Ordering number : ENN7877

SANYO Semiconductors
DATA SHEET

Monolithic Linear IC

LA7848 — 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 Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	+B6 max		45	V
Output block supply voltage	+B3 max		92	V
Allowable power dissipation	Pd max	Mounted on an arbitrarily large heat sink.	9	W
Deflection output current	I2 max		-1.5 to +1.5	Ap-o
EW drive current *1	I10 max	V10 = 1.5V	+0.5	Ap-o
EW drive voltage *2	V10 max	I10 = 10μA	45	V
Thermal resistance	θj-c		4	°C /W
Operating temperature	Topr		-20 to +85	°C
Storage temperature	Tstg		-40 to +150	°C

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

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Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	+B6		30	V
Operating supply voltage range	+B6op		16 to 43	V
Deflection output current	I2p-p		To 2.2	Ap-p
EW drive current	I10		To 0.4	Ap-o

Operating Characteristics at Ta = 25°C, +B = 30V

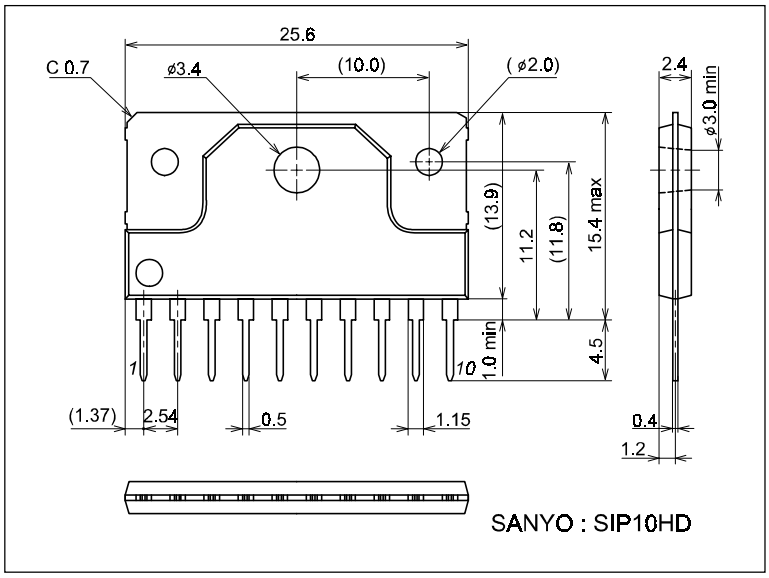
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Deflection output saturation voltage (lower)	Vsat2-1	I2 = 1.1A			1.5	V
Deflection output saturation voltage (upper)	Vsat3-2	I2 = -1.1A			3.2	V
Pump-up charge saturation voltage	Vsat7-1	I7 = 20mA			1.8	V
Pump-up discharge saturation voltage	Vsat6-7	I7 = -1.1A			3.2	V
Idling current	Idl		15		50	mA
Midpoint voltage	Vmid		14.0	15.0	16.0	V
EW drive saturation voltage	Vsat10-1	I10 = 500mA			1.5	V

Note: Current flowing into the IC is positive (+) and current flowing out is negative (-).

