

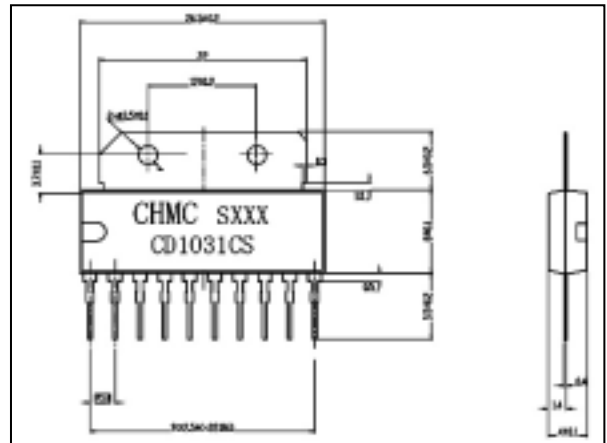


# VERTICAL DEFLECTION DEVICE MONOCHROME TV AND SMALL-SIZED COLOR TV CD1031CS

## GENERAL DESCRIPTION

The CD1031CS is a semiconductor integrated circuit for use in vertical-deflection circuit of monochrome TV and small sized color TV. It oscillates Vertical signal synchronizing with Vertical synchronization signal, and puts out the Vertical Deflection current with the single chip. And as it has some compensating circuits against the effect of temperature in it, it shows excellent characteristics. It uses a Single In-line package easily mountable on heat-sink.

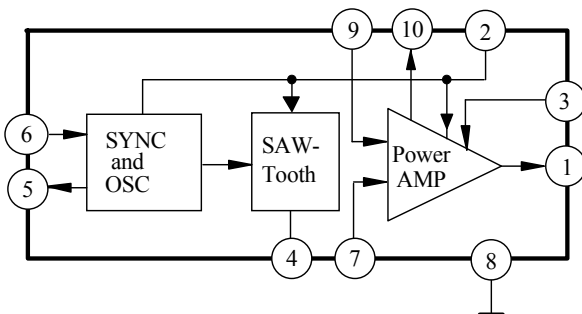
Package Dimensions unit: mm



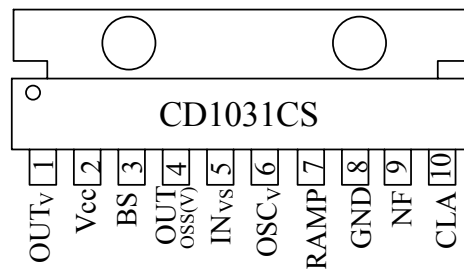
## FEATURES

- Less number of required, external components.
- Wide range of operational voltage (9~18V).
- Freely adjustable pull-in range (by the resistor be put between terminal 5 and the ground, and presenting time constant of integrating circuit).
- Adjustable blanking pulse-width.
- Large output current-capacity (2App).
- Built-in adjusting circuit for fly-back time.
- Easy mounting on printed circuit board.

