



ELECTRONICS, INC.

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NTE1783 Integrated Circuit TV Volume Control Circuit

Features:

- DC Volume Control System
- 7-Lead SIP Type Package

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{6-4}	12V
Circuit Voltage, V_{2-4}	0 to +7V
Circuit Voltage, V_{3-4}	0 to V_{6-4}
Supply Current, I_6	18mA
Circuit Current, I_2	-10 to +5mA _(peak)
Circuit Current, I_3	-10 to +3mA _(peak)
Circuit Current, I_5	-5 to +1mA _(peak)
Circuit Current, I_7	-20 to +0.3mA _(peak)
Power Dissipation, P_D	216mW
Operating Ambient Temperature Range, T_{opr}	-20°C to +70°C
Storage Temperature Range, T_{stg}	-55° to +150°C

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_6		9	12	15	mA
Terminal Voltage	V_{1-4}		3.3	4.5	5.7	V
	V_{5-4}		0.7	1.4	1.8	V
	V_{7-4}		3.0	4.1	5.2	V
Maximum Output Voltage	$V_{O(max)}$	$f = 400\text{Hz}$, THD = 10%	2.6	2.9	3.2	V_{rms}
Voltage Gain	G_V	$f = 400\text{Hz}$, when $V_3 = 10\text{V}$ and $V_O = 1V_{rms}$	19.5	22.0	23.5	dB
Total Harmonic Distortion	THD	$f = 400\text{Hz}$, when $V_3 = 10\text{V}$ and $V_O = 1V_{rms}$	-	0.3	1.0	%
Maximum Attenuation	A_{tt}	$f = 400\text{Hz}$, $V_1 = 0.2V_{rms}$ ratio between $V_3 = 10\text{V}$ and $V_3 = 0$	72	95	-	dB
Mute Operating Voltage	V_{2-4}	$f = 400\text{Hz}$, $V_1 = 0.2V_{rms}$ when $V_O = 0V_{rms}$	2.45	2.70	2.95	V

Pin Connection Daigram
(Front View)

