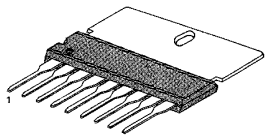
TV VERTICAL OUTPUT CIRCUIT

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

9-SIPH



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.**

ORDERING INFORMATION

Device	Package	Operating Temperature
KA2131	9-SIPH	-20°C ~+70°C

BLOCK DIAGRAM

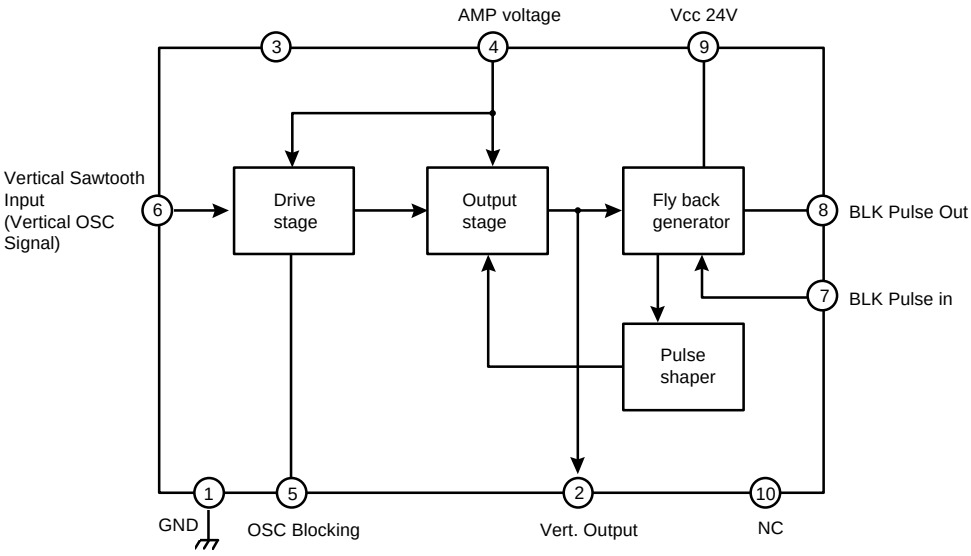
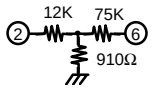


Fig. 1

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_{P-P}
	I_8	-1000~+1000	mA_{P-P}
Operating Temperature	T_{OPR}	-20~+70	°C
Storage Temperature	T_{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Deflection Current	IY_{P-P}	SW: 2	860	930	1000	mAP-P
Deflection Current Linearity	ΔIy (+)	SW: 1	25	–	75	mAP-P
	ΔI_Y (-)	SW: 1	22	–	85	mAP-P
Deflection Current vs. Operating Temperature	$\Delta I_Y/TA$	T_A =-20~+70°C	-1.5	–	1.5	%
Center Voltage	V_{MID}	SW: 1	12.1	12.6	13.1	V
Flyback Pulse Amplitude	V(FBP)	SW: 1	47			V
Flyback Pulse Width	t_{FBP}	SW: 1	850	920	980	µsec
Quiescent Circuit Current	I_{CQ}	V_4 =24V V_9 =24V V_7 =0V 	7	13	22	mA
Output TR Saturation Voltage	V_{4-2}	V_4 =V_9 =24V,pin_{2-1} =56Ω V_6 =0.3V, V7 =0V	–	2.7	3.7	V
	V_2	V_4 =V_9 =24V,pin_{2-4} =56Ω V_6 =1.3V, V7 =0V	–	0.6	1.0	V
Saturation Voltage	V_8	V_9 =24V, $Rpin_{9-8}$=1.2kΩ V_7 =0V	–	–	0.5	V
Thermal Resistance	$R_{TH(J-C)}$		–	–	12	°C /W

