

# ECG766A

## ELECTRONIC ATTENUATOR

- Designed for use in:
  - DC Operated Volume Control
  - Compression and Expansion Amplifier Applications
- Controlled by DC Voltage or External Variable Resistor
- Economical 6-Lead Plastic Package

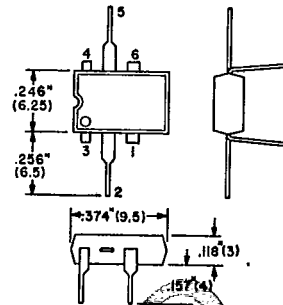
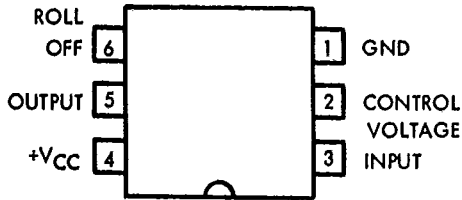
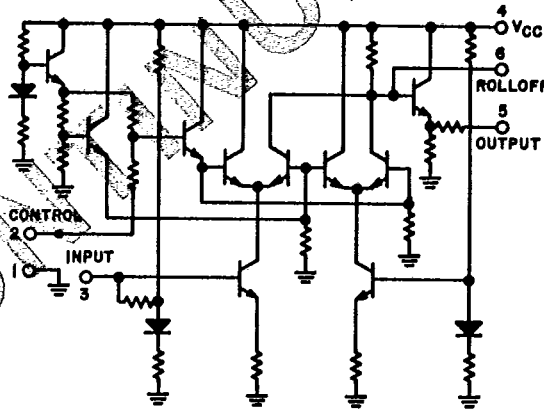
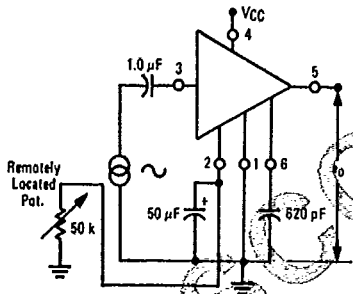


Figure 2 - Circuit Schematic

Figure 1 - Typical DC "Remote" Volume Control



Electrical Characteristics ( $e_{in} = 100 \text{ mV (RMS)}$ ,  $f = 1.0 \text{ kHz}$ ,  $R_I = 0$ ,  $V_{CC} = 16 \text{ Vdc}$ ,  $T_A = +25^\circ\text{C}$  unless otherwise noted.)

Circuit	Characteristic	Min	Typ	Max	Unit
	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 ( $R_C = 33 \text{ k ohms}$ )	70	90	-	dB
	Total Harmonic Distortion (Pin 2 Gnd) ( $e_{in} = 100 \text{ mV (RMS)}$ , $e_o = A_v \times e_{in}$ )	-	0.6	1.0	%

Symbols conform to JEDEC Engineering Bulletin No. 1 when applicable.

Typical Electrical Characteristics  
 ( $V_{CC} = 16 \text{ Vdc}$ ,  $T_A = +25^\circ\text{C}$  unless otherwise noted.)

Figure 3 - Attenuation versus DC Control Voltage

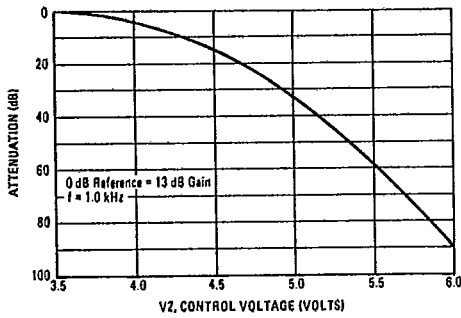


Figure 4 - Attenuation versus Control Resistor

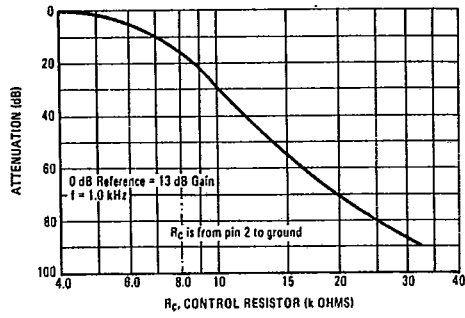


Figure 5 - Frequency Response

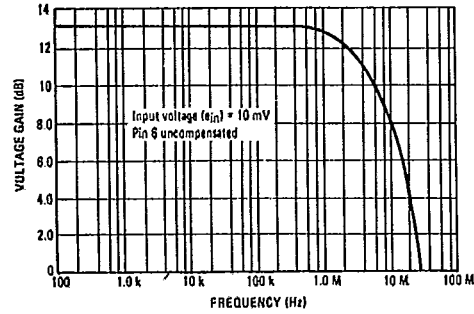


Figure 6 - Output Voltage Swing

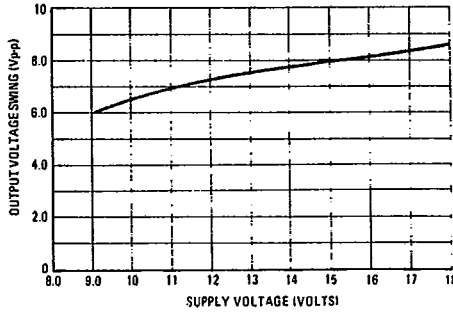
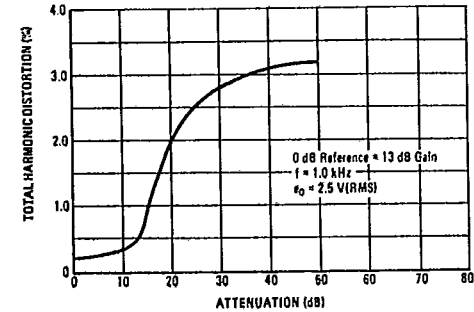


Figure 7 - Total Harmonic Distortion



Maximum Ratings ( $T_A = +25^\circ\text{C}$  unless otherwise noted.)

Rating	Value	Unit
Power Supply Voltage	20	Vdc
Power Dissipation @ $T_A = 25^\circ\text{C}$ (Package Limitation)	1.0	Watt
Derate above $T_A = 25^\circ\text{C}$	10	mW/ $^\circ\text{C}$
Operating Temperature Range	0 to +75	$^\circ\text{C}$