (Worst case in attenuation range)			
0-25 dB Attenuation	1.4:1	2.0:1	2.0:1
> 25 dB Attenuation	< 1.7:1	2.2:1	2.2:1
Flatness Over Frequency (max.) (Attenuation = min. to 15 dB, 100-1000 MHz)			
100-1000 MHz	\pm 0.5 dB	\pm 1.0 dB	\pm 1.0 dB
1000-2000 MHz	\pm 1.0 dB	\pm 1.5 dB	\pm 1.7 dB
Switching Speed (max.)			
10% - 90%	< 0.2 μ sec	0.4 μ sec	0.6 μ sec
0% - 100%	< 1 μ sec	2 μ sec	3 μ sec
Bias Voltage	+15 V	+15 V	+15 V
Bias Current (max.)	7 mA	10 mA	12 mA
Control Voltage	0 to +15 V	0 to +15 V	0 to +15 V
Control Current (max.)	7 mA	10 mA	10 mA

*Measured in a 50-ohm system at +15Vdc unless otherwise specified.

Absolute Maximum Ratings

Storage Temperature	-62°C to +125°C
Maximum Case Temperature	+125°C
Maximum DC Voltage	+18 Volts
Maximum Continuous RF Input Power	+20 dBm
Maximum Short Term RF Input Power (1 minute max.)	200 mW
Maximum Peak Power (3 μ sec max.)	1 W
“S” Series Burn-in Temperature (Case)	+125°C

Outline Drawings

Package	Figure	Model
TO-8	BH	G30
Surface Mount	AC	SMG30
SMA Connectorized	CG	CG30

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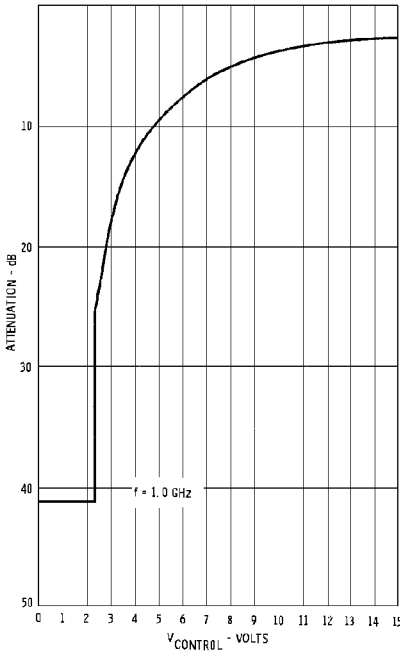
North America: 1-800-366-2266

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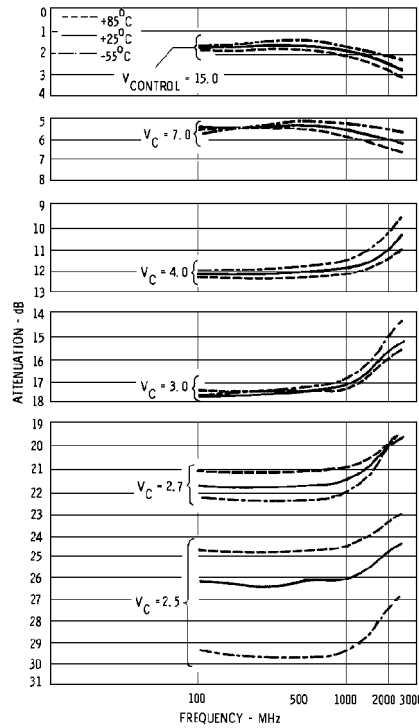


Typical Performance at 25°C

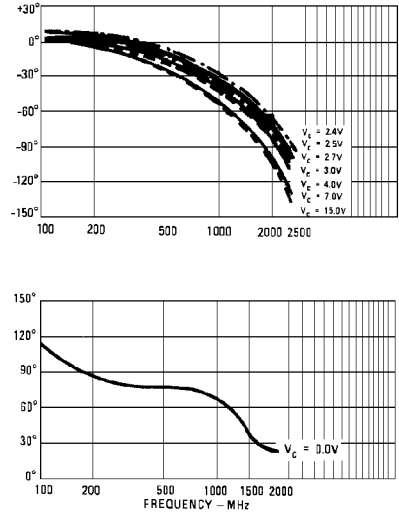
Attenuation vs. Control Voltage



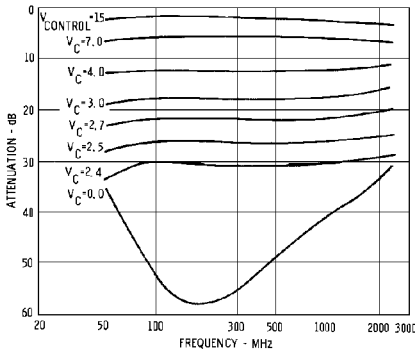
Attenuation vs. $V_{CONTROL}$ vs. Frequency



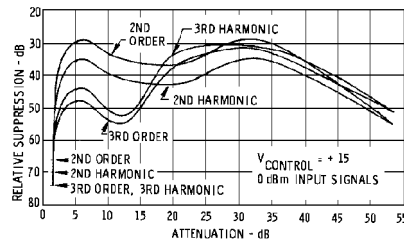
Phase vs. $V_{CONTROL}$ vs. Frequency



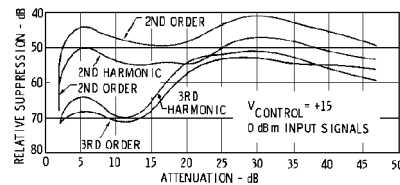
Attenuation vs. $V_{CONTROL}$ vs. Frequency



Distortion Products vs. Attenuation at 100 MHz



Distortion Products vs. Attenuation at 500 MHz



VSWR (In/Out) vs. Frequency

