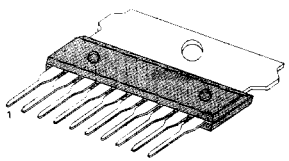
TV VERTICAL DEFLECTION SYSTEM

The KA2130A is a monolithic integrated circuit for use in the vertical deflection circuit of monochrome and small-sized color television receivers. It oscillates vertical signal synchronizing with the vertical synchronization signal and outputs the vertical deflection current with a single chip.

10 SIP H/S



FUNCTIONS

- Vertical synchronization circuit.
- Vertical oscillation circuit.
- Vertical saw-tooth shaper.
- Vertical-output circuit.
- Clamping circuit for blanking pulse.
- Temperature compensating circuit.

FEATURES

- **Less number of external components.**
- **Wide range of operational voltage (9V ~ 18 volts).**
- **Freely adjustable pull-in range.**
- **Adjustable blanking pulse-width.**
- **Large output current-capacity (2 A_{P-P}).**
- **Built-in adjusting circuit for flyback time.**
- **Easy mounting on printed circuit board.**

ORDERING INFORMATION

Device	Package	Operating Temperature
KA2130A	10 SIP H/S	−20 ~ +75°C

TYPICAL APPLICATION CIRCUIT

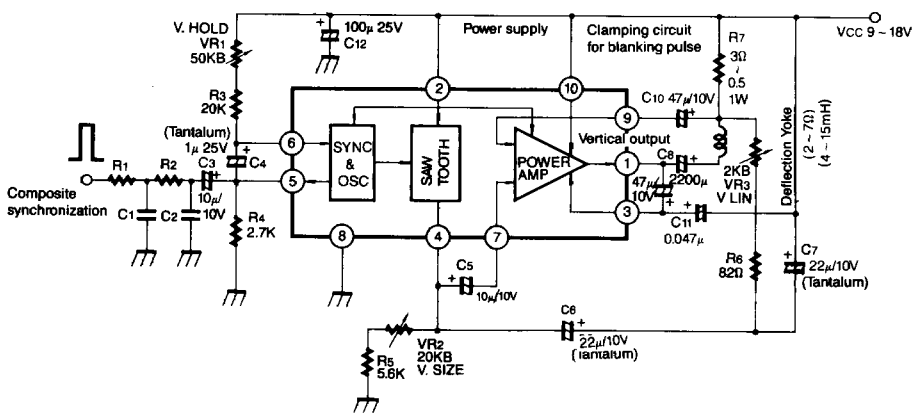


Fig. 1

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	20	V
Output Current	$I_{p\text{-}p}$	2	Ap-p
Power Dissipation	P_{d1}	1.5 (T_a=+75°C) With aluminum heatsink	W
Power Dissipation	P_{d2}	2.15 (T_a=+75°C) With aluminium heatsink (31.6×31.6×1mm t)	W
Operating Temperature	Topr	−20 ~ +75	°C
Storage Temperature	Tstg	−40 ~ +150	°C

ELECTRICAL CHARACTERISTICS (V_{CC}=12V, T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit	Test Fig
Circuit Current	I_{CC}	No input signal and no load condition	15	30	46	mA	2
Output Terminal Voltage	V_N	No inupt signal and no load condition	5.6	6.0	6.4	V	2
Vertical Oscillation Frequency	f_V	Synchronization signal voltage applied at Terminal 5 is 1.3 $V_{p\text{-}p}$	—	50/60	—	Hz	2
Free-running Frequency	f_{VO}	Oscillation capacitor, 1μF (Tantalum) resistor, 38.1KΩ	53	60	67	Hz	2
Pull-in Range	f_P	With specified integration circuit, applied voltage of synchronization signal is 1.3 $V_{p\text{-}p}$ at Terminal 5	−10	−12	—	Hz	2
Drift of Free-running Frequency vs. Power Supply Voltage	Δf_{VO}	Frequency drift from standard frequency (f_{VO} 60 Hz at V_{CC} = 12V) vs. power supply voltage (V_{CC} = 12 ± 2V)	—	—	±1.0	Hz	2
Deviation of Pull-in Range vs. Power Supply Voltage	Δf_P	Deviation from the range for pull in (at V_{CC}=12V) vs. power supply voltage (V_{CC}=12±2V)	—	—	±3.0	Hz	2
Output Saturation Voltage	Vsat	Output current: 0.7A	—	1.3	1.6	V	2
Output Pulse Width of Terminal 4	T_O	Oscillation capacitor, 1μF (Tantalum) resistor, 38.1KΩ	300	420	600	μsec	2

TEST CIRCUIT

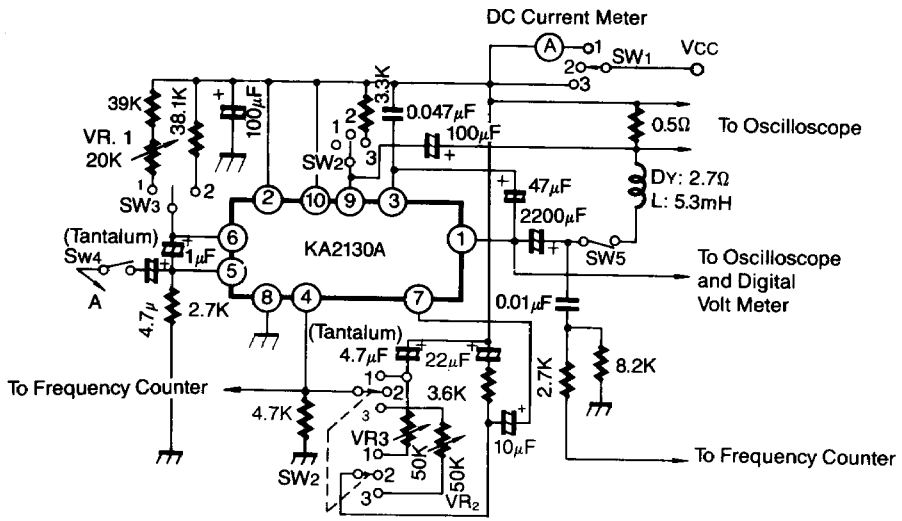


Fig. 2

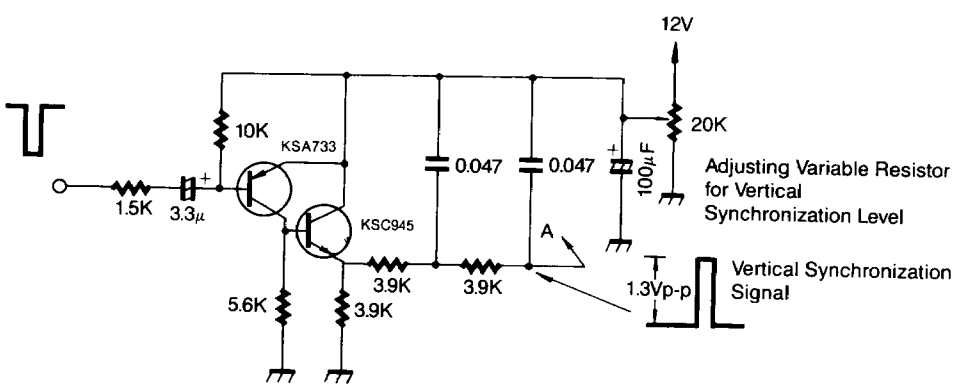


Fig. 3