Ordering number : EN5149D

SANYO Semiconductors
DATA SHEET

Monolithic Linear IC

LA7846N — 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

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

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended operating voltage	+B7		24	V
Operating voltage range	+B7 op		16 to 38	V
Deflection output current	I3 p-p		to 3.0	Ap-p

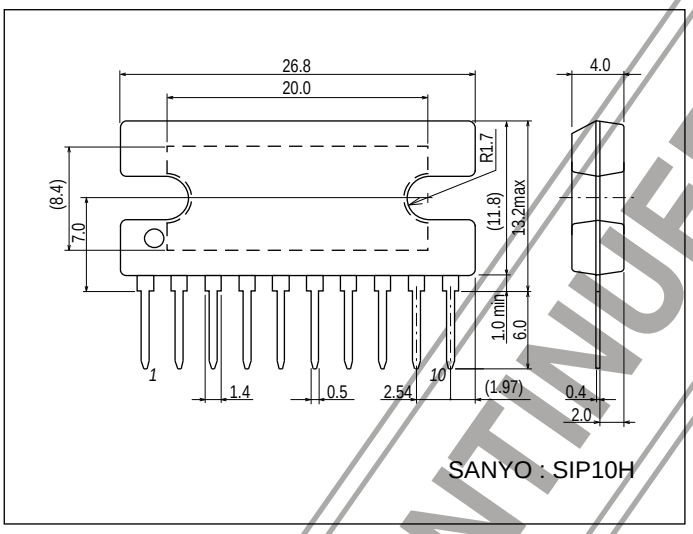
Electrical Characteristics at Ta = 25°C, +B7 = 24V

Parameter	Symbol	Conditions	Test circuit	Ratings			Unit
				min	typ	max	
Deflection output saturation Voltage (lower)	Vsat 3-2	I3 = 1.5A	1			1.7	V
Deflection output saturation Voltage (upper)	Vsat 4-3	I3 = -1.5A	2			3.9	V
Pump-up charge saturation voltage	Vsat 8-2	I8 = 20mA	3			1.8	V
Pump-up discharge saturation voltage	Vsat 7-8	I8 = -1.5A	4			3.7	V
Idling current	I_{DL}		5	35		70	mA
Midpoint voltage	V_{MID}		5	11.0	12.0	13.0	V

Package Dimensions

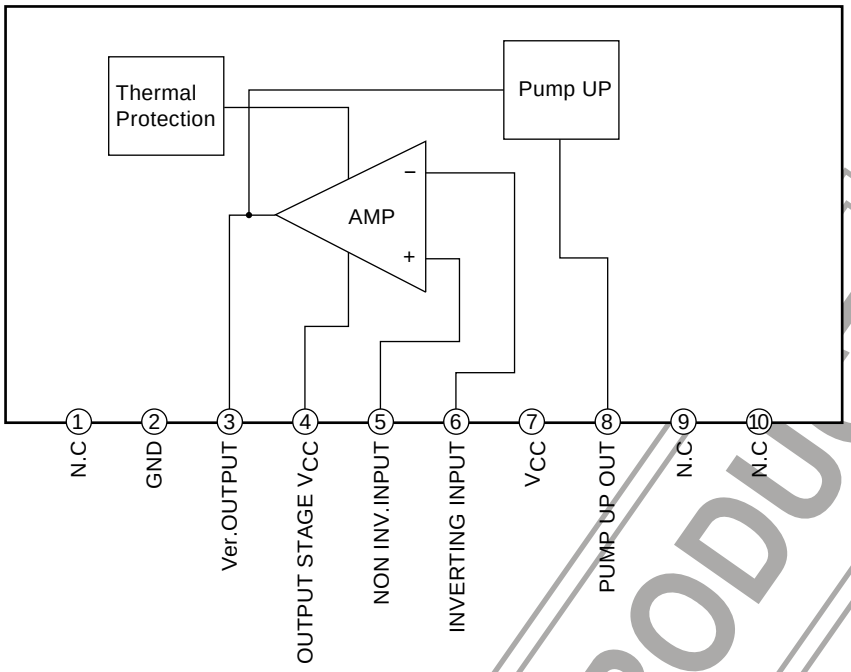
unit : mm (typ)

