

NTE1839 Integrated Circuit TV Fixed Voltage Regulator 120V $\pm$ 0.8V, 1A

Absolute Maximum Ratings:

Maximum Peak Input Voltage, V_{IN} 200V
Maximum Output Current, I_O 1A
Power Dissipation ($T_C = +100^\circ\text{C}$), P_D 27W
Power Transistor Junction Temperature, T_J $+150^\circ\text{C}$
Operating Temperature Range (Case Temperature, Note 1), T_{opr} -20° to $+125^\circ\text{C}$
Storage Temperature Range, T_{stg} -30° to $+125^\circ\text{C}$

Note 1. Recommended Operating Temperature: $T_{opr} = +100^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	$V_{IN} = 161\text{V}$, $I_O = 500\text{mA}$, $I_{IN} = 7.2\text{mA}$, Note 2	119.2	120.0	120.8	V
Line Regulation	Reg_{LINE}	$V_{IN} = 145\text{V}$ to 170V , $I_O = 500\text{mA}$	—	—	$\Delta 2.4$	V
Load Regulation	Reg_{LOAD}	$V_{IN} = 161\text{V}$, $I_O = 250\text{mA}$ to 500mA	—	—	$\Delta 0.5$	V
Output Voltage Temperature Coefficient		$V_{IN} = 161\text{V}$, $I_O = 500\text{mA}$, $T_C = -20^\circ$ to $+100^\circ\text{C}$	—	± 0	—	mV/ $^\circ\text{C}$
Input Output Saturation Voltage	$V_{EC(sat)}$	$I_C = 1\text{A}$, $I_B = 10\text{mA}$	—	—	1.5	V
Input Output Breakdown Voltage	V_{CEO}	$I_{CEO} = 10\text{mA}$, $I_B = 0$	200	—	—	V
DC Current Gain	h_{FE}	$I_C = 1\text{A}$, $V_{CE} = 4\text{V}$	1500	—	6500	
Power Transistor Thermal Resistance	$R_{\theta JC}$	Between Junction and Case	—	1.8	—	$^\circ\text{C/W}$
Input Output Leakage Current	I_{CEO}	V_{CE} (Pin3, Pin4) = 200V, Pin1, Pin2, Pin5 Open	—	—	100	μA
Output Base Reverse Current Capacity (Between Emitter–Base)	$I_{EB(S/B)}$	$t = 65\text{ms}$	—	—	300	mA

Note 2. The fixed output voltage is to be measured 5 seconds after the power switch is turned on.

Pin Connection Diagram
(Front View)