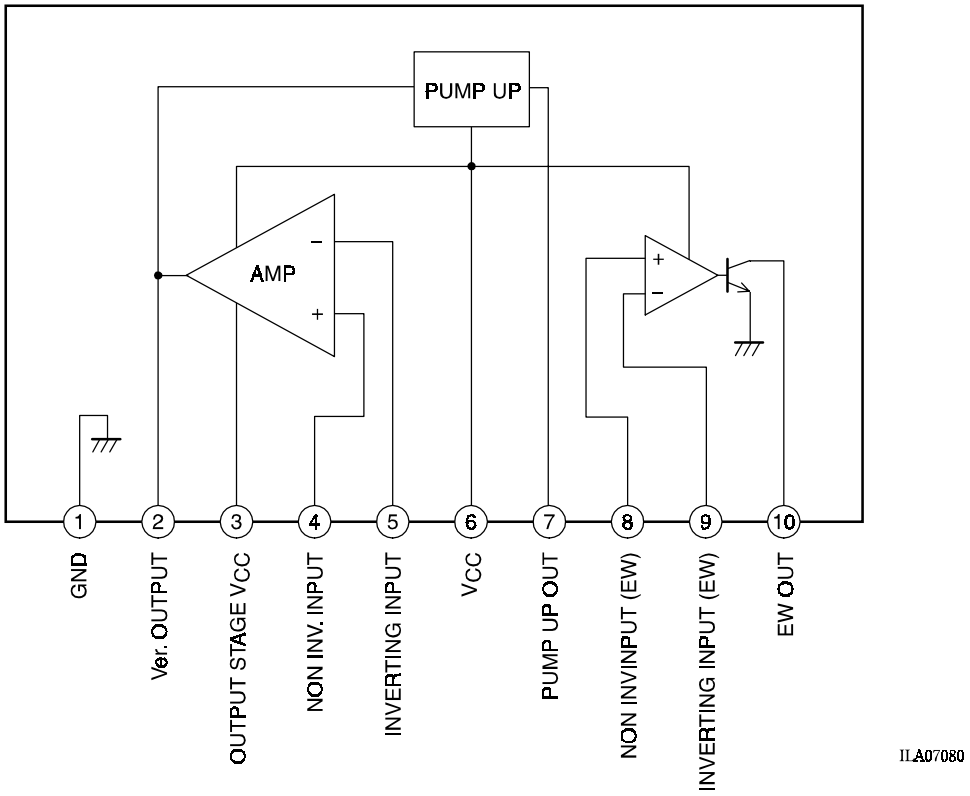
Package Dimensions

unit : mm

3248A



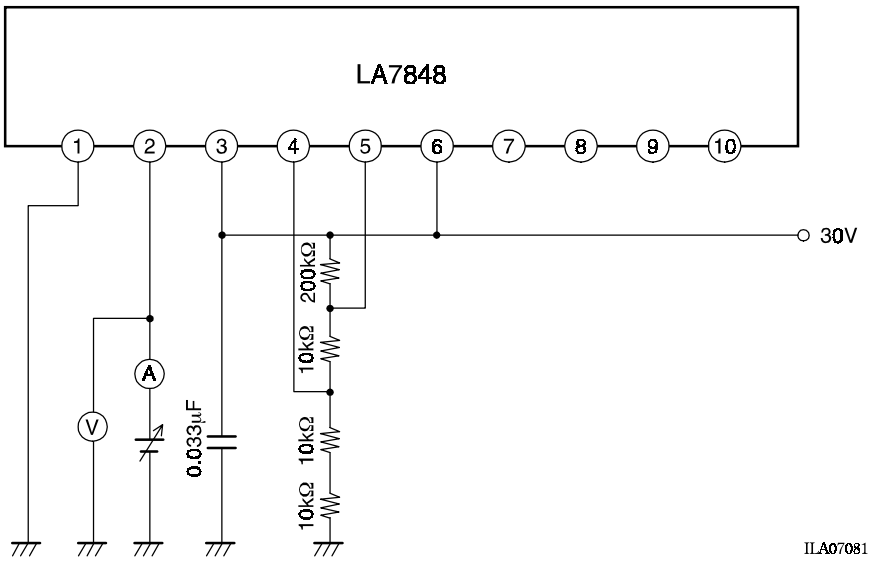
Block Diagram



Test Circuit Diagrams

1. Output saturation voltage (lower) Vsat2-1

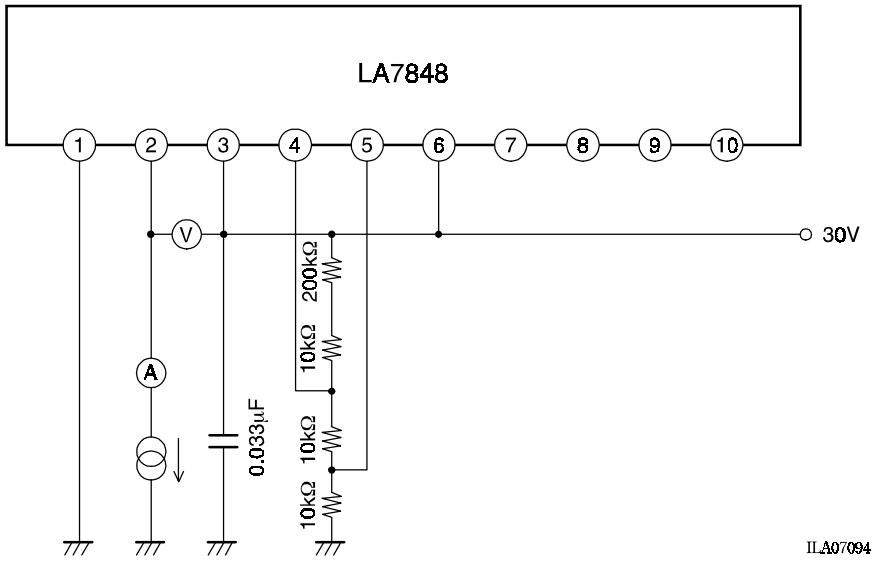
Figure 1



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

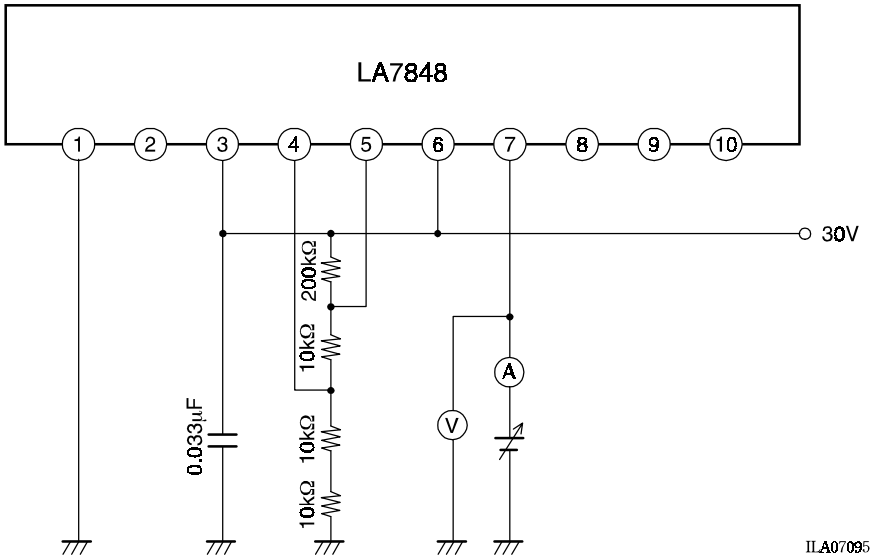
