TEA 8172

TV Vertical Deflection Output Amplifier

Technology: Bipolar

Features

- Output peak current, I_5 = 2 A
- Flyback current, peak to peak, I_3 = 3 A
- Thermal protection, $T_j \geq 140°C$

Case: 7 leads special plastic case

Block diagram

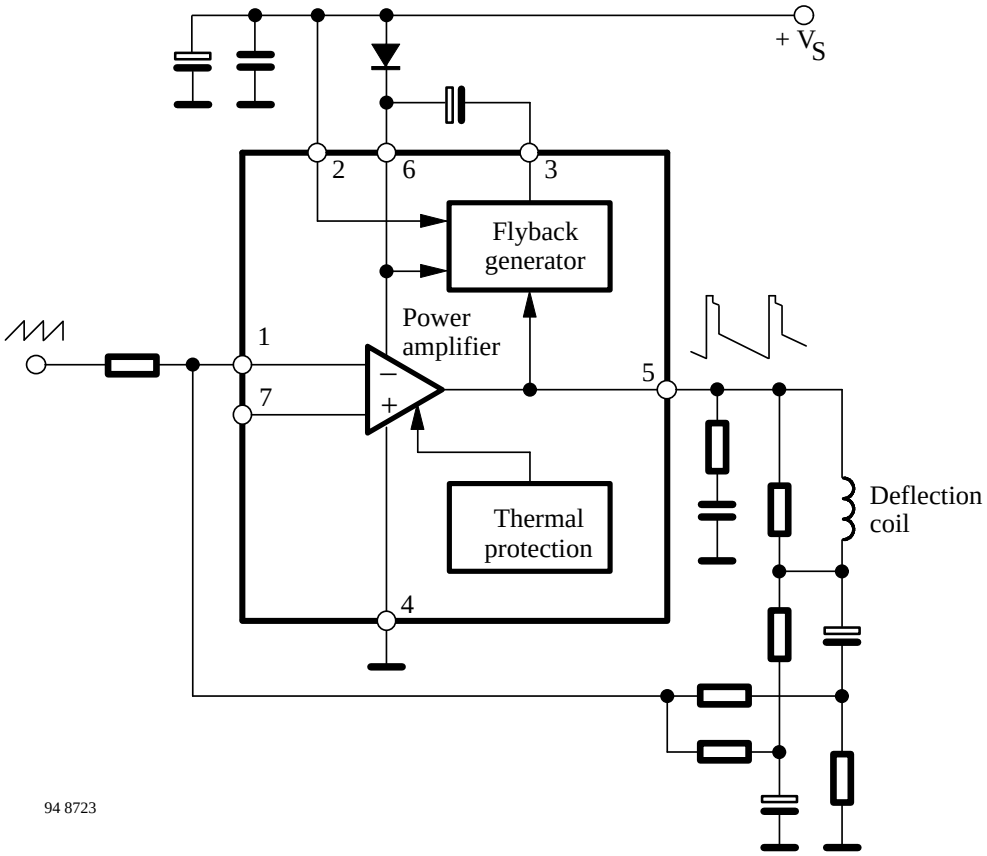


Figure 1 Block diagram

Pin Configuration

Pin	Function
1	Inverted input
2	Supply voltage
3	Flyback generator
4	Ground

Pin	Function
5	Output
6	Output stage supply
7	Non inverted input

Absolute Maximum Ratings

Parameters		Symbol	Value	Unit
Supply voltage	Pin 2	V_S	35	V
Flyback peak voltage	Pins 5 and 6	$V_{5, 6}$	60	V
Voltage at pin 3		V_3	V_S	V
Input voltage	Pins 1 and 7	$V_{1, 7}$	V_S	V
Output peak current: t = 2 ms, non repetitive f = 50/60 Hz, t ≤ 10 µs f = 50/60 Hz, t > 10 µs	Pin 5	I_O	 2.5 3.0 2.0	A
DC current at pin 3, $V_5 < V_2$		I_3	100	mA
Flyback current peak to peak, f= 50/60 Hz, $t_{fly} \leq 1.5$ ms	Pin 3	I_3	3	A
Power dissipation, T_{case} = 70°C		P_{tot}	20	W
Storage temperature		T_{stg}	– 40 to + 150	°C
Junction temperature		T_j	– 40 to + 150	°C

Thermal Resistance

Parameters	Symbol	Maximum	Unit
Junction case	R_{thJC}	3	K/W

Electrical Characteristics

V_S = 35 V, T_{amb} = 25°C, reference point Pin 4 (GND), see test circuits, unless otherwise specified

Parameters	Test Conditions / Pin	Symbol	Min	Typ	Max	Unit
Quiescent current	I_3 = 0, I_S = 0 Pin 2 I_3 = 0, I_S = 0 Pin 6 figure 2	I_2 I_6		8 16	16 36	mA
Input quiescent current	V_1 = 1 V Pin 1 figure 3	$-I_1$		0.1	1	µA
Saturation voltage to GND	I_3 = 20 mA Pin 3 figure 4	V_{3-4}		1	1.5	V
Output voltage	V_S = 35 V, R_r = 39 kΩ figure 5 Pin 5	V_5		18		V
Saturation voltage to GND	I_5 = 0.7 A Pin 5 I_5 = 1.2 A figure 6	V_{5-4}		0.7 1.0	1.0 1.4	V
Saturation voltage to supply	I_5 = – 0.7 A Pin 5 I_5 = – 1.2 A figure 7	V_{5-6}		1.3 1.6	1.8 2.2	V
Junction temperature for thermal shut down		T_j		140		°C