TYPICAL APPLICATION CIRCUIT

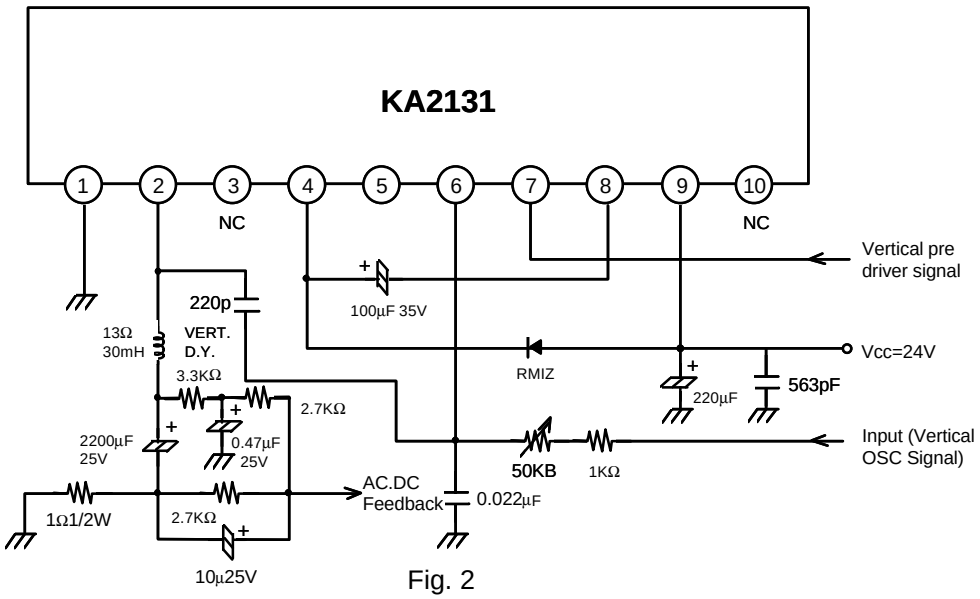


Fig. 2

TEST CIRCUIT

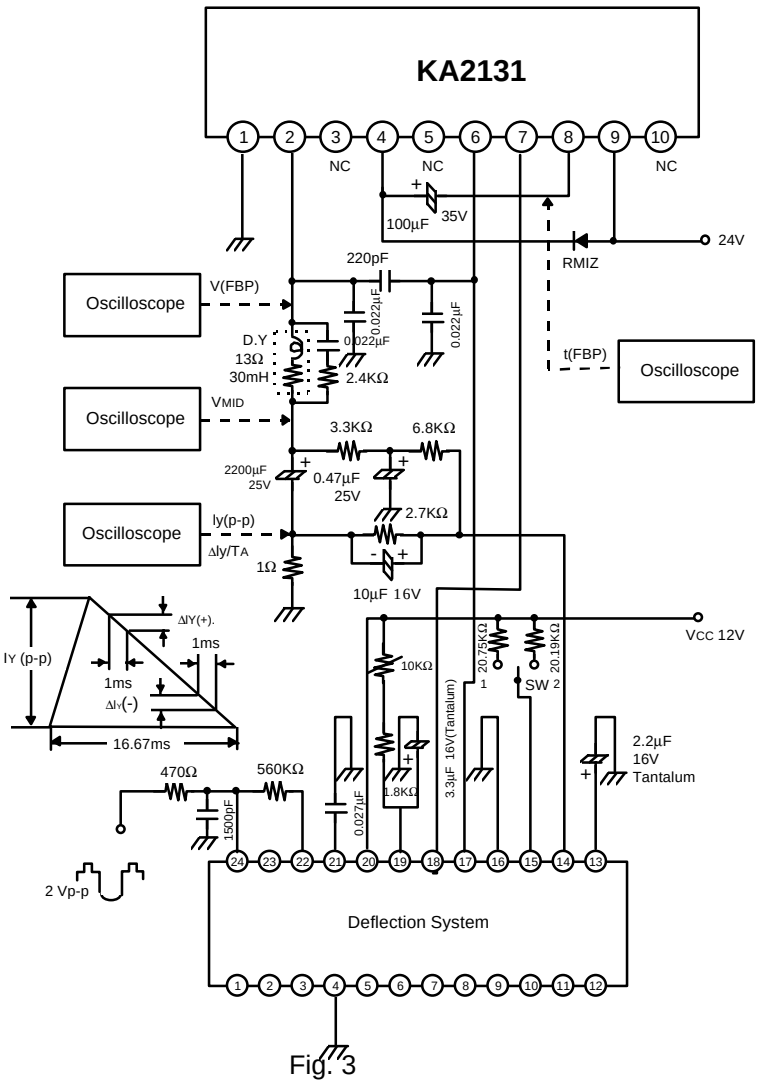


Fig. 3