Figure 2



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

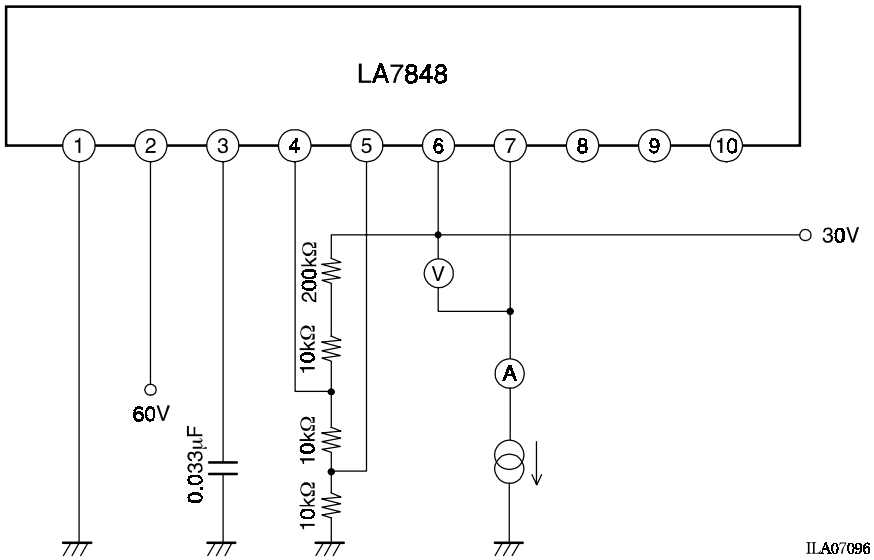
Figure 3



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

4. Charge pump discharge saturation voltage Vsat6-7

Figure 4

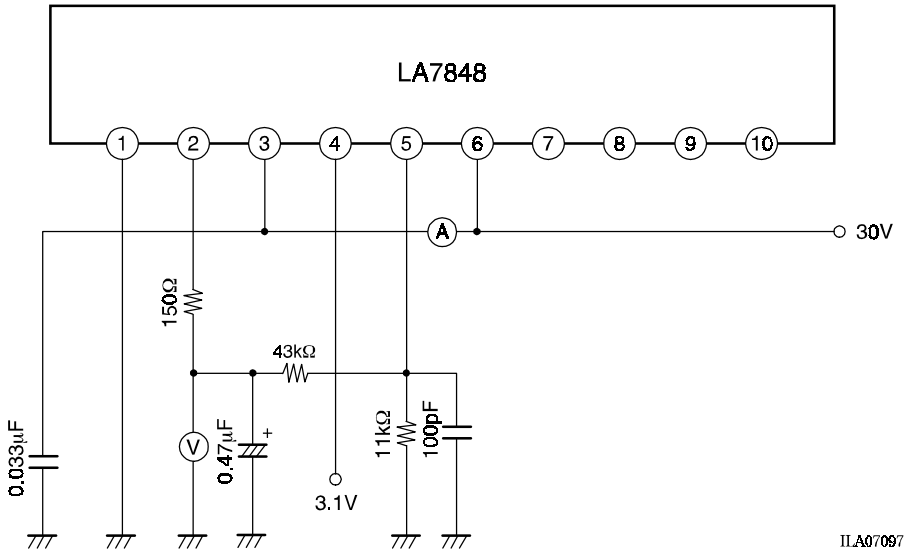


In the circuit in figure 4 with the output from pin 7 