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NTE7078 Integrated Circuit Hybrid Switching Voltage Regulator

Absolute Maximum Ratings:

Maximum Peak Input Voltage, V_{IN}	850V
Input Current, I_{IN}	
Continuous	6A
Pulse	12A
Power Dissipation ($T_C = +100^\circ\text{C}$), 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: $T_{opr} = +100^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	$V_{IN} = 220\text{V}$, $I_O = 700\text{mA}$, Note 2	113.5	115.0	116.5	V
Sensing Voltage (Fixed Voltage)	V_O	$I_{IN} = 7\text{mA}$	41.3	41.8	42.3	V
Line Regulation	Reg_{LINE}	$V_{IN} = 180\text{V}$ to 280V , $I_O = 700\text{mA}$	Initial Value $\pm 1\text{V}$			V
Load Regulation	Reg_{LOAD}	$V_{IN} = 220\text{V}$, $I_O = 400\text{mA}$ to 700mA	Initial Value $\pm 2\text{V}$			V
Output Voltage Temperature Coefficient	K_t	$T_C = -20^\circ$ to $+100^\circ\text{C}$, $I_{IN} = 7\text{mA}$	-	± 2	-	mV/°C
Saturation Voltage	$V_{CE(sat)}$	$I_C = 2\text{A}$, $I_B = 400\text{mA}$	-	-	0.4	V
	$V_{BE(sat)}$	$I_C = 2\text{A}$, $I_B = 400\text{mA}$	-	-	1.5	V
DC Current Gain	h_{FE}	$I_C = 1\text{A}$, $V_{CE} = -4\text{V}$	15	-	38	
Collector Cutoff Current	I_{CEX}	$V_{CE} = 850\text{V}$, $V_{BE} = -1.5\text{V}$	-	-	1	mA
Power Transistor Thermal Resistance	$R_{\theta JC}$	Between Junction and Case	-	1.8	-	°C/W
Switching Time	t_s	$I_C = 2\text{A}$, $I_{B1} = 400\text{mA}$, $I_{B2} = -400\text{mA}$, $R_L = 100\Omega$	-	-	11.0	μs
	t_f		-	-	0.5	μs

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

Pin Connection Diagram
(Front View)

