ELECTRONICS, INC.
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NTE7075
Integrated Circuit
Module – 100W Offline Switching Regulator for Color TV

Features:

- The Oscillation Circuit is Self–Oscillating
- Functional Trimming Permits the Output Voltage to be Set with High Accuracy: ±1V
- No Feedback from the Secondary Side to the Primary Side
- Few External Components Required

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

AC Input Voltage, V_{ac}max . . . . . $280V_{rms}$
Maximum Output Power, $P_O$max
85 to 280VAC 100W
150 to 280VAC 130W
Junction Temperature, $T_J$max . . . . . +150°C
Operating Case Temperature, T_C . . . . . –30° to +105°C
Operating Temperature Range, T_{opr} . . . . . –10° to +65°C
Storage Temperature Range, T_{stg} . . . . . –30° to +105°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage Setting		V_{ac} = 200V, I_O = 0.5A, R_L = 230Ω	114	115	116	V
Line Regulation		V_{ac} = 85 to 280V, I_O = 0.8A, R_L = 144Ω	–	0.4	1.0	V
Load Regulation		V_{ac} = 200V, I_O = 0.4 to 0.87A	–	1.0	1.5	V
Input Power		V_{ac} = 200V, I_O = 0.87A, R_L = 132Ω	–	125	128	W
Output Ripple Voltage		V_{ac} = 200V, I_O = 0.87A, R_L = 132Ω	–	0.3	0.6	$V_{P–P}$
Temperature Coefficient		V_{ac} = 200V, I_O = 0.5A, R_L = 230Ω	–	7	–	mV/°C
Reduced Voltage Characteristic (1)		V_{ac} = 85V, I_O = 0.87A, R_L = 132Ω	112	113	–	V
Reduced Voltage Characteristic (2)		V_{ac} = 95V, I_O = 1.04A, R_L = 110Ω	112	113	–	V
Light Load Characteristic		V_{ac} = 200V, R_L = 4.7kΩ	–	119	130	V
TR5 Thermal Resistance	$R_{\Theta JC}$	Junction–Substrate	–	–	1.3	°C/W
Current Amplification Factor	h_{FE}	V_{CE} = 5V, I_C = 1.2A	10	–	–	
Saturation Voltage	$V_{CE(sat)}$	I_C = 6A, I_B = 1.2A	–	–	1.5	V
Shorted Load Handling Capability			280	–	–	V
Recommended Tightening Torque			6	–	10	kg

Equivalent Circuit



