



ELECTRONICS, INC.

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NTE1789 Integrated Circuit TV Sound Preamp, AF Output, Volume Control

Description:

The NTE1789 is an integrated circuit in a 9-Lead SIP type package designed for use in TV sound output circuit.

Features:

- DC Volume Control System

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

Supply Voltage, V_{1-7}	14.4V
Supply Voltage, V_{9-7}	26V
Circuit Voltage, V_{3-7}	0 to 7V
Circuit Voltage, V_{4-7}	0 to V_{1-7} V
Circuit Voltage, V_{6-7}	0 to V_{9-7} V
Peak Circuit Current, I_4	-10 to +3mA
Peak Circuit Current, I_8	-1.2 to +1.2mA
Power Dissipation, P_D	1.6W
Operating Ambient Temperature Range, T_{opr}	-20° 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_i	SW ₁ : 1, SW ₂ : 1	7.1	9.5	11.9	mA
Circuit Voltage	V_{2-7}	SW ₁ : 2, SW ₂ : 1	-	5.4	-	V
	V_{5-7}	SW ₁ : 2, SW ₂ : 1	-	8.5	-	V
	V_{6-7}	SW ₁ : 2, SW ₂ : 1	-	8.8	-	V
	V_{8-7}	SW ₁ : 2, SW ₂ : 2	-	8.8	-	V
Max. Output Voltage	P_{Omax}	$V_4 = 12\text{V}$, $f = 1\text{kHz}$, THD = 10%	2.0	2.3	-	W
Voltage Gain	G_V	$V_4 = 12\text{V}$, $V_i = 0.1V_{rms}$, $f = 1\text{kHz}$	28.5	30.5	32.5	dB
Total Harmonic Distortion	THD	$V_4 = 12\text{V}$, $P_O = 1\text{W}$, $f = 1\text{kHz}$	-	0.8	1.2	%
Max. Attenuation	A_{tt}	$f = 1\text{kHz}$, $V_i = 0.1V_{rms}$, Ratio between $V_4 = 12\text{V}$ and $V_4 = 0\text{V}$	-	-95	-85	dB
Output Noise Voltage	V_{no}	$V_4 = 0\text{V}$, $V_i = 0V_{rms}$	-	0.6	1.0	mV _{rms}
Mute Operating Voltage	V_{3-7}	$f = 1\text{kHz}$, $V_4 = 12\text{V}$, when $V_8 = 0V_{rms}$	2.45	2.65	2.85	V

Pin Connection Diagram
(Front View)