absorbed by an electronic load, read the value shown by the voltage meter (V) when the current meter (A) reads 1.1A.

7. Idling current Idl

8. Midpoint voltage Vmid

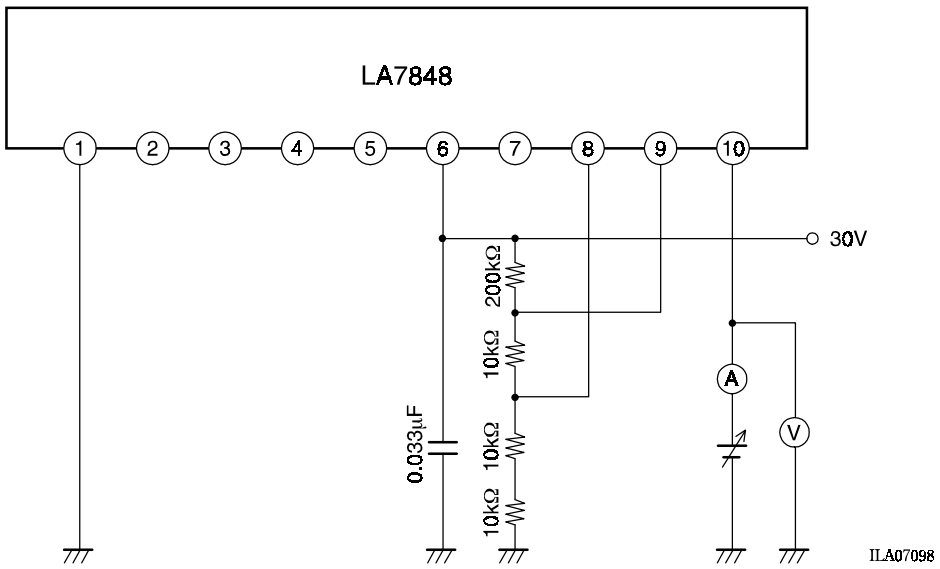
Figure 5



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 Vsat10-1

Figure 6



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