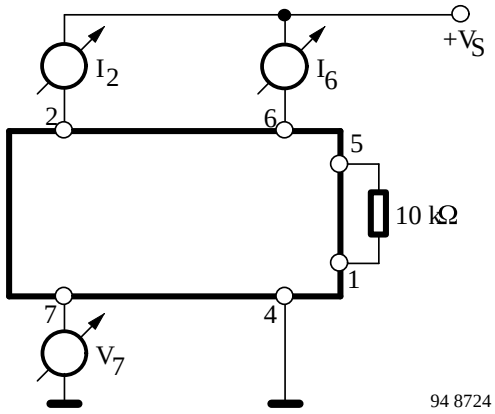


Figure 2

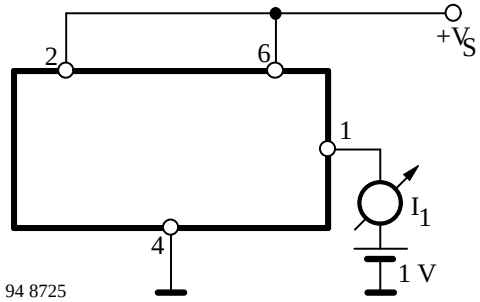


Figure 3

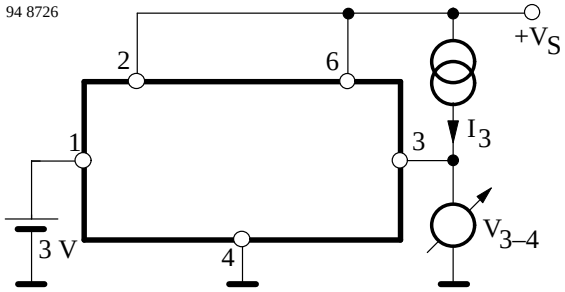


Figure 4

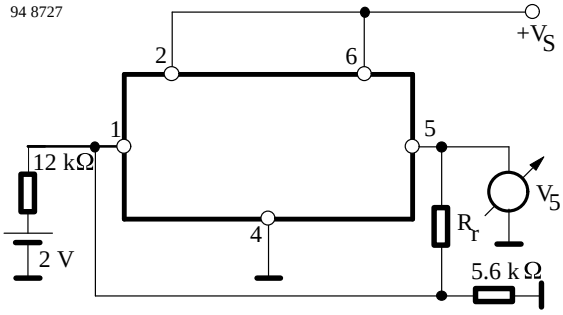


Figure 5

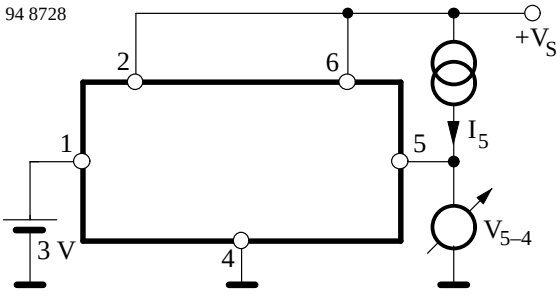


Figure 6

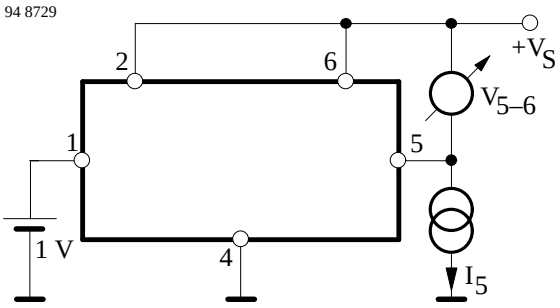
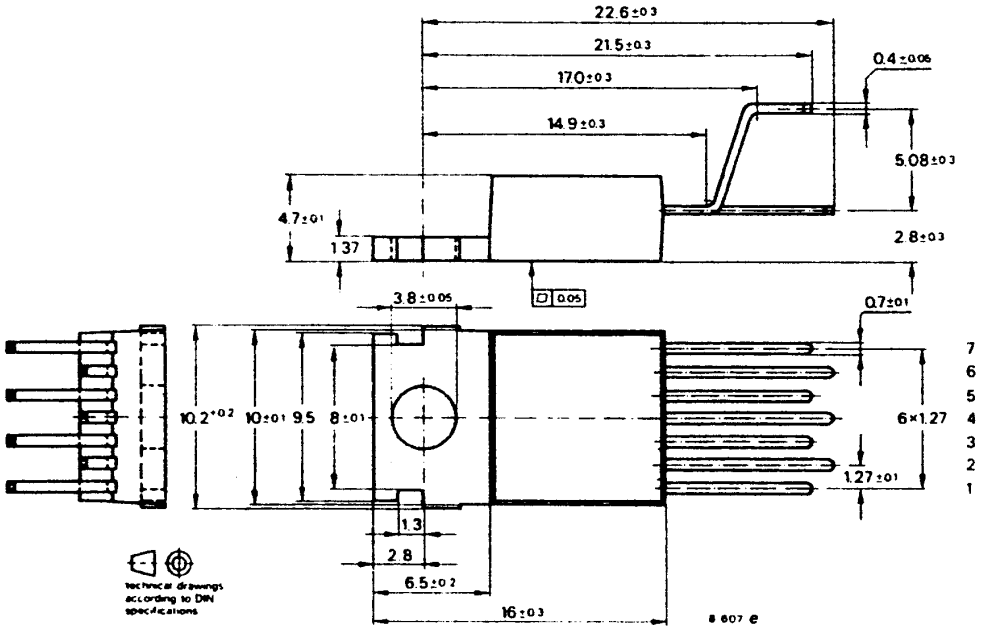


Figure 7

Dimensions in mm

7 leads special plastic case



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