## BLOCK DIAGRAM



## PINCONNECTION



**ABSOLUTE MAXIMUM RATINGS** (Ta=25°C)

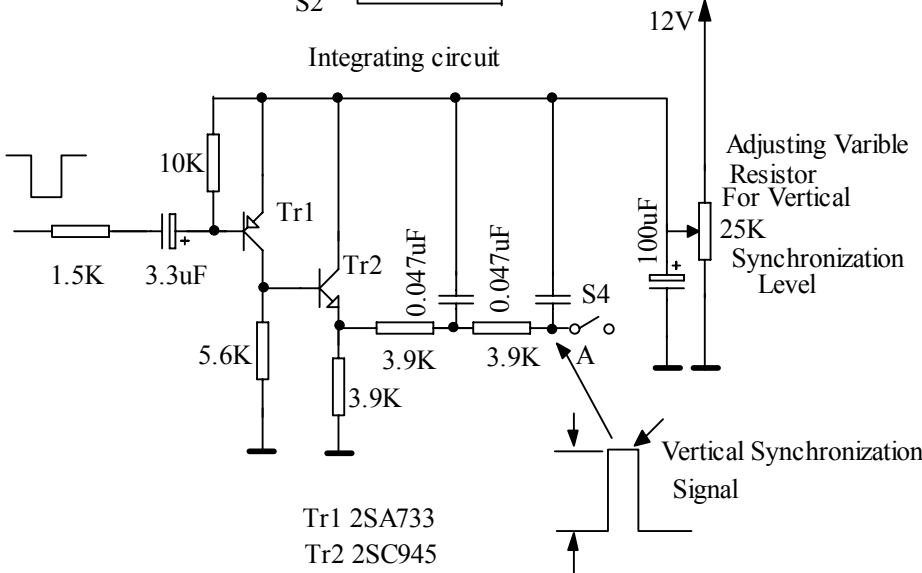
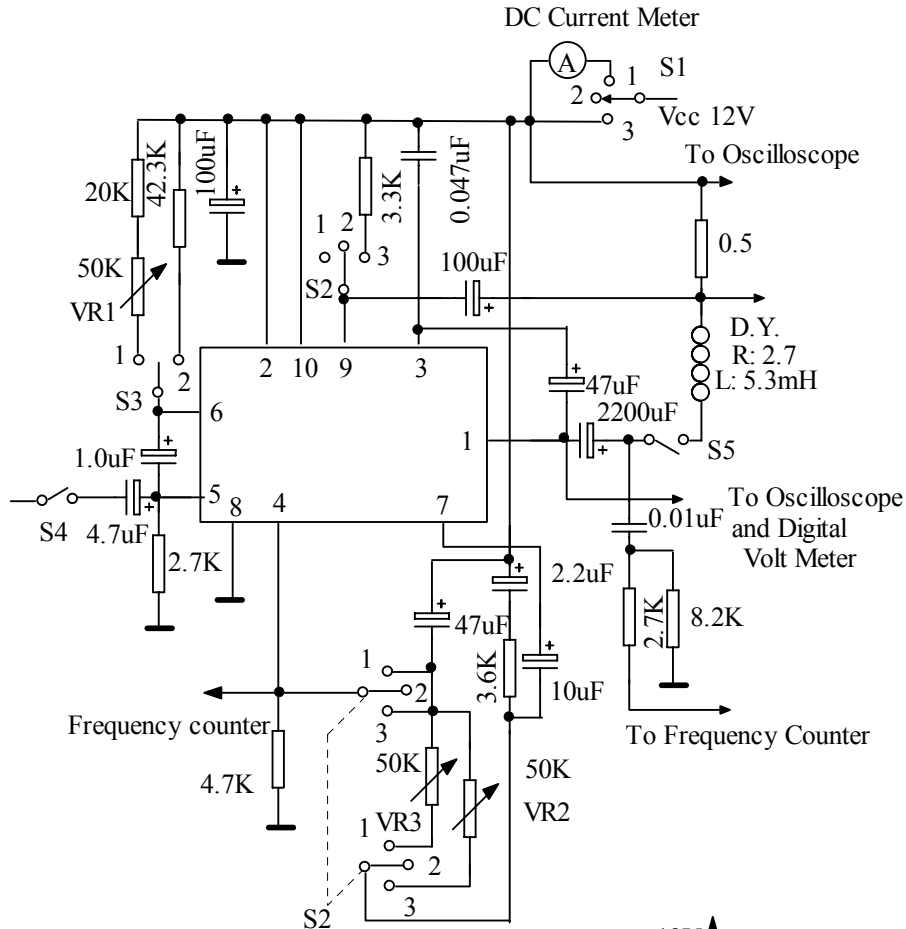
Characteristic	Symbol	Value	Unit
Power Supply Voltage	Vcc	20	V
Output Current	Ipp	2	App
Power Dissipation	Pd1	1.5(Ta=75°C) without heatsink	W
Power Dissipation	Pd2	2.15(Ta=75°C)with aluminum heatsink (31.6 × 31.6 × 1mm t)	W
Operating Temperature	Topr	-20 to +75	°C
Storage Temperature	Tstg	-40 to +150	°C

**ELECTRICAL CHARACTERISTICS**

(Vcc=12V, Ta=25±3°C Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Circuit Current	Icc	Vi=0	15	30	46	mA
Output Terminal Voltage	Vo	Vi=0	5.6	6.0	6.4	V
Vertical Oscillation Frequency	fv	Synchronization signal voltage applied at terminal 5 is 1.3Vpp	-	50/60	-	Hz
Free-running Frequency	fvo	Oscillation capacitor; 1μF (Tantalum) Resistor; 38.1kΩ	53	60	67	Hz
Pull-in Range	fp	With specified integration Circuit, applied voltage of synchronization signal is 1.3Vpp at terminal 5	-10	-12	-	Hz
Drift if Free-running frequency vs. Power Supply Voltage	Δfvo	Frequency drift from standard frequency (fvo= 60HzVcc=12V) Power supply voltage (Vcc=12 ± 2V)	-	-	± 1.0	Hz
Deviation of Pull-in Range vs. Power Supply Voltage	Δfp	Deviation from the frequency range fo (at Vcc=12V) vs. Power supply voltage (Vcc=12 ± 2V)	-	-	± 3.0	Hz
Output Saturation Voltage	Vsat	Io=0.7mA	-	1.3	1.6	V
Output Pulse Width of terminal 4	Twv	Oscillation capacitor; 1μF(Tantalum) Resistor; 38.1kΩ	300	420	600	μs

TEST CIRCUIT



APPLICATION CIRCUIT

