

**1-CHIP DEFLECTION SYSTEM**

The KA2133 consists of a vertical system including an output function and a horizontal system including an AFC function. It is for use in small size color TVs, B/W TV receivers and monitors.

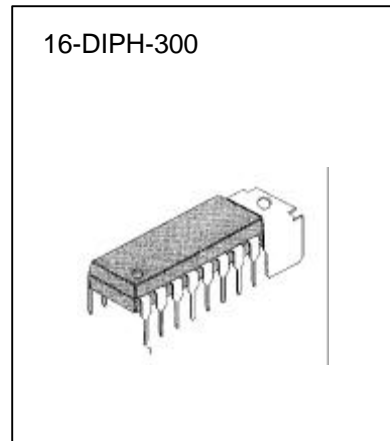
**FUNCTIONS**

(Horizontal Section)

- SYNC separators
- Horizontal oscillators
- Horizontal predrivers
- Horizontal AFCs
- Shunt regulators (Typ: 6.7V)

(Vertical Section)

- Vertical oscillators
- Vertical predrivers
- Vertical output
- Flyback generators



**ORDERING INFORMATION**

Device	Package	Operating Temperature
KA2133	16-DIHP-300	-20°C ~+75°C

**FEATURES**

- Low power consumption, direct deflection coil driving capability (Flyback voltage is two times as high as supply voltage is supplied during flyback period )
- Variable circuit of vertical retrace time on chip.

**BLOCK DIAGRAM**

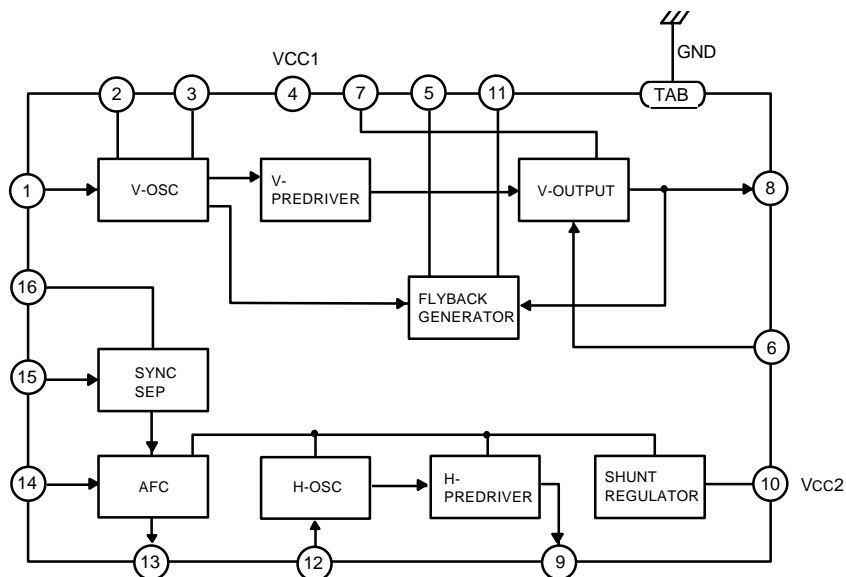


Fig. 1

ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

Characteristic	Symbol	Value	Unit
Vertical Supply Voltage	$V_{CC}$	15	V
Horizontal Supply Current	$I_{10}$	30	mA
Vertical Output Current	$I_B$	-500 ~+500	mA peak
Horizontal Output Current (Pulse)	$I_g$	15 ~+5	mA
Flyback Generator Output Current	$I_S$	-500 ~+500	mA peak
Power Dissipation	$P_D$	1.3	W
Operating Temperature	$T_{OPR}$	-20 ~+75	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~+150	$^\circ\text{C}$

Characteristic	Symbol	Min	Typ	Max	Unit
Vertical Supply Voltage	$V_{CC}$	9.6	12.0	14.4	V
Horizontal Supply Current	$I_{10}$	6.5	12	18	mA

