



LA7846N

Vertical Deflection Output Circuit

Overview

The LA7846N is a vertical deflection output IC for TVs and CRT displays with excellent image quality that use a BUS control system signal processing IC. This IC can drive the direct (even including a DC component) deflection yoke with the sawtooth wave output from the BUS control system signal processing IC. When used in conjunction with Sanyo's LA7615 series of BUS control system signal processing ICs for TVs, this IC can process all color television signal system functions through the BUS system. Because the maximum deflection current is 3.0 Ap-p, the LA7846N is suited for large screen sets, being capable of driving screens ranging from 33 inches to 37 inches.

Features

- Low power dissipation due to built-in pump-up circuit
- Vertical output circuit
- Thermal protection circuit built in
- Excellent crossover characteristics
- DC coupling possible

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC7} max		40	V
Output block supply voltage	V_{CC4} max		85	V
Deflection output current	I_3 max		-1.9 to +1.9	Ap-o
Thermal resistance	θ_{j-c}		3.0	$^\circ\text{C}/\text{W}$
Allowable power dissipation	P_d max	With arbitrarily large heat sink fins	20	W
Operating temperature	T_{opr}		-20 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

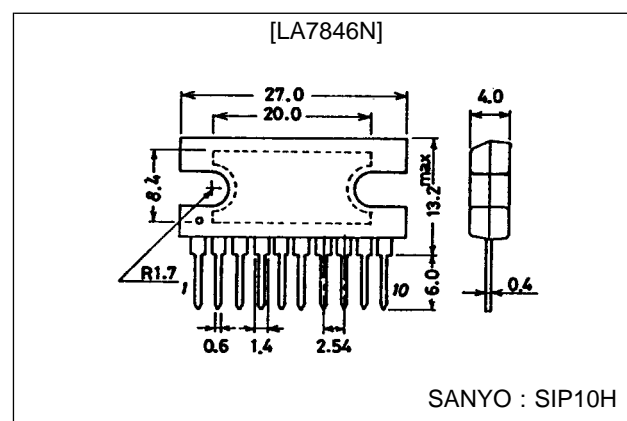
Operating Conditions at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC7}		24	V
Operating supply voltage range	V_{CC7} op		16 to 38	V
Recommended deflection output current	I_3 p-p		to 3.0	Ap-p

Package Dimensions

unit : mm

3024A-SIP10H

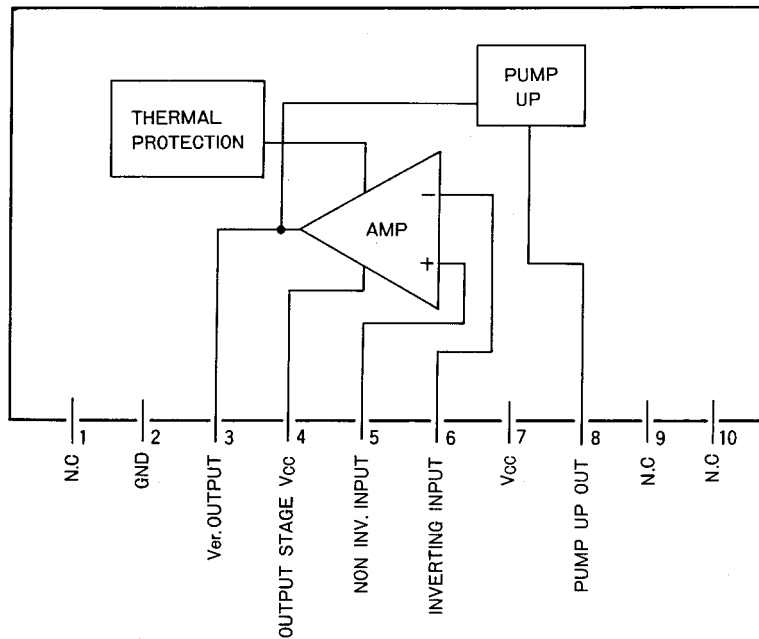


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Operating Characteristics at $T_a = 25\text{ }^\circ\text{C}$, $V_{CC7} = 24\text{ V}$

