



SANYO Semiconductors

# DATA SHEET

## LA7846N — Monolithic Linear IC Vertical Output IC

### Overview

The LA7846N is a vertical deflection output IC for high-definition TV and CRT displays in systems that use a bus control system signal-processing IC. This IC can directly drive (including the DC component) the deflection yoke from the sawtooth wave output from the bus control system signal-processing IC. The color TV vertical deflection system adjustment function can be controlled from the bus system when this IC is used in conjunction with a SANYO LA768X or LA769XX series TV bus control system signal-processing IC.

The LA7846N provides a maximum deflection current of 3.0Ap-p, and thus is optimal for large diameter CRTs, and can drive the CRTs used in TV sets in the 33 to 37 inch range.

### Functions

- Low power operation achieved by using integrated charge pump circuit
- Vertical output circuit
- Thermal protection circuit
- Excellent crossover characteristics
- Supports DC coupling

### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Pump-up block supply voltage	+B7 max		40	V
Output block supply voltage	+B4 max		85	V
Deflection output current	I3 max		-1.9 to +1.9	Ap-o
Thermal resistance	θj-c		3.0	°C/W
Allowable power dissipation	Pd max	With an infinite heat sink.	20.0	W
Operating Temperature	Topr		-20 to +85	°C
Storage temperature	Tstg		-40 to +150	°C

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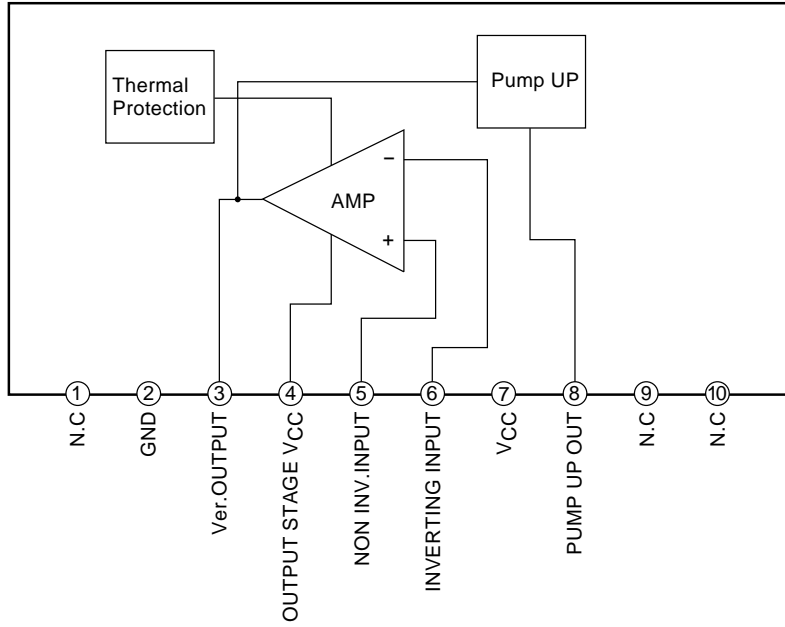
**SANYO Semiconductor Co., Ltd.**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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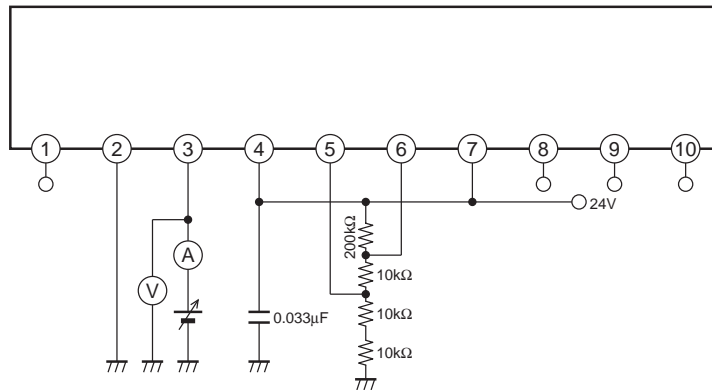
Block Diagram



