No.1835		**LA7831**
SANYO		Monolithic Linear IC
		Color TV Vertical Deflection Output Circuit

The LA7831 is a monolithic linear IC designed for large-aperture color TV vertical deflection output and has such features as greatly reduced number of external parts and low power dissipation. The LA7831 can be used in conjunction with the LA7620 series for video chroma deflection use and the LA7800 series for deflection use and the LA7850 series for display use to form a stable and compact vertical output deflection circuit.

Features

. High output
. On-chip pump-up circuit and low power dissipation
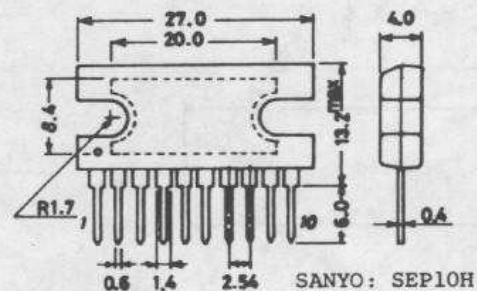. Minimum number of external parts required

Maximum Ratings at Ta=25°C

			unit
Maximum Supply Voltage	V_8max	30	V
	V_5max	60	V
Deflection Output Current	I_4max	±1.8	Ap-0
Allowable Power Dissipation	Pdmax	8	W
Operating Temperature	Topg	-20 to +85	°C
Storage Temperature	Tstg	-40 to +150	°C

Operating Conditions at Ta=25°C

			unit
Recommended Supply Voltage	V_8	24	V
Operating Voltage Range		18 to 27	V
Deflection Output Current	I_4p-p	up to 1.8	Ap-p

Operating Characteristics at Ta=25°C

		min	typ	max	unit
Output Transistor Saturation	V_{OS1}		0.5	1.0	V
Voltage	V_{OS2}		1.8	2.6	V
Pin 7 Saturation Voltage	V_{7S1}			1.5	V
	V_{7S2}		0.8	1.6	V
Quiescent Current	Icco	8.0	11.5	24.0	mA
Output Middle Point Voltage	V_N		11		V

Case Outline 3024A-S10HIC
(unit:mm)

27.0
20.0
R1.7
0.6 1.4 2.54 SANYO: SEP10H
4.0
0.6

These specifications are subject to change without notice.

Pin Assignment

Pin	Function
1	NC
2	NC
3	Gnd
4	Vertical output
5	Power supply for vertical output
6	Input
7	OSC blocking
8	Power supply +V$_{CC}$
9	Pump-up output
10	NC

Pdmax − Ta

Heat sink mounting conditions
Mounting torque 4kg.cm.

With infinite heat sink
With silicone grease applied
With 50x50x1.5mm^3 Al heat sink
No heat sink

Allowable Power Dissipation, Pdmax — W

Ambient Temperature, Ta − °C
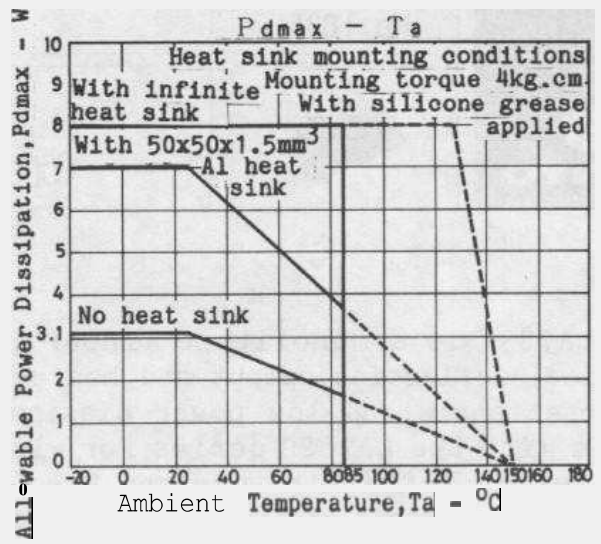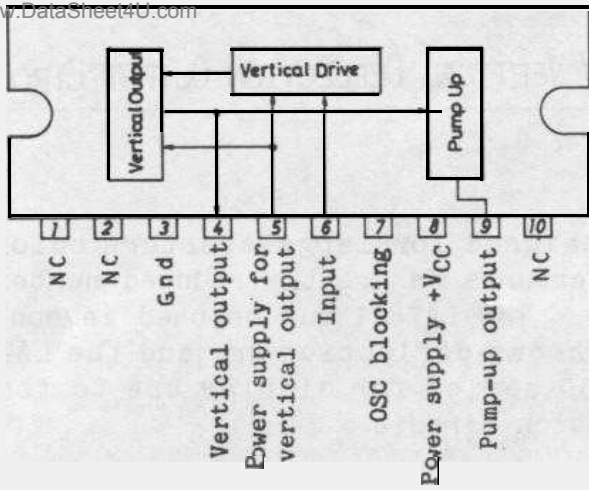
Sample Application Circuit 1
Vertical output of LA7820

LA7831

CI	0.01 u
C2	0.033u
C3	560p
C4	47p
C5	1000p
R1	
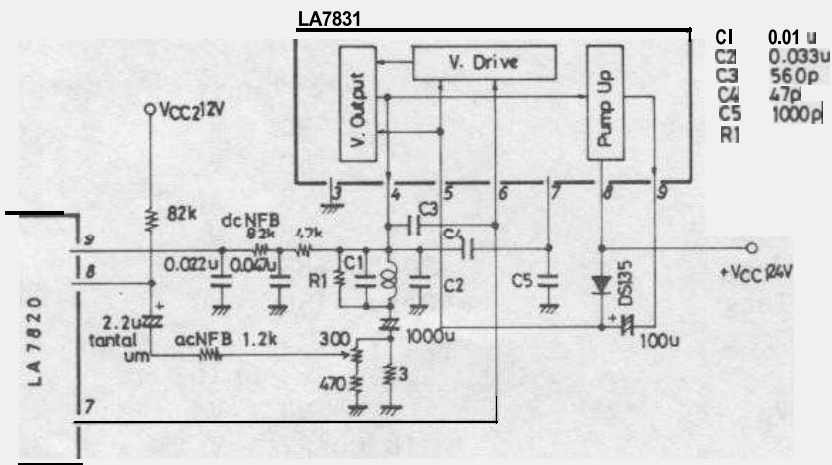
CR for OSC
Combination depends on OSC mode.

V. Output — V. Drive — Pump Up

VCC2 12V

82k dcNFB 82k 4.7k
0.022u 0.047u R1 C1
2.2u tantalum
acNFB 1.2k 300
470 C2 1000u C5
DS135 +VCC 24V
100u

LA7820

Sample Application Circuit 2
Vertical output of LA7620

LA7831

V Output — V Drive — Pump Up

VCC2
(tantalum) 1000u VCC1

LA7620

Sample Application Circuit 3
Vertical output of LA7850

LA7831

V. Output — V. Drive — Pump Up

91k (A) 22k
0.01u 0.033u 1k 560p 560p
0.033u 1000p DS135 VCC1 24V
1000u 0.056u 100u
68k (B) 100u
1u 390 4.7 390 0.047u
(tantalum) Co

17 16 15 LA7850

Vertical Ramp Generator