



## Color TV Vertical Deflection Output Circuit

### Overview

The LA7832 is a monolithic linear IC for vertical deflection output for small and mid-sized color television sets that requires few external components and dissipates little power. When used in conjunction with the LA7620 series of video chroma deflection ICs, the LA7800 series of deflection ICs, and the LA7850 series of display ICs, it is possible to create a stable and compact vertical output deflection circuit.

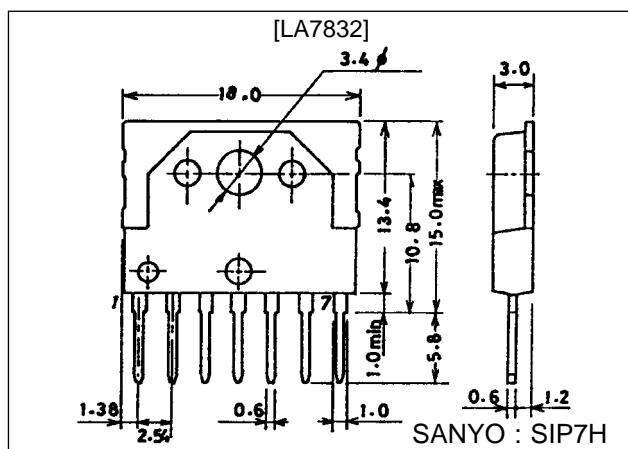
### Features

- High output.
- Low power dissipation due to built-in pump-up circuit.
- Few external components needed.
- Thermal protection circuit built in.

### Package Dimensions

unit : mm

3075-SIP7H



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_6$ max	(Pump-up block)	30	V
	$V_3$ max	(Output block)	62	V
Deflection output current	$I_2$ max		$\pm 1.5$	Ap-o
Allowable power dissipation	$P_d$ max	With arbitrarily large heat sink	8	W
Operating temperature	$T_{opr}$		-20 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to +150	$^\circ\text{C}$
Thermal resistance	$\theta_{j-c}$		4	$^\circ\text{C}/\text{W}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_6$		24	V
Operating supply voltage range	$V_6$		10 to 27	V
Deflection output current	$I_{2p-p}$		to 1.8	Ap-p

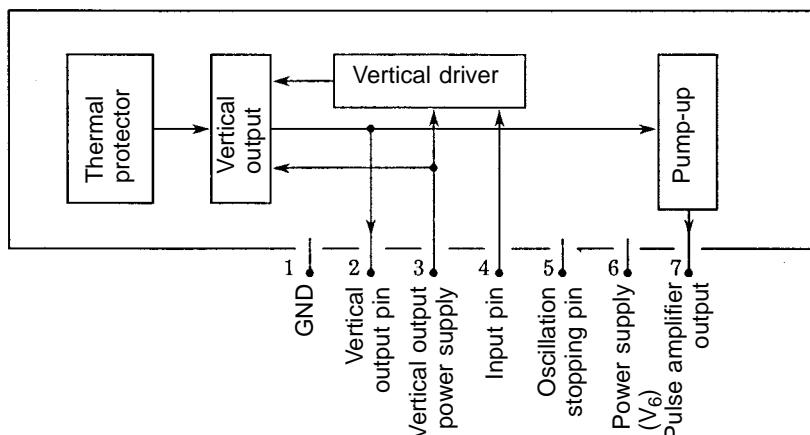
#### Operating Characteristics at $T_a = 25^\circ\text{C}$ , $V_6 = 24\text{ V}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Deflection output saturation voltage (lower)	$V_{(sat)2-1}$	$I_2 = +0.9\text{ A}$			1.2	V
Deflection output saturation voltage (upper)	$V_{(sat)3-2}$	$I_2 = -0.9\text{ A}$			3.2	V
Pump-up charge saturation voltage	$V_{(sat)7-1}$	$I_7 = +20\text{ mA}$			1.8	V
Pump-up discharge saturation voltage	$V_{(sat)6-7}$	$I_7 = -0.9\text{ A}$			3.0	V
Idling current	$I_{DL}$		30		60	mA
Midpoint voltage	$V_{MID}$		9.5	10.5	11.5	V

