

## NTE1796 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:**

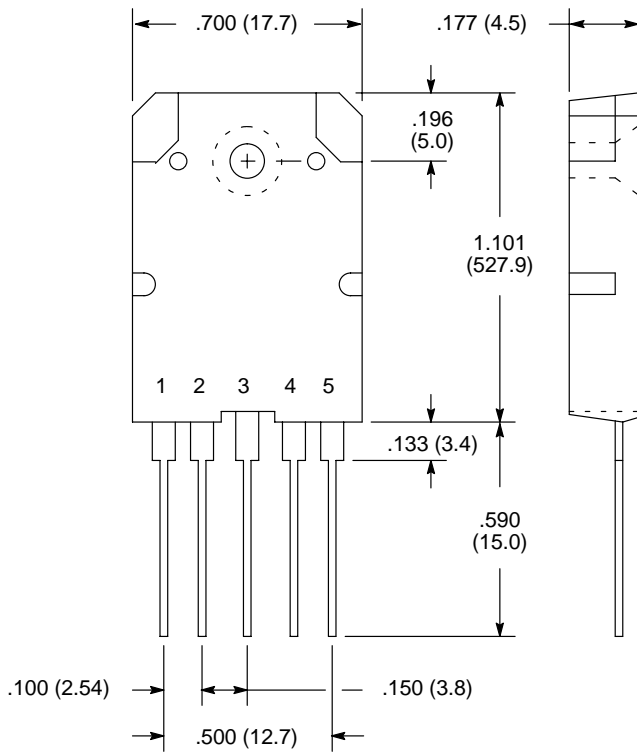
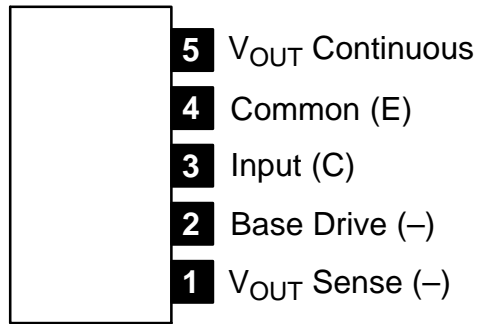
Peak Input Voltage, $V_{IN}$ .....	900V
Input Current, $I_{IN}$	
Continuous .....	6A
Pulse .....	12A
Power Dissipation ( $T_C = +100^\circ\text{C}$ ), $P_D$ .....	27W
Maximum Power Transistor Junction Temperature, $T_J$ .....	+150°C
Operating Temperature Range ( $T_C$ ), $T_{opr}$ .....	-20° to +125°C
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	$V_O$	$V_{IN} = 220\text{V}$ , $I_O = 500\text{mA}$	113.0	114.5	116.0	V
Detecting Voltage (Fixed Output)	$V_O$	$I_{in} = 7\text{mA}$	41.3	41.8	42.3	V
Load Regulation	$Reg_{LOAD}$	$V_{IN} = 220\text{V}$ , $I_O = 300\text{mA}$ to $500\text{mA}$	Initial Value $\pm 2$			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	-	30	
Collector Cutoff Current	$I_{CEX}$	$V_{CE} = 900\text{V}$ , $V_{BE} = -1.5\text{V}$	-	-	1.0	mA
Power Transistor Thermal Resistance	$R_{thJC}$	Between Junction and Stem Upper Surface	-	1.8	-	°C/W
Switching Time	$t_s$	$I_C = 2\text{A}$ , $I_{B1} = 300\text{mA}$ , $I_{B2} = 1\text{A}$ , $R_L = 50\Omega$	-	-	7	$\mu\text{s}$
	$t_f$		-	-	1	$\mu\text{s}$

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

**Pin Connection Diagram**  
(Front View)



OR

