

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.

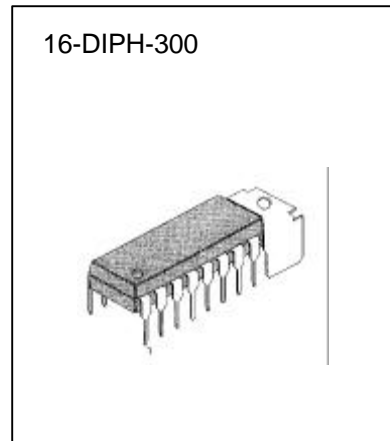
FUNCTIONS

(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

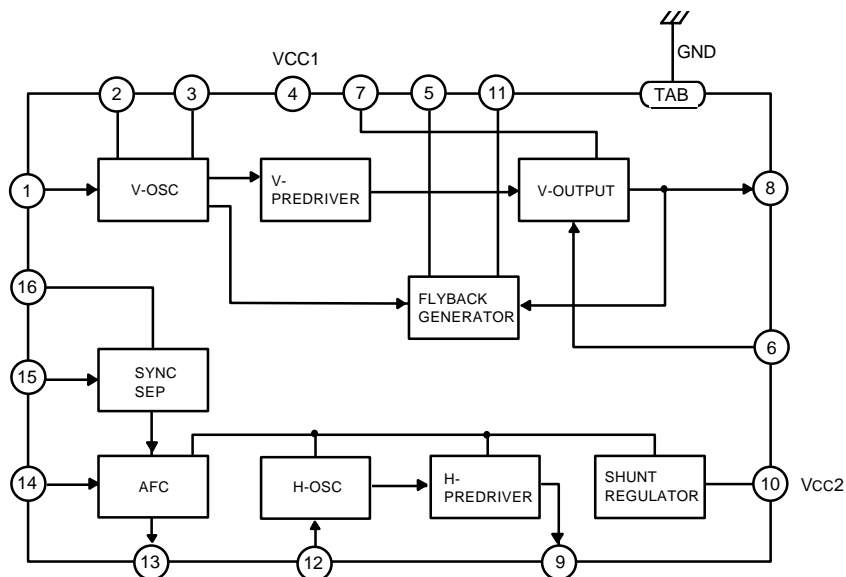


Fig. 1

ABSOLUTE MAXIMUM RATINGS (T_A=25°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 ₉	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	°C
Storage Temperature	T _{STG}	-40 ~+150	°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°C)**ELECTRICAL CHARACTERISTICS (V_{CC} =12V, I₁₀ =12mA, T_A =25°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	Δf _{VO} /V _{CC}	Δf _{VO} =1f _{VO} (14.4V)-f _{VO} (9.6V)1 SW _A =2	-	0.8	2	Hz	2
	Δf _{VO} /T _A	Δf _{VO} =1f _{VO} (-20°C) - f _{VO} (+70°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 _{P-P}	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 =12mA SW _B =1	15.0	15.75	16.5	KHz	2
Horizontal Output Pulse Width	t _{HPW}	f _{HO} =15.75KHz SW _B =2	23	25	27	us	2
Horizontal Output Current	I ₉	SW _B =2	0.8	1.3	2.0	mA	2

TEST CIRCUIT

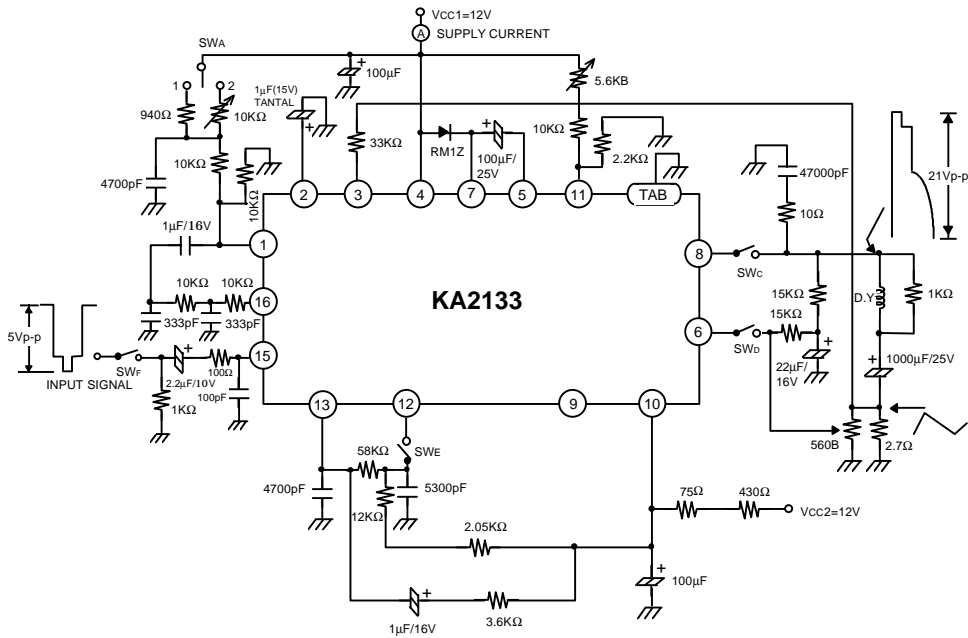


Fig. 2



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