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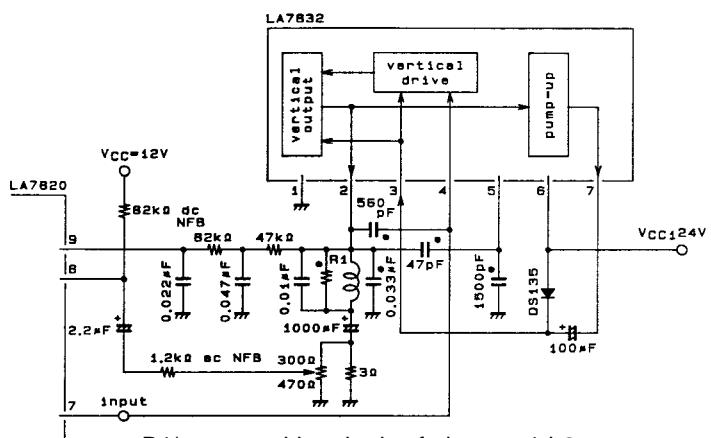
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## Pin Assignment and Functional Block Diagram



## Sample Application Circuit

LA7820 vertical output

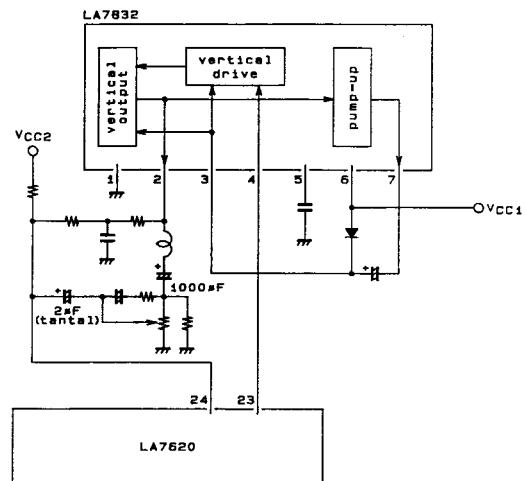


R1\* = several hundreds of ohms to 1 kΩ  
CR used against oscillation

The combination depends on the oscillation mode.

## Sample Application Circuit

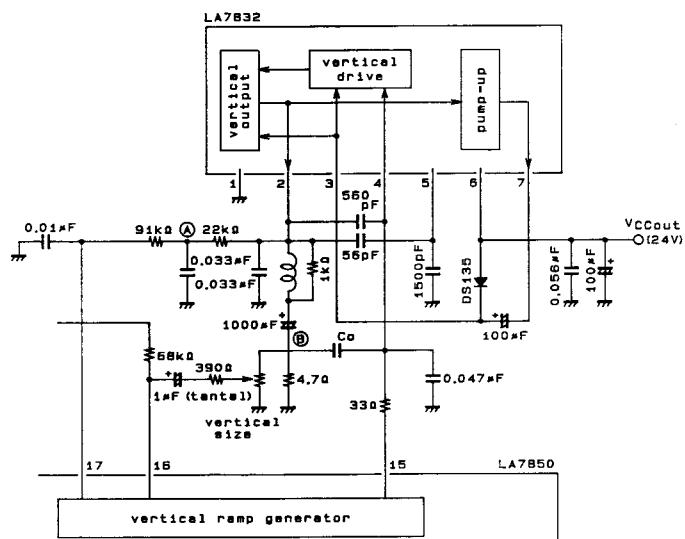
LA7620 vertical output



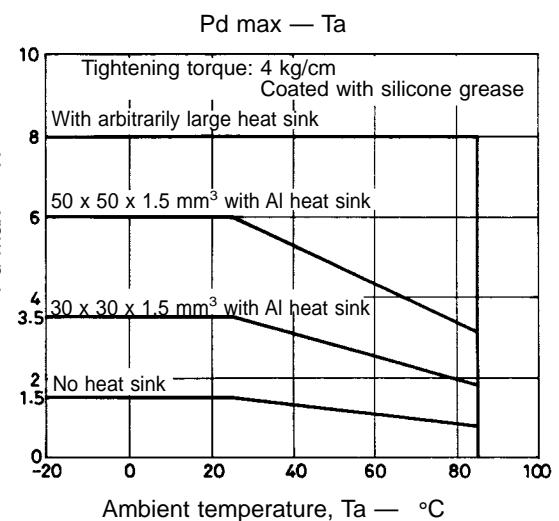
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## Sample Application Circuit

LA7850 vertical output



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