

## NTE7079 Integrated Circuit Hybrid Switching Voltage Regulator

**Absolute Maximum Ratings:**

Maximum Peak Input Voltage, $V_{IN}$ .....	850V
Input Current, $I_{IN}$	
Continuous .....	6A
Pulse .....	12A
Maximum Output Current ( $V_O = 115V$ ), $I_O$ .....	1.3A
Power Dissipation ( $T_C = +100^\circ C$ ), $P_D$ .....	27W
Power Transistor Junction Temperature, $T_J$ .....	+150°C
Operating Temperature Range (Case Temperature, Note 1), $T_{opr}$ .....	-20° to +125°C
Storage Temperature Range, $T_{stg}$ .....	-30° to +125°C

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

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_O$	$V_{IN} = 220V, I_O = 900mA$ , Note 2	108.5	110.0	111.5	V
Sensing Voltage (Fixed Voltage)	$V_O$	$I_{IN} = 7mA$	41.3	41.8	42.3	V
Line Regulation	$Reg_{LINE}$	$V_{IN} = 180V$ to $280V, I_O = 900mA$	Initial Value $\pm 1V$			V
Load Regulation	$Reg_{LOAD}$	$V_{IN} = 220V, I_O = 550mA$ to $900mA$	Initial Value $\pm 2V$			V
Output Voltage Temperature Coefficient	$K_t$	$T_C = -20^\circ$ to $+100^\circ C, I_{IN} = 7mA$	-	$\pm 2$	-	mV/°C
Saturation Voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 600mA$	-	-	0.4	V
	$V_{BE(sat)}$	$I_C = 3A, I_B = 600mA$	-	-	1.5	V
DC Current Gain	$h_{FE}$	$I_C = 1A, V_{CE} = 4V$	15	-	38	
Collector Cutoff Current	$I_{CEX}$	$V_{CE} = 850V, V_{BE} = 1.5V$	-	-	1	mA
Power Transistor Thermal Resistance	$R_{\theta JC}$	Between Junction and Case	-	1.8	-	°C/W
Switching Time	$t_s$	$I_C = 3A, I_{B1} = 500mA, I_{B2} = -500mA, R_L = 67\Omega$	-	-	11.0	$\mu s$
	$t_f$		-	-	0.5	$\mu s$

Note 2. Output voltage is determined by the ratio between the sensing winding “D” and the secondary winding “S”.

**Pin Connection Diagram**  
(Front View)

