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NTE1895 Integrated Circuit Hybrid Switching Voltage Regulator

Absolute Maximum Ratings:

Maximum Peak Input Voltage, V_{IN}	550V
Input Current, I_{IN}	
Continuous	10A
Pulse	20A
Maximum Output Current ($V_O = 115V$), I_O	1.4A
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	$V_{IN} = 120V, I_O = 1.1A$, Note 2	108.5	110.0	111.5	V
Set Output Voltage	V_O	$I_{IN} = 7mA$	41.3	41.8	42.3	V
Line Regulation	Reg_{LINE}	$V_{IN} = 90V$ to $145V, I_O = 1.1A$	Initial Value $\pm 1V$			V
Load Regulation	Reg_{LOAD}	$V_{IN} = 120V, I_O = 0.6A$ to $1.1A$	Initial Value $\pm 2V$			V
Output Voltage Temperature Coefficient	K_t	$T_C = -20^\circ$ to $+100^\circ C, I_{IN} = 7mA$	-	± 2	-	mV/°C
Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 1A$	-	-	0.5	V
	$V_{BE(sat)}$	$I_C = 5A, I_B = 1A$	-	-	1.5	V
DC Current Gain	h_{FE}	$I_C = 1A, V_{CE} = 4V$	15	-	40	
Collector Cutoff Current	I_{CEX}	$V_{CE} = 550V, V_{BE} = 1.5V$	-	-	1	A
Power Transistor Thermal Resistance	$R_{\theta JC}$	Between Junction and Case	-	1.8	-	°C/W
Switching Time	t_s		-	-	12.0	μs
	t_f		-	-	0.7	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)

