



SANYO Semiconductors

DATA SHEET

LA7848 — Monolithic Linear IC TV Vertical Output + E/W Driver with Bus Control Support

Overview

The LA7848 is a vertical deflection plus EW driver IC for high image quality TV and CRT displays that supports the use of a bus control system signal-processing IC. The sawtooth waveform from the bus control system signal-processing IC can directly drive the deflection yoke (including the DC component). The LA7848 also provides a parabolic waveform output that can similarly be used to drive the diode modulator block.

Functions

- Built-in pump-up circuit for low power dissipation.
- Vertical output circuit.
- Excellent crossover characteristics.

Specifications

Maximum Ratings at $T_a = 25^\circ\text{C}$

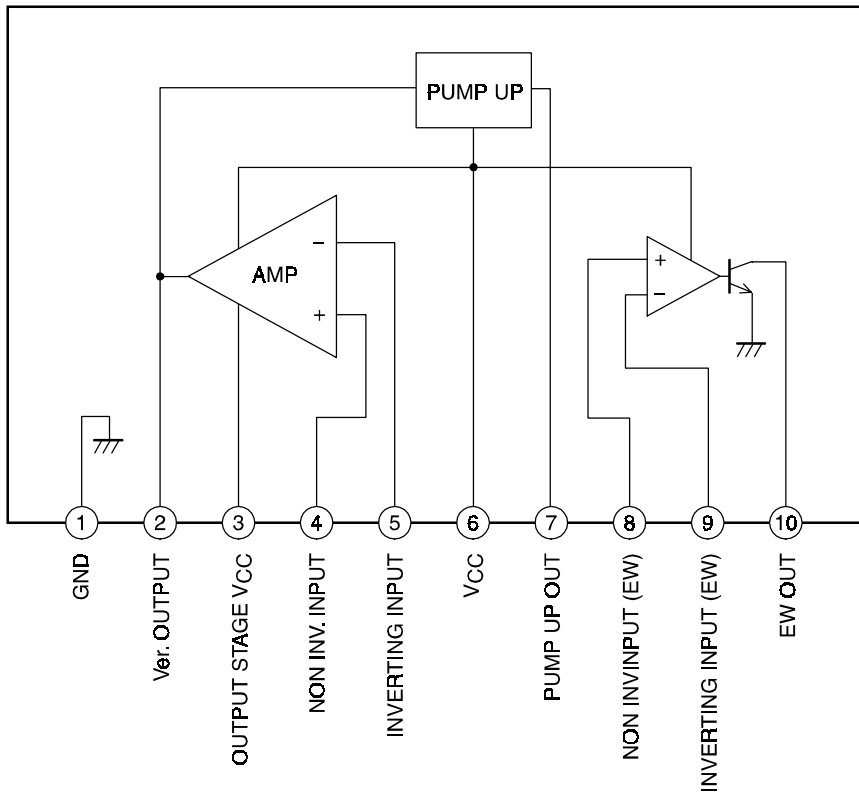
Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	+B6 max		45	V
Output block supply voltage	+B3 max		92	V
Allowable power dissipation	P_d max	Mounted on an arbitrarily large heat sink.	9	W
Deflection output current	I_2 max		-1.5 to +1.5	Ap-o
EW drive current *1	I_{10} max	$V_{10} = 1.5\text{V}$	+0.5	Ap-o
EW drive voltage *2	V_{10} max	$I_{10} = 10\mu\text{A}$	45	V
Thermal resistance	θ_{j-c}		4	$^\circ\text{C/W}$
Operating temperature	T_{opr}		-20 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

Note: The EW driver is used within the range that connects the two points *1 and *2.

