



**ELECTRONICS, INC.**  
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## NTE1840 & NTE1841 Integrated Circuit Hybrid Switching Voltage Regulator

### Features:

- Triple Diffused Transistor Chips Incorporated
- Compact Plastic Package with Industry Standard Reliability
- Output Voltage is Pre-Fixed – No External Adjustment is Required

### Absolute Maximum Ratings:

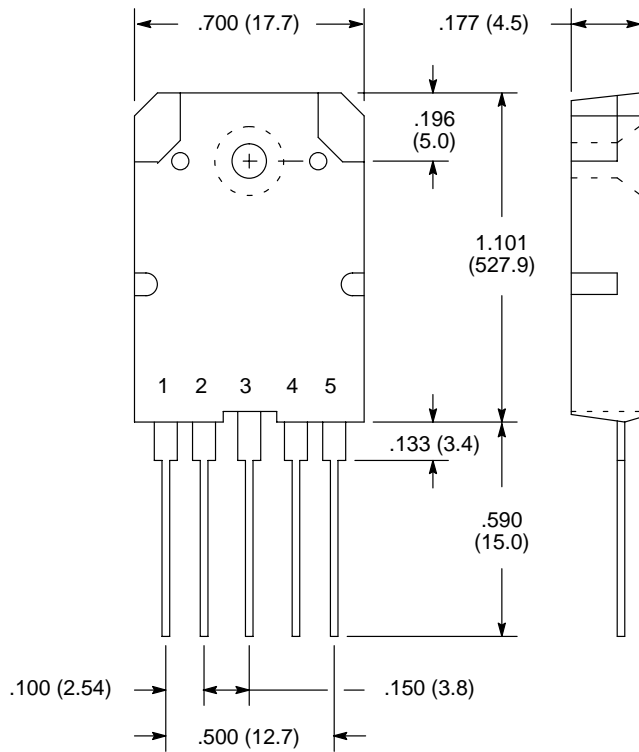
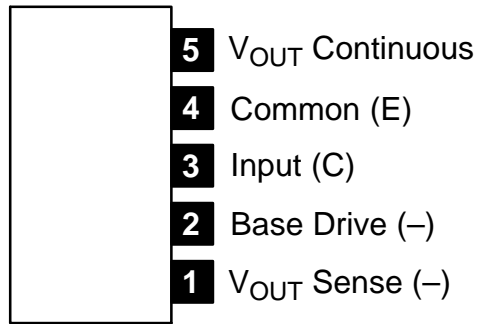
Peak Input Voltage, $V_{IN}$ .....	550V
Input Current, $I_{IN}$	
Continuous .....	6A
Pulse .....	12A
Power Dissipation ( $T_C = +100^\circ\text{C}$ ), $P_D$ .....	27W
Maximum Power Transistor Junction Temperature, $T_J$ .....	+150°C
Operating Temperature Range ( $T_C$ ), $T_{opr}$ .....	-20° to +125°C
Storage Temperature Range, $T_{stg}$ .....	-30° to +125°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$V_{IN} = 120\text{V}$ , $I_O = 900\text{mA}$	114.5	116.0	117.5	V	
Detecting Voltage (Fixed Output)	$V_O$	$I_{in} = 7\text{mA}$	NTE1840	41.3	41.8	42.3	V
			NTE1841	42.5	43.0	43.5	V
Load Regulation	$Reg_{LOAD}$	$V_{IN} = 120\text{V}$ , $I_O = 500\text{mA}$ to $900\text{mA}$	Initial Value $\pm 1$			V	
Output Voltage Temperature Coefficient		$T_C = -20^\circ$ to $+100^\circ\text{C}$ , $I_{in} = 7\text{mA}$	-	$\pm 2$	-	mV/°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	-	40		
Collector Cutoff Current	$I_{CEX}$	$V_{CE} = 550\text{V}$ , $V_{BE} = -1.5\text{V}$	-	-	1.0	mA	
Power Transistor Thermal Resistance	$R_{thJC}$	Between Junction and Stem Upper Surface	-	1.8	-	°C/W	
Switching Time	$t_s$	$I_C = 2\text{A}$ , $I_{B1} = 300\text{mA}$ , $I_{B2} = 300\text{mA}$ , $R_L = 50\Omega$	-	-	12	$\mu\text{s}$	
	$t_f$		-	-	7	$\mu\text{s}$	

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

### Pin Connection Diagram (Front View)



OR

