



SANYO Semiconductors

# DATA SHEET

Monolithic Linear IC

## LA78040B — The Vertical Deflection Output IC With Bus Control Support for TVs and CRT Display

### Overview

The LA78040B 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 saw tooth wave output from the BUS control system signal processing IC.

### Functions

- 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  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Pump-up block supply voltage	$V_{CC2 \text{ max}}$		34	V
Output block supply voltage	$V_{CC6 \text{ max}}$		70	V
Allowable power dissipation	$P_d \text{ max}$	Mounted on an arbitrarily large heat sink.	9	W
Deflection output current	$I_5 \text{ max}$		-1.4 to +1.4	Ap-o
Thermal resistance	$\theta_j\text{-c}$		3	$^\circ\text{C/W}$
Operating temperature	$T_{opr}$		-20 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to +150	$^\circ\text{C}$

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# LA78040B

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC2}$ max		24	V
Operating supply voltage range	$V_{CC2}$ op		16 to 33	V
Deflection output current	$I_{5p-p}$		to 1.8	Ap-p

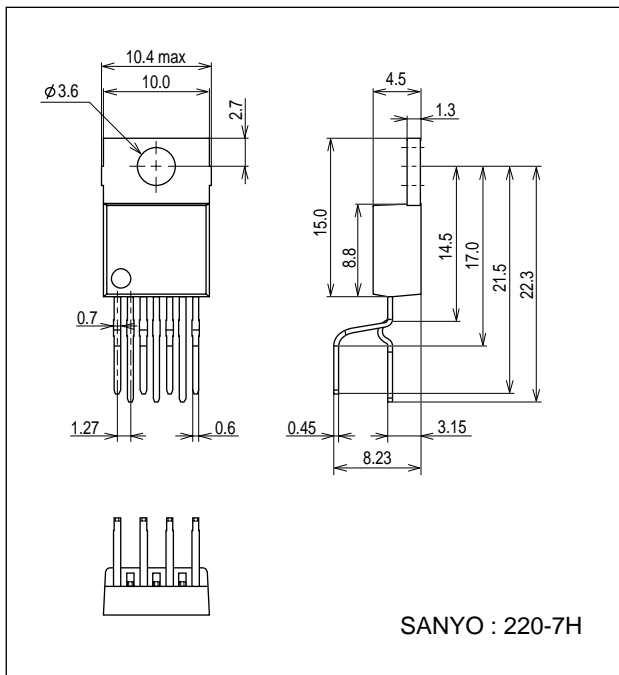
## Operating Characteristics at $T_a = 25^\circ\text{C}$ , $V_{CC2} = 24\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Deflection output saturation voltage (lower)	$V_{sat5-4}$	$I_5 = 0.9\text{A}$			1.3	V
Deflection output saturation voltage (upper)	$V_{sat6-5}$	$I_5 = -0.9\text{A}$			3.2	V
Pump-up charge saturation voltage	$V_{sat3-4}$	$I_3 = 20\text{mA}$			1.8	V
Pump-up discharge saturation voltage	$V_{sat2-3}$	$I_3 = -0.9\text{A}$			3.0	V
Idling current	$I_{dl}$		20		50	mA
Midpoint voltage	$V_{mid}$		11.0	12.0	13.0	V

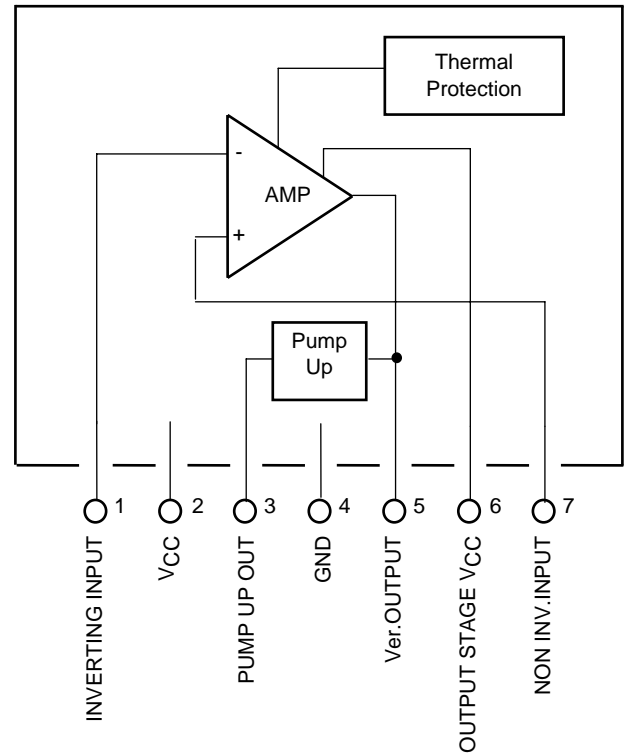
Note: Current flowing into the IC is positive (+) and current flowing out is negative (-).

## Package Dimensions

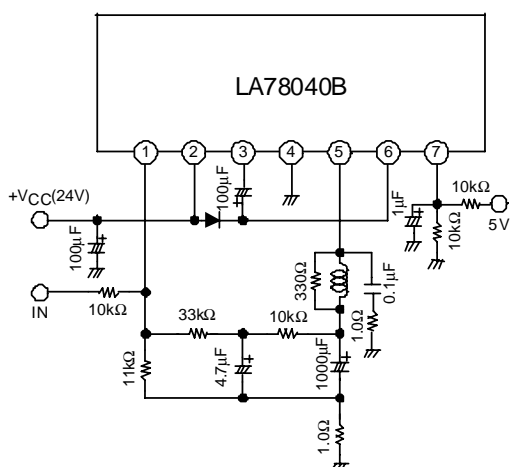
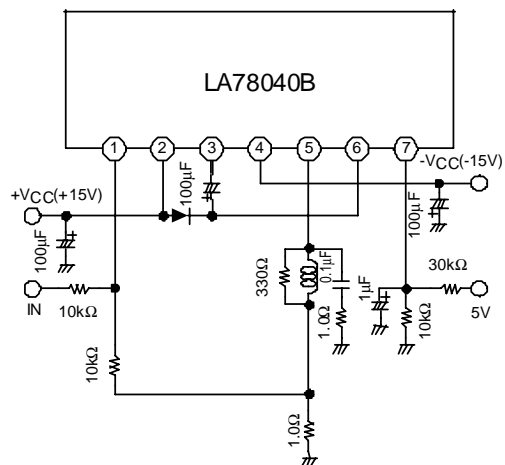
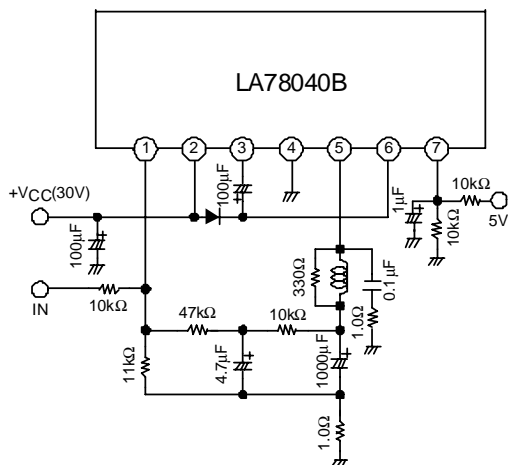
unit : mm (typ)  
3286



## Pin Connections and Functional Block Diagram



## Sample Application Circuits



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