



ELECTRONICS, INC.

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NTE1732 Integrated Circuit Module, Hybrid, TV Voltage Regulator w/4W Audio Output

Features:

- Series Regulator and Audio Output Amp Incorporated into a Single Package
- Low Power Dissipation, Low Distortion, High Gain
- Excellent Heat Radiation and Thermal Stability

Functions:

- Line Operated Series Regulator
- Line Operated Audio Output Amp

Applications:

- NTSC System Color Television Sets

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

Maximum Input Voltage (Between Pin1 and Pin4), V_{inmax}	200V
Maximum Supply Voltage (Between Pin8 and Pin11), V_{CCmax}	160V
Maximum Output Current (Pin6), I_{Omax}	1A
Maximum Collector Output Current (TR5, TR6), I_{Cmax}	1A
Operating Case Temperature, T_C	+105°C
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-30° to +105°C
Thermal Resistance, Junction-to-Case (TR1), R_{thJC1}	1.8°C/W
Thermal Resistance, Junction-to-Case (TR5, TR6), R_{thJC2}	12.5°C/W
Allowable Load Shorting Time ($V_{indc} = 158V$, $R_L = 8\Omega$, $P_O = 1W$, $f = 50Hz$), t_s	2sec

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Block						
Output Voltage	V_O	$V_{\text{indc}} = 158\text{V}$, $I_O = 0.5\text{A}$, Note 1	134.2	135.2	136.2	V
Output Voltage Fluctuation Against Input Voltage		$V_{\text{indc}} = 151\text{V}$ to 174V , $I_O = 0.5\text{A}$	-1	-	+1	V
		$V_{\text{indc}} = 158\text{V}$, $I_O = 0.2\text{A}$ to 0.5A	-	-	0.5	V
Output Voltage Temperature Factor		$V_{\text{indc}} = 158\text{V}$, $I_O = 0.5\text{A}$	-	7	-	mV/ $^{\circ}\text{C}$
Ripple Compression Rate		$V_{\text{ac}} = 120\text{V}$, $I_O = 0.5\text{A}$	-	37	-	dB
Withstanding Voltage Between Input and Output Pins		TR1, $I_{\text{CEO}} = 10\text{mA}$	-	200	-	V
Saturation Voltage Between Input and Output Pins		TR1, $I_B = 10\text{mA}$, $I_C = 1\text{A}$	-	-	0.2	V
DC Current Gain	h_{FE}	TR1, $V_{\text{CE}} = 5\text{V}$, $I_C = 1\text{A}$	1500	-	6500	
Audio Output ($V_{\text{indc}} = 158\text{V}$, $I_O = 200\text{mA}$, $R_g = 600\Omega$, $R_{L2} = 440\Omega$ unless otherwise specified)						
Quiescent Current	I_{CCO}	$V_{\text{indc}} = 135\text{V}$, Pin6	3	5	10	mA
Output Power	P_O	THD = 10%, $f = 1\text{kHz}$	4.0	5.0	-	W
Total Harmonic Distortion	THD	$P_O = 0.1\text{W}$, $f = 1\text{kHz}$	-	-	2	%
Voltage Gain	V_G	$P_O = 0.1\text{W}$, $f = 1\text{kHz}$	47	49	51	dB
Frequency Response	f_L , f_H	$P_O = 0.1\text{W}$, $\pm 6\text{dB}$	70 to 10k			Hz
Output Noise Voltage	V_{NO}	$R_g = 0\Omega$	-	-	2.0	mV
Middle-Point Voltage	V_N	Pin9	66.5	68.5	70.5	V

Note 1. Measure within 5 min. after switch is on.

Note 2. Unless otherwise specified, voltage regulated power supply is used.

Pin Connection Diagram
(Front View)