3024B



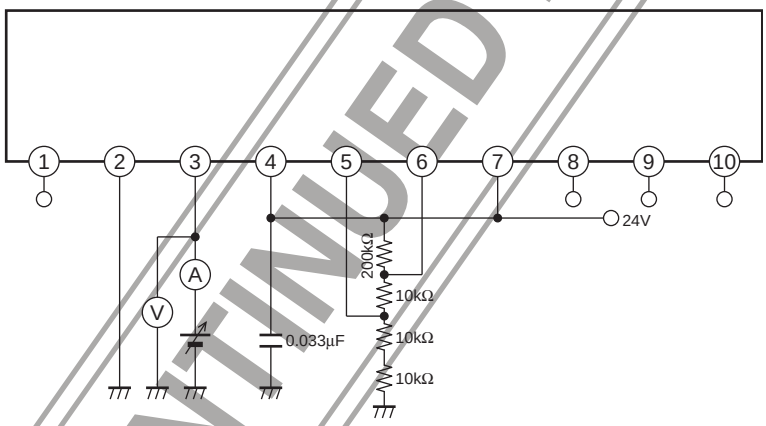
SANYO : SIP10H

Block Diagram



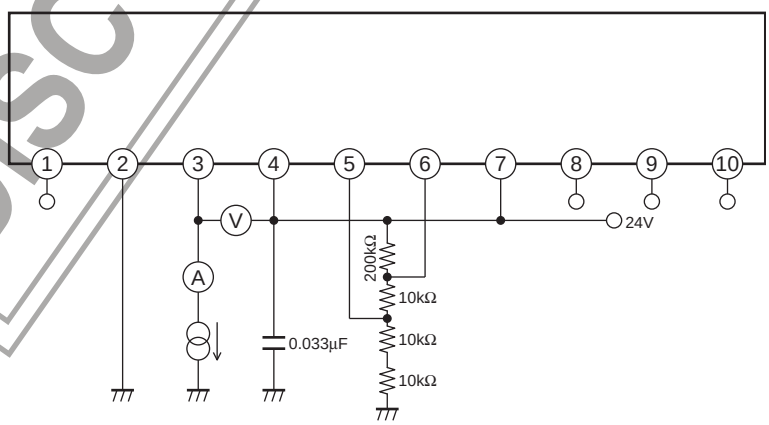
Test Curcuit

1. Output saturation voltage (lower) Vsat 3-2
   Fig.1



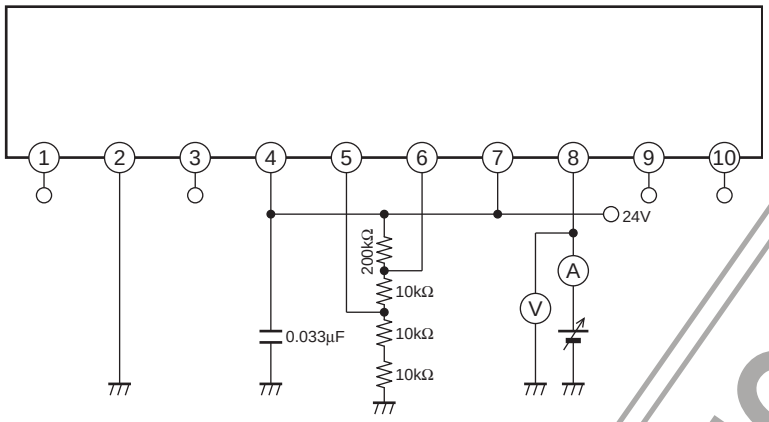
Read the reading on voltmeter (V) when ammeter (A) reads 1.5A is Fig.1.

2. Output saturation voltage (upper) Vsat 4-3
   Fig.2



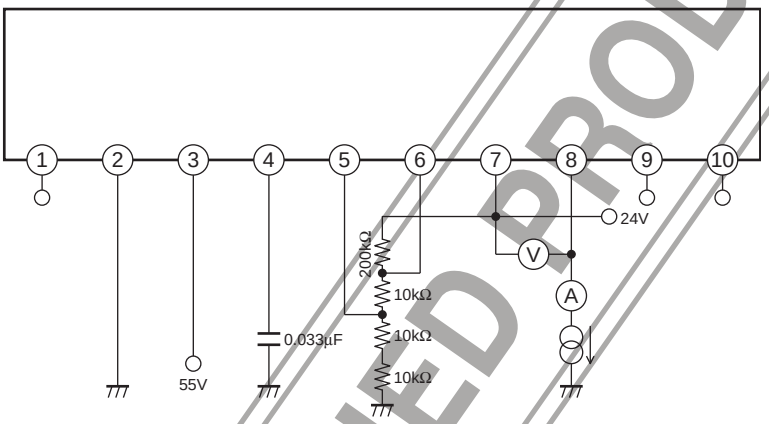
Absorb current from pin 3 into an electronics load and read the reading on voltmeter (V) when ammeter (A) reads 1.5A in Fig.2.

3. Pump-up charge saturation voltage Vsat 8-2
Fig.3



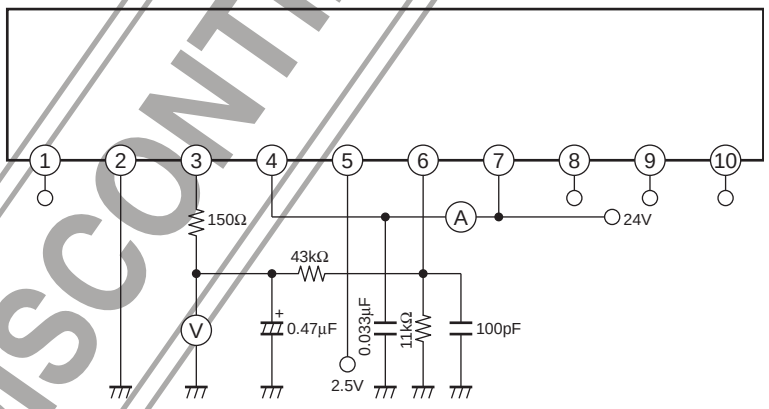
Read the reading on voltmeter (V) when ammeter (A) reads 20mA is Fig.3

4. Pump-up discharge saturation voltage Vsat 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

This catalog provides information as of November, 2007. Specifications and information herein are subject to change without notice.