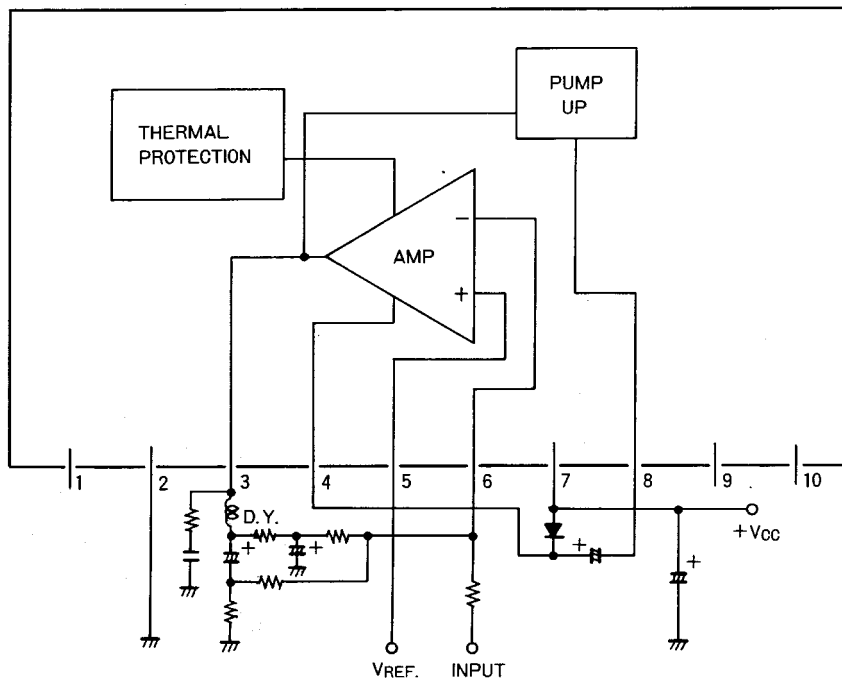
Parameter	Symbol	Conditions	min	typ	max	Unit
Pump-up charge saturation voltage	V_{S8-2}	$I_8 = 20\text{ mA}$			1.8	V
Pump-up discharge saturation voltage	V_{S7-8}	$I_8 = -1.5\text{ A}$			3.7	V
Deflection output saturation voltage (lower)	V_{S3-2}	$I_3 = 1.5\text{ A}$			1.7	V
Deflection output saturation voltage (upper)	V_{S4-3}	$I_3 = -1.5\text{ A}$			3.9	V
Idling current	I_{DL}		35		70	mA
Midpoint voltage	V_{MID}		11.0	12.0	13.0	V

Block Diagram



Sample Application Circuit

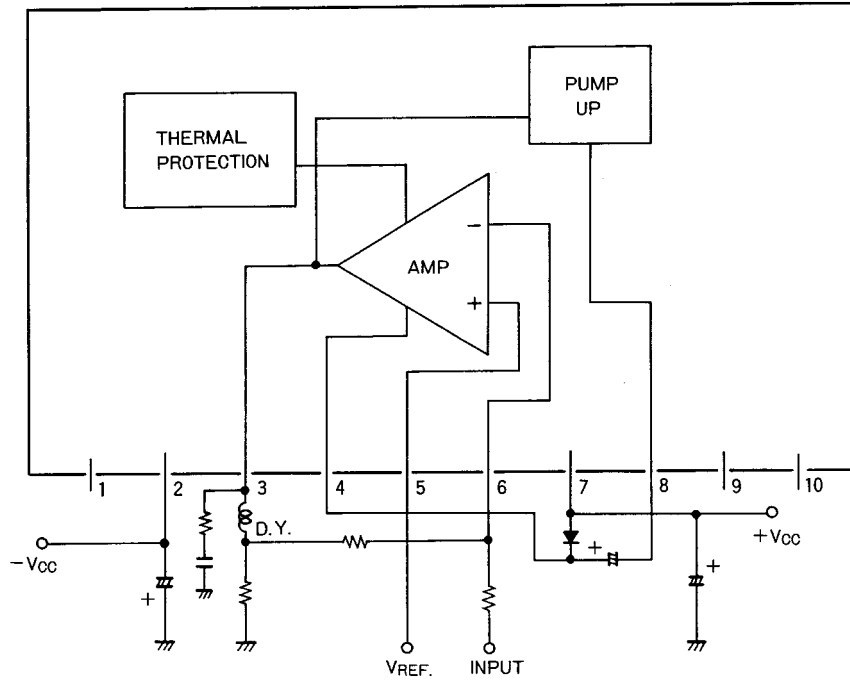
(Single power supply)



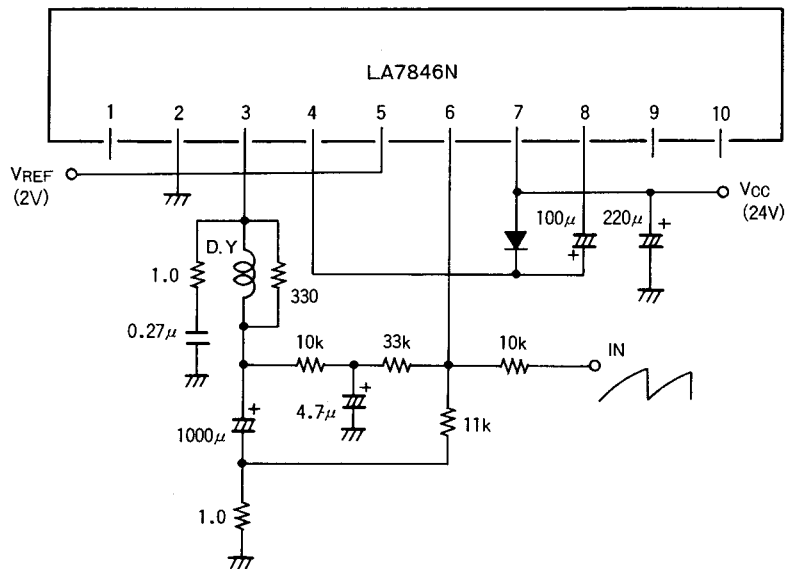
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Sample Application Circuit

(Double power supply)



Sample Application Circuit



Unit (resistance: Ω , capacitance: F)

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