

## TV VERTICAL OUTPUT CIRCUIT

The KA2131 is a monolithic integrated circuit designed for the vertical output stage in color television receivers.

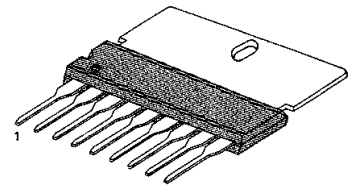
### FUNCTIONS

- Driver stage.
- Output stage.
- Flyback generators.
- Pulse shapers.

### FEATURES

- Low power consumption, direct deflection coil driving capability (Flyback voltage is two times as high as the supply voltage is supplied during flyback period only).
- High breakdown voltage: 60V.

9 SIP H/S



### ORDERING INFORMATION

Device	Package	Operating Temperature
KA2131	9 SIP H/S	-20 ~ +70°C

### BLOCK DIAGRAM

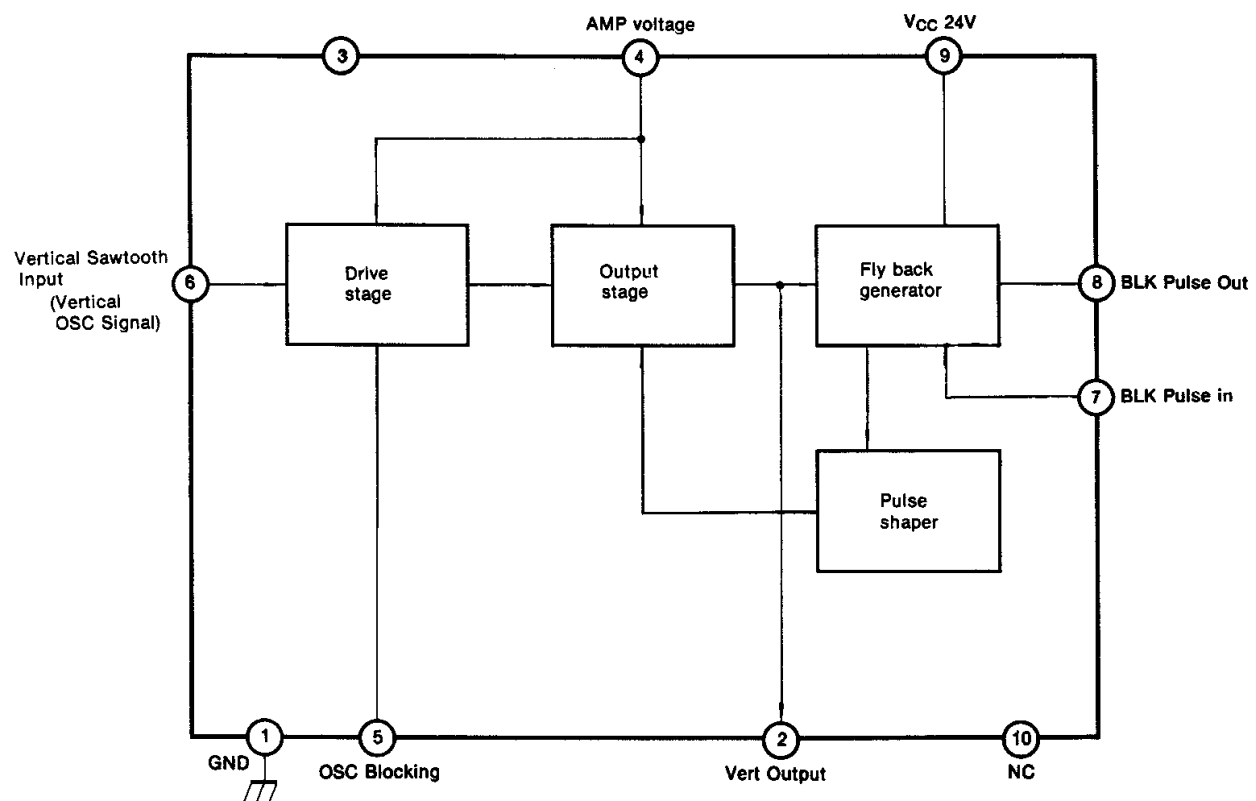
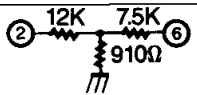


Fig. 1

## ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	27.6	V
Circuit Voltage	$V_4$	60	V
	$V_6$	2.5	V
	$V_7$	1.3	V
Supply Current	$I_{CC}$	250	mA
Power Dissipation	$P_D$	6.66	W
Circuit Current	$I_2$	- 1000 ~ + 1000	mA <sub>P-P</sub>
	$I_8$	- 1000 ~ + 1000	mA <sub>P-P</sub>
Operating Temperature	$T_{OPR}$	- 20 ~ + 70	°C
Storage Temperature	$T_{STG}$	- 55 ~ + 150	°C

## ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Deflection Current	$I_{Y-P-P}$	SW:2	860	930	1000	mA <sub>P-P</sub>
Deflection Current Linearity	$\Delta I_Y (+)$	SW: 1	25	—	75	mA <sub>P-P</sub>
	$\Delta I_Y (-)$	SW:1	22	—	85	mA <sub>P-P</sub>
Deflection Current vs. Operating Temperature	$\Delta I_Y/T_A$	$T_a = -20 \sim +70^\circ\text{C}$	- 1.5	—	1.5	%
Center Voltage	$V_{MID}$	SW: 1	12.1	12.6	13.1	V
Flyback Pulse Amplitude	$V(\text{FBP})$	SW: 1	47			V
Flyback Pulse Width	$t_{\text{FBP}}$	SW: 1	850	920	980	$\mu\text{sec}$
Quiescent Circuit Current	$I_{CC}$	$V_4 = 24\text{V}$ $V_9 = 24\text{V}$ $V_7 = 0\text{V}$ 	7	13	22	mA
Output TR Saturation Voltage	$V_{4-2}$	$V_4 = V_9 = 24\text{V}$ , $\text{pin}_{2-1} = 56\Omega$ $V_6 = 0.3\text{V}$ , $V_7 = 0\text{V}$	—	2.7	3.7	V
	$V_2$	$V_4 = V_9 = 24\text{V}$ , $\text{pin}_{2-4} = 56\Omega$ $V_6 = 1.3\text{V}$ , $V_7 = 0\text{V}$	—	0.6	1.0	V
Saturation Voltage	$V_8$	$V_9 = 24\text{V}$ , $R_{\text{pin}_{9-8}} = 1.2\text{K}\Omega$ $V_7 = 0\text{V}$	—	—	0.5	V
Thermal Resistance	$R_{\text{TH (J-C)}}$		—	—	12	°C/W



# TEST CIRCUIT

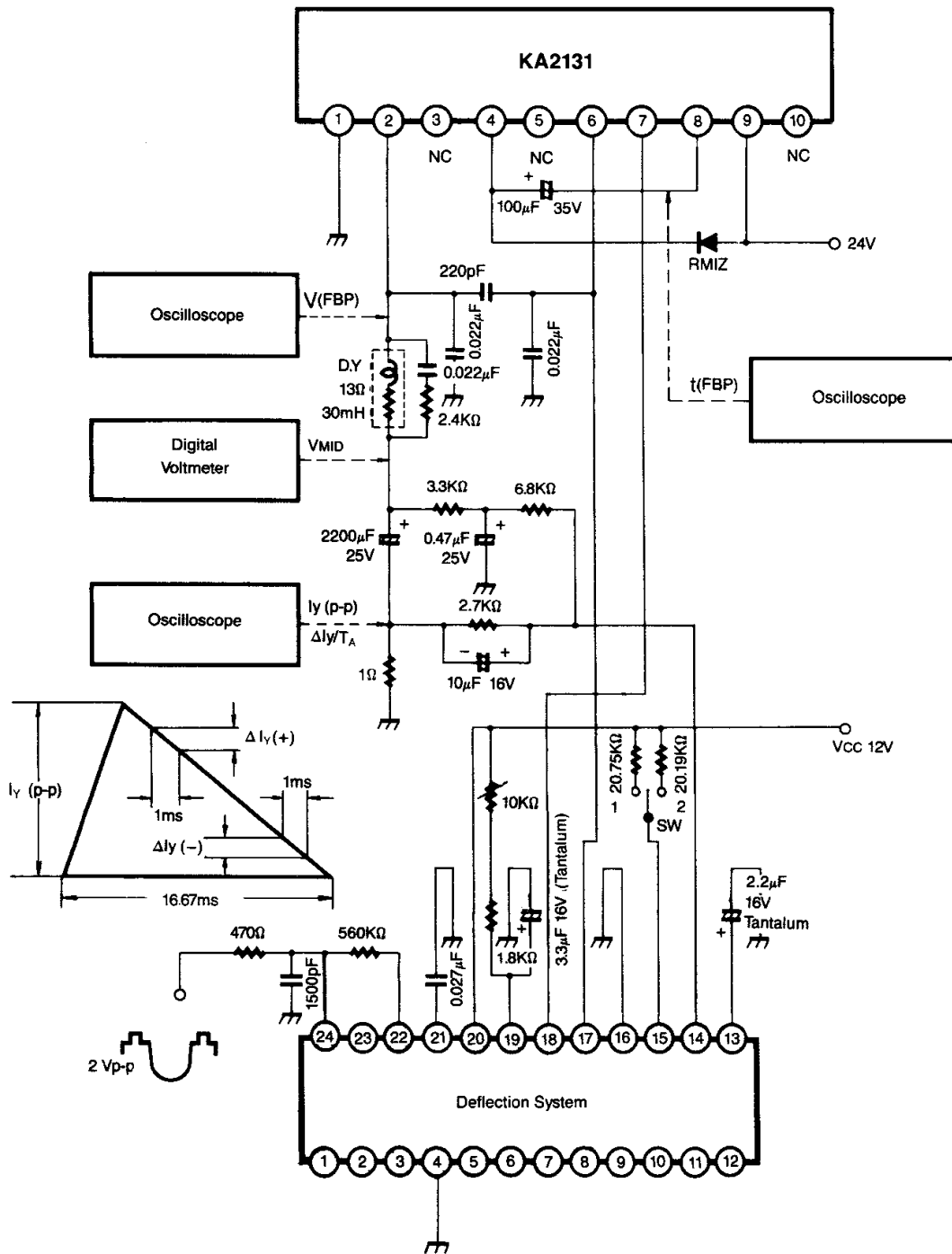


Fig. 3