



LA7832 — Monolithic Linear IC

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.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_G max	(Pump-up block)	30	V
	V_3 max	(Output block)	62	V
Deflection output current	I_2 max		± 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	θ_{j-c}		4	$^\circ\text{C/W}$

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LA7832

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

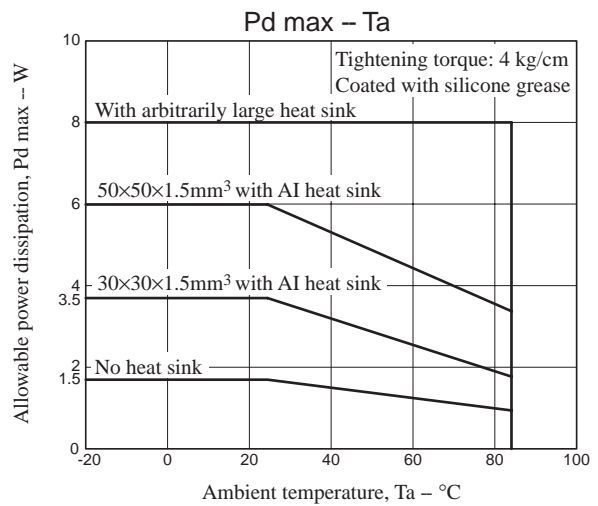
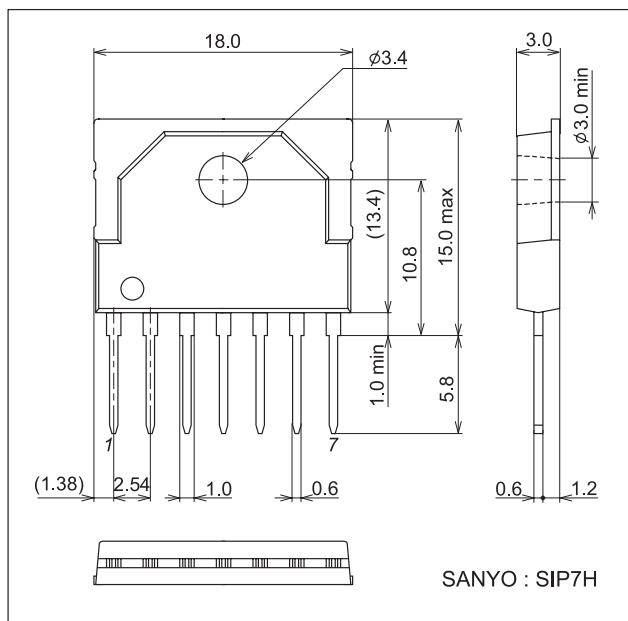
Electrical Characteristics at $T_a = 25^\circ\text{C}$, $V_6 = 24\text{V}$

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

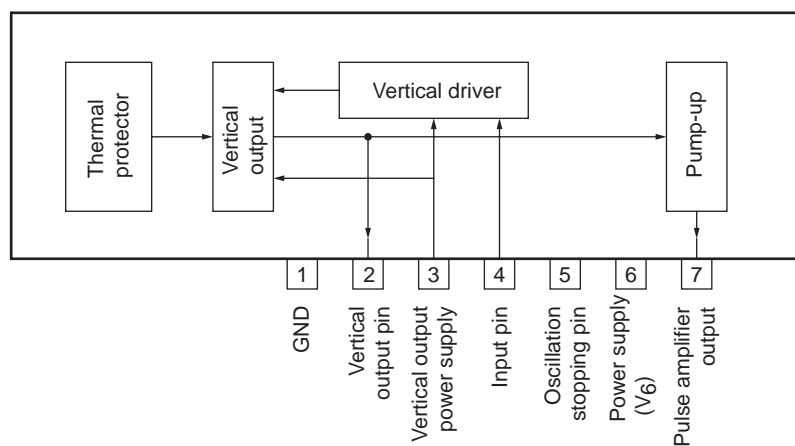
Package Dimensions

unit : mm (typ)

3075A



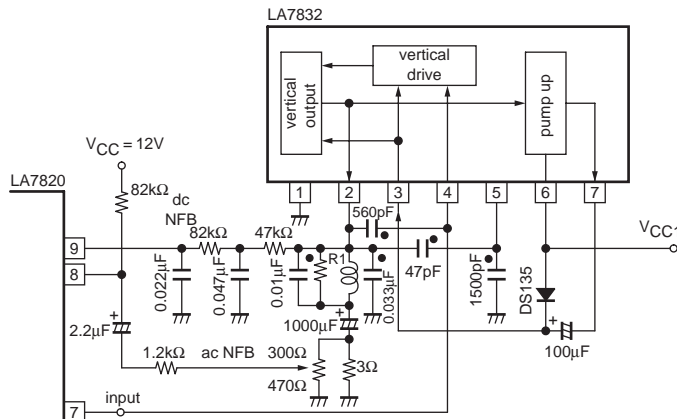
Pin Assignment and Block Diagram



LA7832

Sample Application Circuit

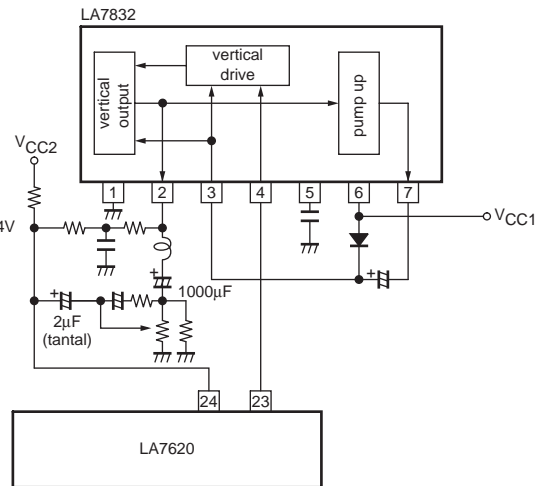
LA7820 vertical output



R1* = several hundreds of ohms to 1kΩ
 *: CR used against oscillation
 The combination depends on the oscillation mode.

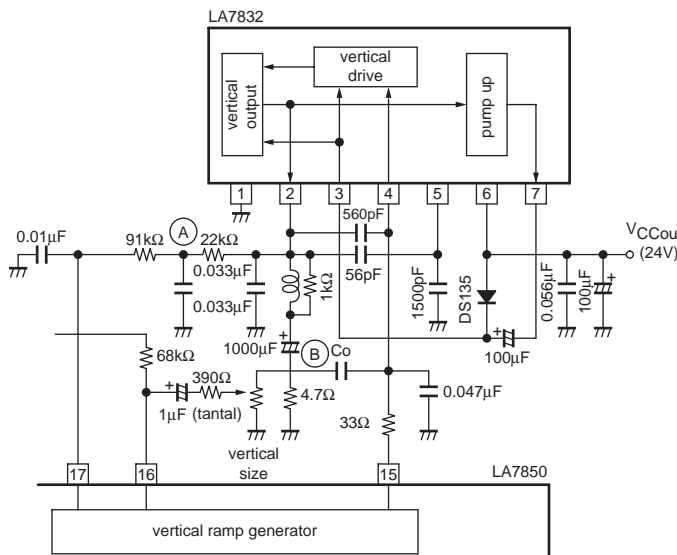
Sample Application Circuit

LA7620 vertical output



Sample Application Circuit

LA7850 vertical output



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