

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: $\pm 1V$
- No Feedback from the Secondary Side to the Primary Side
- Few External Components Required

Absolute Maximum Ratings: ($T_A = +25^\circ C$ 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: ($T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage Setting		$V_{ac} = 200V, I_O = 0.5A, R_L = 230\Omega$	114	115	116	V
Line Regulation		$V_{ac} = 85 \text{ to } 280V, I_O = 0.8A, R_L = 144\Omega$	–	0.4	1.0	V
Load Regulation		$V_{ac} = 200V, I_O = 0.4 \text{ to } 0.87A$	–	1.0	1.5	V
Input Power		$V_{ac} = 200V, I_O = 0.87A, R_L = 132\Omega$	–	125	128	W
Output Ripple Voltage		$V_{ac} = 200V, I_O = 0.87A, R_L = 132\Omega$	–	0.3	0.6	V _{p-p}
Temperature Coefficient		$V_{ac} = 200V, I_O = 0.5A, R_L = 230\Omega$	–	7	–	mV/°C
Reduced Voltage Characteristic (1)		$V_{ac} = 85V, I_O = 0.87A, R_L = 132\Omega$	112	113	–	V
Reduced Voltage Characteristic (2)		$V_{ac} = 95V, I_O = 1.04A, R_L = 110\Omega$	112	113	–	V
Light Load Characteristic		$V_{ac} = 200V, R_L = 4.7k\Omega$	–	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

