ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

# 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**