



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE7152 Integrated Circuit Hybrid Switching Voltage Regulator

Features:

- Built-In Power Transistor NPN Triple Diffused Planar
- On-Line SMPS for Color TV
- Output Voltage is Pre-Fixed – No External Adjustment is Required

Absolute Maximum Ratings:

Peak Input Voltage, V_{IN} 900V
 Input Current, I_{IN} 6A
 Power Dissipation ($T_C = +100^\circ\text{C}$), P_D 27W
 Maximum Power Transistor Junction Temperature, T_J $+150^\circ\text{C}$
 Operating Temperature Range (T_C), T_{opr} -20° to $+125^\circ\text{C}$
 Storage Temperature Range, T_{stg} -30° to $+125^\circ\text{C}$

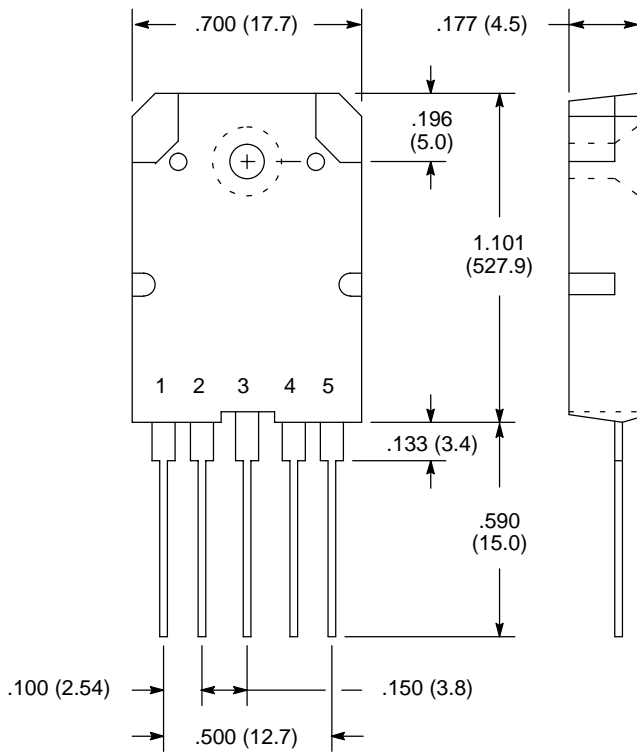
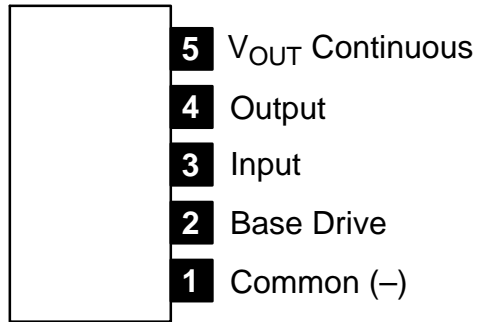
Electrical Characteristics: (Note 1)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	$V_{IN} = 220\text{V}$, $I_O = 500\text{mA}$	101.5	103.0	104.5	V
Detecting Voltage (Fixed Output)	V_O	$I_{IN} = 6\text{mA}$	102.4	103.4	104.4	V
Load Regulation	Reg_{LOAD}	$V_{IN} = 180\text{V}$ to 280V	Initial Value ± 1			V
		$V_{IN} = 220\text{V}$, $I_O = 300\text{mA}$ to 500mA	Initial Value ± 1			V
Output Ripple		$V_{IN} = 180\text{V}$, $I_O = 500\text{mA}$, Note 2	$(\Delta V_{IN}/\Delta V_O) \times 100$ 1% Typ.			
Output Voltage Temperature Coefficient		$T_C = -20^\circ$ to $+100^\circ\text{C}$, $I_{IN} = 6\text{mA}$	–	± 4	–	mV/ $^\circ\text{C}$
Saturation Voltage	$V_{CE(sat)}$	$I_C = 2\text{A}$, $I_B = 400\text{mA}$	–	–	1.0	V
	$V_{BE(sat)}$	$I_C = 2\text{A}$, $I_B = 400\text{mA}$	–	–	1.5	V
DC Current Gain	h_{FE}	$I_C = 1\text{A}$, $V_{CE} = 4\text{V}$	10	–	30	
Collector Cutoff Current	I_{CEX}	$V_{CE} = 900\text{V}$, $V_{BE} = -1.5\text{V}$	–	–	1.0	mA
Emitter Cutoff Current	I_{EBO}	$V_{BE} = 5.5\text{V}$	–	–	1.0	mA
Power Transistor Thermal Resistance	R_{thJC}	Between Junction and Stem Upper Surface	–	1.8	–	$^\circ\text{C}/\text{W}$
Switching Time	t_s	$V_{CE} = 250\text{V}$, $I_C = 1\text{A}$, $I_{B1} = 150\text{mA}$, $I_{B2} = 500\text{mA}$	–	–	7	μs
	t_f		–	–	1	μs

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

Note 2. ΔV_{IN} : Input Ripple Voltage
 ΔV_O : Output Ripple Voltage

Pin Connection Diagram (Front View)



OR

