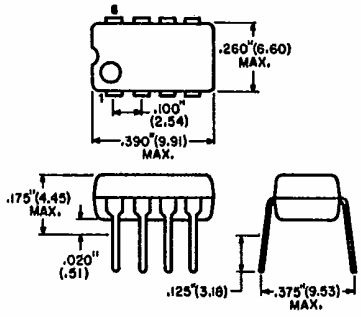
ECG® Semiconductors

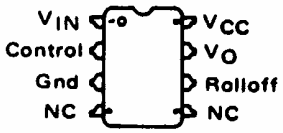
ECG829

Electronic Attenuator

Features

- **Designed for use in:**
  DC operated volume control
  Compression and expansion amplifier applications
- **Controlled by DC voltage or external variable resistor**
- **Silicon monolithic integrated circuit**





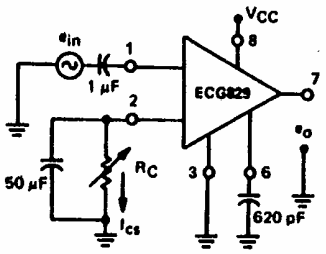
Maximum Ratings (T_A = +25°C unless otherwise noted.)

Rating	Value	Unit
Power Supply Voltage	20	Vdc
Power Dissipation @ T_A = 25°C Derate above T_A = 25°C	1.2 10	Watt mW/°C
Operating Temperature Range	0 to +75	°C

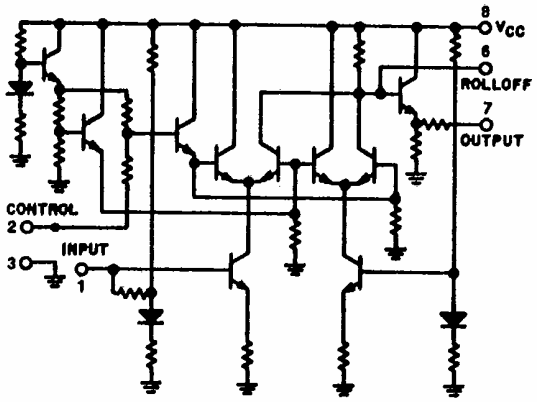
Electrical Characteristics (e_{in} = 100mV (RMS), f = 1.0kHz, R1 = 0, V_{cc} = 16Vdc, T_A = +25°C unless otherwise noted.)

Characteristic	Min	Typ	Max	Units
Operating Power Supply Voltage	9.0		18	Vdc
Control Terminal Sink Current (e_{in} = 0)			2.0	mAdc
Maximum Input Voltage			0.5	V(RMS)
Voltage Gain	11	13		dB
Attenuation Range (R_C = 33kΩ)	70	90		dB
Total Harmonic Distortion (Pin 2 Gnd) (e_{in} = 100mV(RMS), $e_o = A_v \times e_{in}$)		0.6	1.0	%

Test Circuit

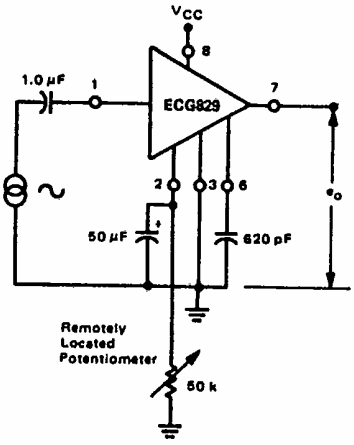


Circuit Schematic



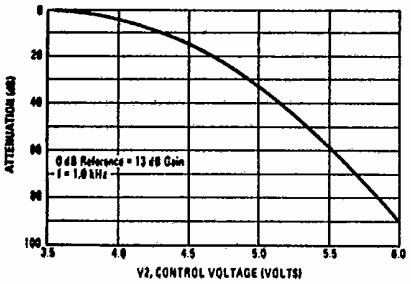
Application

Typical DC "Remote" Volume Control

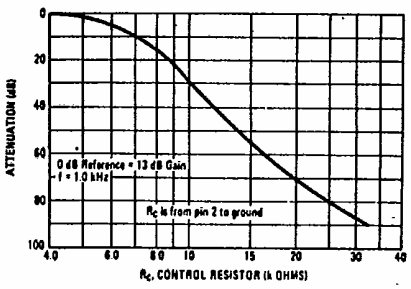


Typical Electrical Characteristics (V_{CC} = 16Vdc, T_A = +125°C unless otherwise noted.)

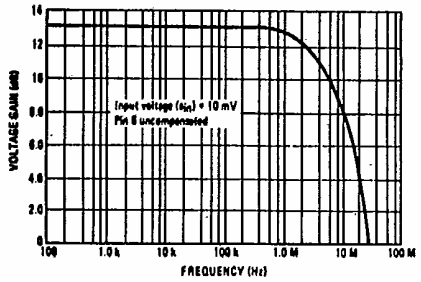
Attenuation versus DC Control Voltage



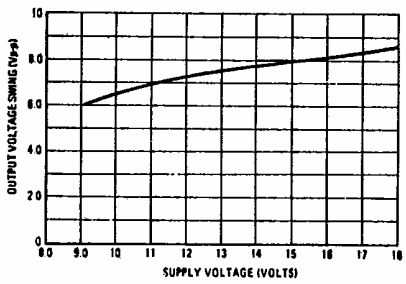
Attenuation versus Control Resistor



Frequency Response



Output Voltage Swing



Total Harmonic Distortion