ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

NTE1788
Integrated Circuit
TV Vertical Deflection Output Circuit

Description:

The NTE1788 is a monolithic integrated circuit in 7–Lead Staggared SIP type package and is designed for use as a high efficiency power booster for direct driving of vertical windings of TV yokes. It is intended for use in color and B & W television as well as in monitors and displays.

Features:

- Power Amplifier
- Flyback Generator
- Thermal Protection

Absolute Maximum Ratings:

Supply Voltage (Pin2), V_S 35V

Flyback Peak Voltage, V_5, V_6 . . . . . 60V

Voltage at Pin3, V_3 . . . . . $+V_S$

Amplifier Input Voltage, V_1, V_7 . . . . . $+V_S$

Output Peak Current, I_O

(Non Repetitive, t = 2ms) . . . . . –0.5A to +2.5A

(f = 50 or 60Hz, t ≤ 10μs) 3A

(f = 50 or 60Hz, t > 10μs) 2A

Pin3 DC Current ($V_5 < V_2$), I_3 . . . . . 100mA

Pin3 Peak to Peak Flyback Current (f = 50 or 60Hz, $t_{fly} \leq 1.5$ms), I_3 . . . . . 3A

Total Power Dissipation (T_C = +90°C), P_{tot} 20W

Junction Temperature Range, T_J . . . . . –40° to 150°C

Storage Temperature Range, T_{stg} . . . . . –40° to 150°C

Thermal Resistance, Junction to Case, $R_{\Theta JC}$ . . . . . +3°C/W

Electrical Characteristics: (V_S = 35V, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_2	I_3 = 0, I_5 = 0	–	8	16	mA
	I_6	I_3 = 0, I_5 = 0	–	16	36	mA
Amplifier Input Bias Current	I_1	V_1 = 1V, V_7 = 2V	–	–0.1	–1.0	μA
		V_1 = 2V, V_7 = 1V	–	–0.1	–1.0	μA
Pin3 Saturation Voltage to GND	V_{3L}	I_3 = 20mA	–	1.0	1.5	V
Quiescent Output Voltage	V_5	V_5 = 35V, R_a = 39kΩ	–	18	–	V
Output Saturation Voltage to GND	V_{5L}	I_5 = 1.2A	–	1.0	1.4	V
		I_5 = 0.7A	–	0.7	1.0	V
Output Saturation Voltage to Supply	V_{5H}	$-I_5$ = 1.2A	–	1.6	2.2	V
		$-I_5$ = 0.7A	–	1.3	1.8	V
Junction Temperature for Thermal Shut Down	T_j		–	140	–	°C

Pin Connection Diagram
(Front View)