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Block Diagram

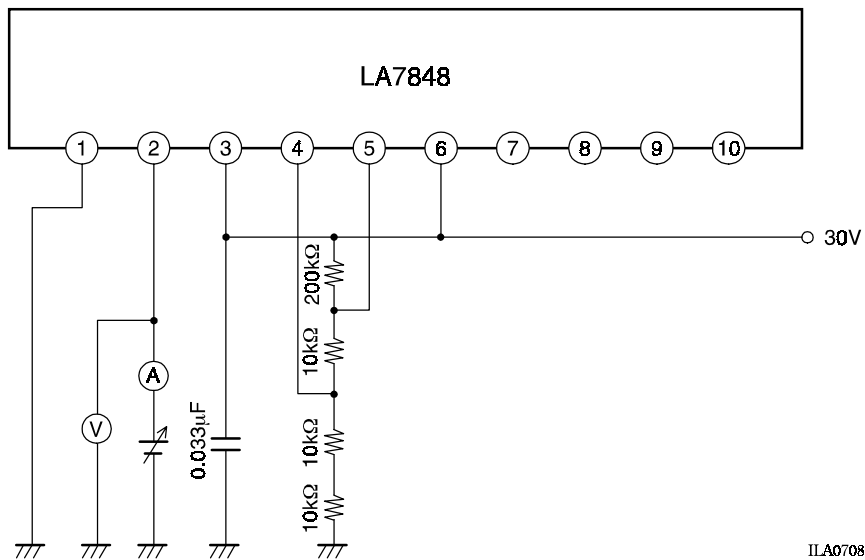


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Test Circuit Diagrams

1. Output saturation voltage (lower) Vsat2-1

Figure 1

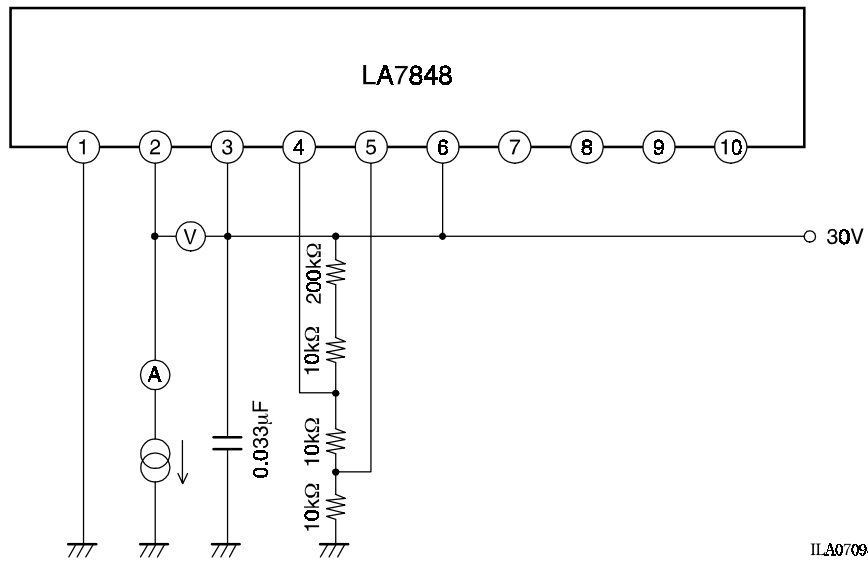


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In the circuit in figure 1, read the value shown by the voltage meter (V) when the current meter (A) reads 1.1A.

2. Output saturation voltage (upper) Vsat3-2

Figure 2

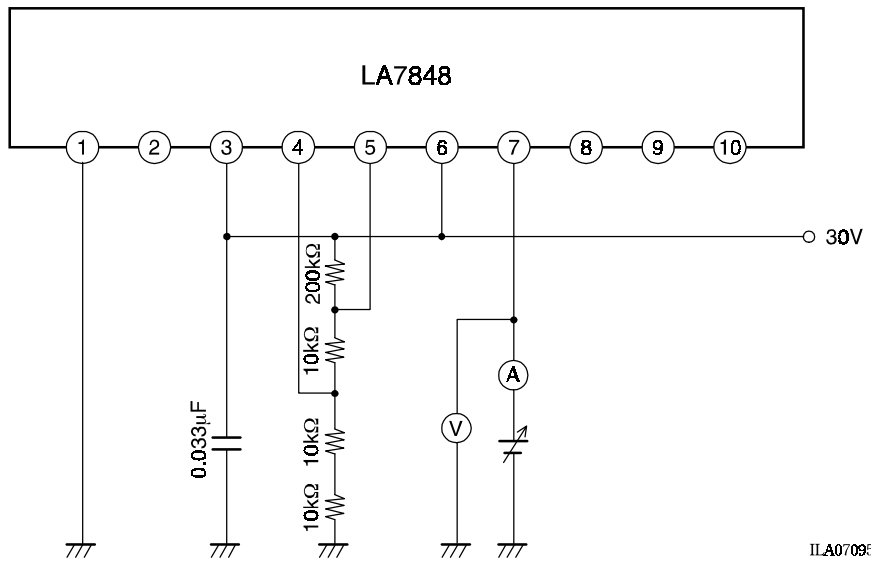


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In the circuit in figure 2 with the output from pin 2 absorbed by an electronic load and read the value shown by the voltage meter (V) when the current meter (A) reads 1.1A.

3. Charge pump charge saturation voltage Vsat7-1

Figure 3



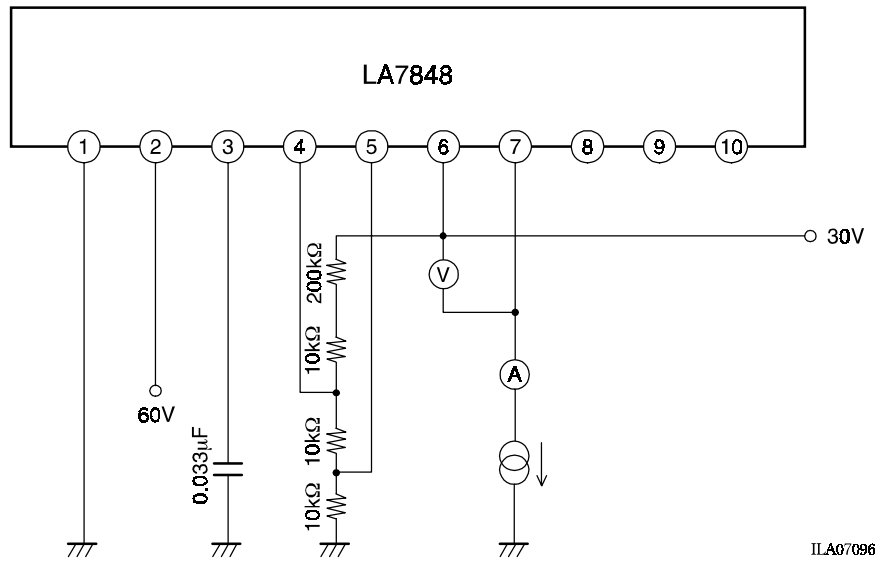
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In the circuit in figure 3, read the value shown by the voltage meter (V) when the current meter (A) reads 20mA.