Test Circuit

1. Output saturation voltage (lower)  $V_{sat}$  3-2

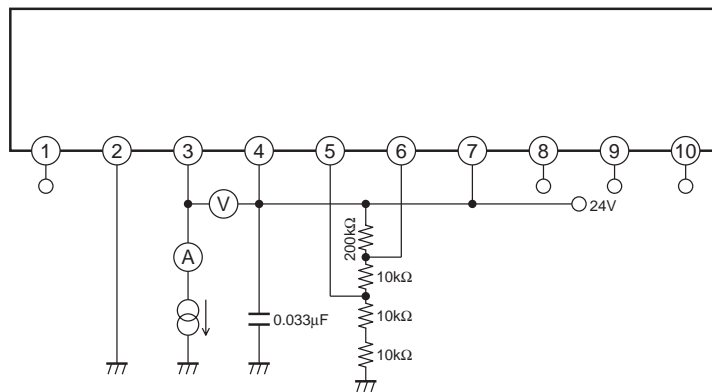
Fig.1



Read the reading on voltmeter (V) when ammeter (A) reads 1.5A is Fig.1.

2. Output saturation voltage (upper)  $V_{sat}$  4-3

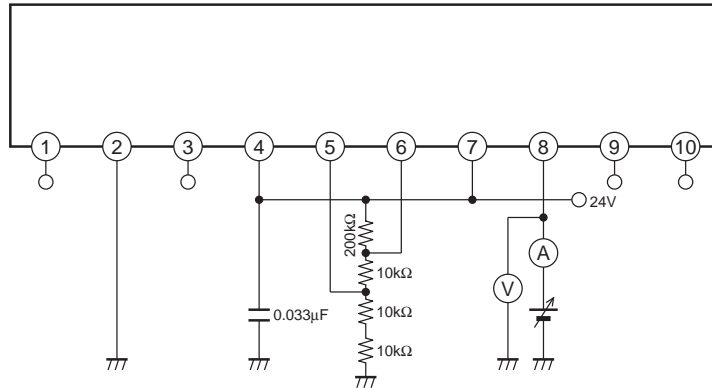
Fig.2



Absorb current from pin 3 into an electronics load and read the reading on voltmeter (V) when ammeter (A) reads 1.5A in Fig.2.

3. Pump-up charge saturation voltage  $V_{sat}$  8-2

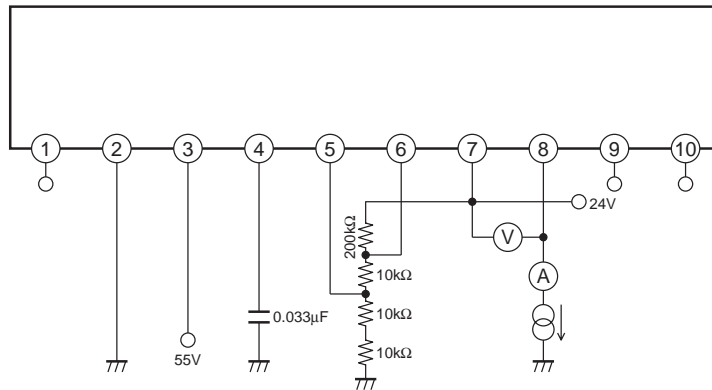
Fig.3



Read the reading on voltmeter (V) when ammeter (A) reads 20mA is Fig.3

4. Pump-up discharge saturation voltage  $V_{sat}$  7-8

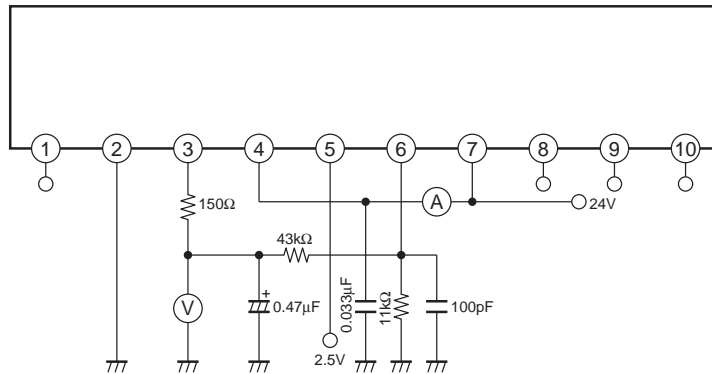
Fig.4



Absorb current from pin 7 into an electronics load and read the reading on voltmeter V when ammeter (A) reads 1.5A in Fig.4.

5. Idling current  $I_{DL}$

Fig.5



Read the reading on ammeter (A) is Fig.5

6. Midpoint voltage  $V_{MID}$

Read the reading on voltmeter (V) is Fig.5

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