RECOMMENDED OPERATING CONDITIONS ( $T_A = 25^\circ\text{C}$ )ELECTRICAL CHARACTERISTICS ( $V_{CC} = 12\text{V}$ ,  $I_{10} = 12\text{mA}$ ,  $T_A = 25^\circ\text{C}$ )

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit	Test Fig
Vertical Supply Current	$I_{CC} (1)$	$SW_A = 2$	-	85	100	mA	2
Vertical Supply Current	$I_{CC} (2)$	No Input Signal $SW_A = 2$	6	12	20	mA	2
Vertical Free Running Frequency	$f_{VO}$	$SW_A = 1$	55	60	65	Hz	2
Drift of Vertical Free-Running Frequency	$\Delta f_{VO}/V_{CC}$	$\Delta f_{VO} = 1f_{VO}(14.4\text{V}) - f_{VO}(9.6\text{V})$ $SW_A = 2$	-	0.8	2	Hz	2
	$\Delta f_{VO}/T_A$	$\Delta f_{VO} = 1f_{VO}(-20^\circ\text{C}) - f_{VO}(+70^\circ\text{C})$ $SW_A = 2$	-	1.5	2	Hz	2
Vertical Output Center Voltage	$V_{MID}$	$SW_A = 2$	5.3	5.8	6.3	V	2
Vertical Output Current	$I_B$	$SW_A = 2$	450	500	550	mA <sub>P-P</sub>	2
Horizontal Supply Pin Voltage	$V_{10}$	$SW_B = 2$	6.2	6.7	7.2	V	2
Horizontal Free Running Frequency	$f_{HO}$	$I_{10} = 12\text{mA}$ $SW_B = 1$	15.0	15.75	16.5	KHz	2
Horizontal Output Pulse Width	$t_{HPW}$	$f_{HO} = 15.75\text{KHz}$ $SW_B = 2$	23	25	27	us	2
Horizontal Output Current	$I_g$	$SW_B = 2$	0.8	1.3	2.0	mA	2

TEST CIRCUIT

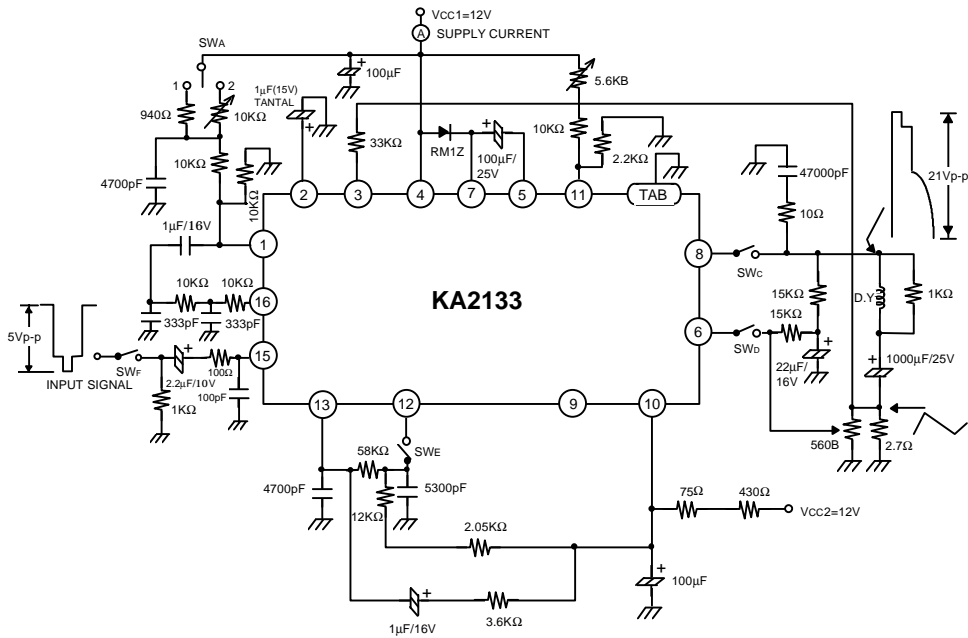


Fig. 2

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.