LA7848

4. Charge pump discharge saturation voltage V_{sat6-7}

Figure 4



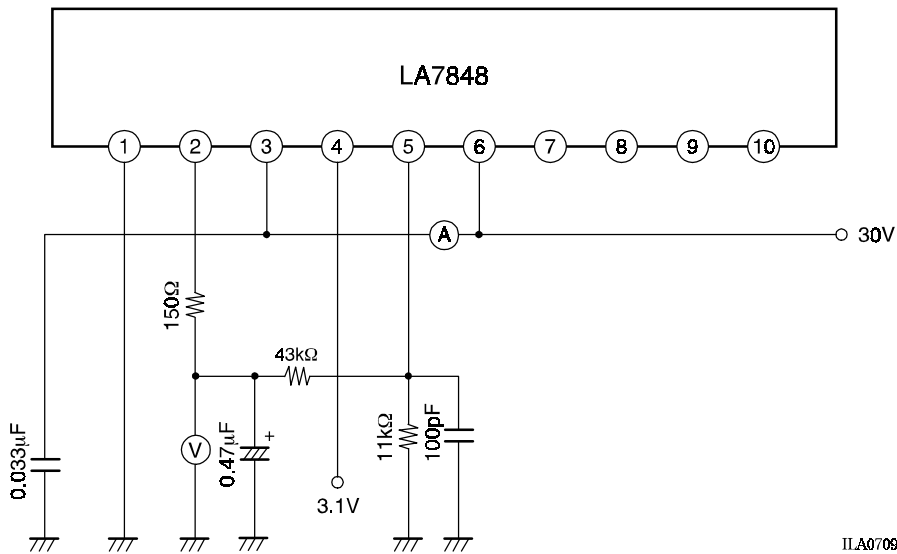
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In the circuit in figure 4 with the output from pin 7 absorbed by an electronic load, read the value shown by the voltage meter (V) when the current meter (A) reads 1.1A.

7. Idling current I_{dl}

8. Midpoint voltage V_{mid}

Figure 5



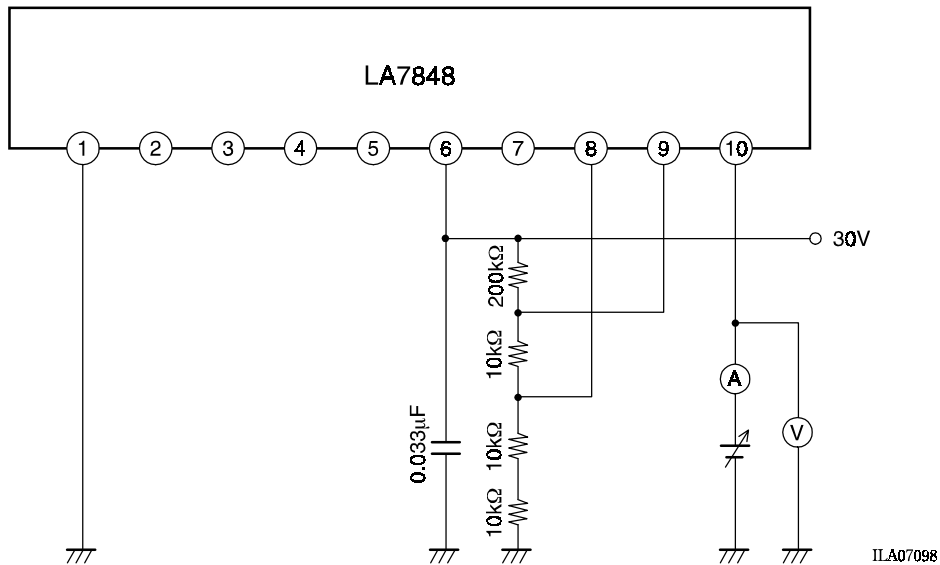
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In the circuit in figure 5, read the value shown by the current meter (A).

In the circuit in figure 5, read the value shown by the voltage meter (V).

9. EW drive saturation voltage V_{sat10-1}

Figure 6



In the circuit in figure 6, read the value shown by the voltage meter (V) when the current meter (A) reads 500mA.

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