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NTE1788 Integrated Circuit TV Vertical Deflection Output Circuit

Description:

The NTE1788 is a monolithic integrated circuit in 7-Lead Staggered 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 $60Hz$, $t \leq 10\mu s$)	3A
($f = 50$ or $60Hz$, $t > 10\mu s$)	2A
Pin3 DC Current ($V_5 < V_2$), I_3	100mA
Pin3 Peak to Peak Flyback Current ($f = 50$ or $60Hz$, $t_{fly} \leq 1.5ms$), I_3	3A
Total Power Dissipation ($T_C = +90^\circ C$), 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: ($V_S = 35V$, $T_A = +25^\circ C$ 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	$V_5 = 35V, R_a = 39k\Omega$	-	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	-	$^\circ C$

Pin Connection Diagram
(Front View)

