

SANYO Semiconductors DATA SHEET



Monolithic Linear IC TV and CRT Display Vertical Output IC with Bus Control Support

Overview

The LA78040N is a vertical deflection output 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). Color TV vertical deflection system adjustment functions can be controlled over a bus system by connecting the LA78040N to a Sanyo LA768X series or LA769XX series bus control system signal-processing IC.

Since the LA78040N provides a maximum deflection current of 1.7Ap-p, it is optimal for small and medium size CRTs.

Functions

- Built-in pump-up circuit for low power dissipation.
- Vertical output circuit.
- Thermal protection circuit.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Pump-up block supply voltage	+B2 max		34	V
Output block supply voltage	+B6 max		70	V
Allowable power dissipation	Pd max	Mounted on an arbitrarily large heat sink.	9	W
Deflection output current	I5 max		-1.4 to +1.4	Ap-o
Thermal resistance	өј-с		3	°C/W
Operating temperature	Topr		-20 to +85	°C
Storage temperature	Tstg		-40 to +150	°C

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	+B2		24	V
Operating supply voltage range	+B2op		16 to 33	V
Deflection output current	І5р-р		To 1.8	Ар-р

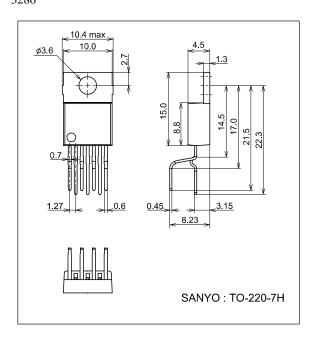
Operating Characteristics at $Ta = 25^{\circ}C$, +B2 = 24V

Parameter	Symbol	Conditions	Ratings			11-21
			min	typ	max	Unit
Deflection output saturation voltage (lower)	Vsat5-4	I5 = 0.9A			1.3	V
Deflection output saturation voltage (upper)	Vsat6-5	I5 = -0.9A			3.2	V
Pump-up charge saturation voltage	Vsat3-4	13 = 20mA			1.8	V
Pump-up discharge saturation voltage	Vsat2-3	l3 = 0.9A			3.0	V
Idling current	ldl		20		50	mA
Midpoint voltage	Vmid		11.0	12.0	13.0	V

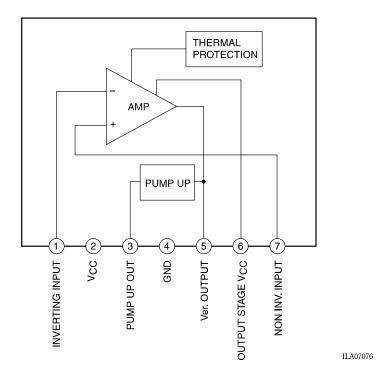
Note: Current flowing into the IC is positive (+) and current flowing out is negative (-).

Package Dimensions

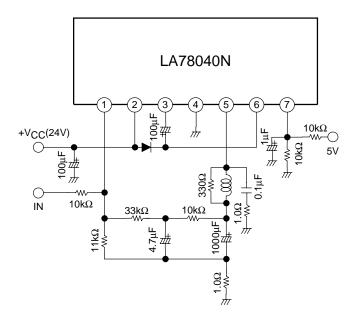
unit : mm 3286



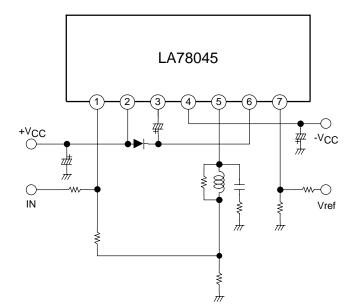
Block Diagram



Application Circuit Example 1 (Single power supply)



Application Circuit Example 2 (Dual power supply)



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