

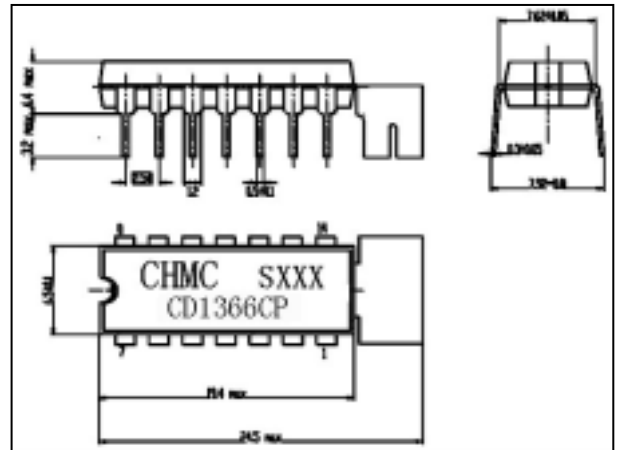


# VIDEO IF PROCESSOR FOR B/W TV CD1366CP

## GENERAL DESCRIPTION

The CD1366CP is a silicon monolithic integrated circuit designed for VIF section in B/W television receivers. This IC has functions including video IF amplifier, video low-level detector, RF AGC, IF AGC and noise cancellor.

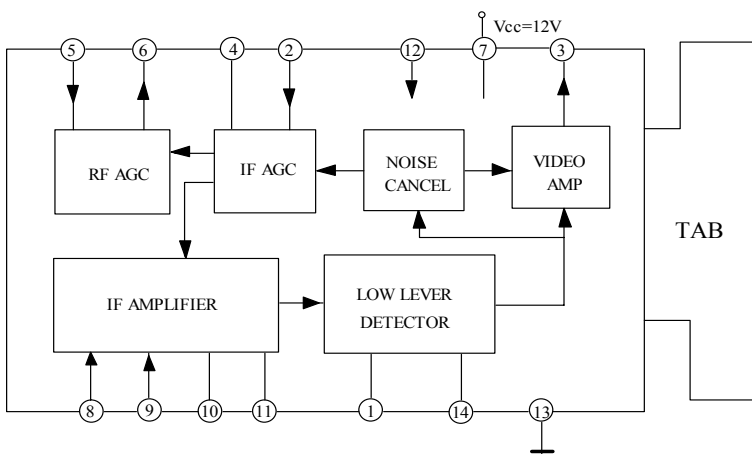
This IC is encapsulated in 14 pin dual in-line package with heat tab.



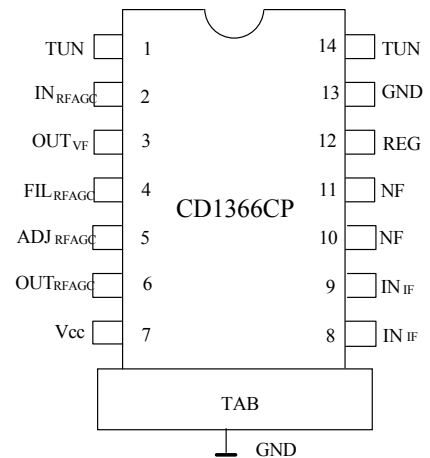
## FEATURES

- High input sensitivity; TYP. 30dBμ.
- It can be used both of keyed type AGC and peak type AGC.
- It can be operated with the power supply voltage above 7V.
- Since the video detector has wide bandwidth, it's suitable for the sound carrier frequency of 4.5, 5.5, 6.0, 6.5 MHz.
- As input is differential mode, it can be used with SAW filter.
- All functions for VIF stage are provided by this single chip IC and this IC will realize reduction of assembly cost as well as reduction of number of external components.

## BLOCK DIGRAM



## PIN CONNECTION



**PIN DESCRIPTION**

Pin	Description	Symbol	Pin	Description	Symbol
1	Detector Coil	TUN	8	VIF Input	IN <sub>IF</sub>
2	Keying Pulse Input	IN <sub>IFAGC</sub>	9	VIF Input	IN <sub>IF</sub>
3	Video Output	OUT <sub>VF</sub>	10	Capacitor	NF
4	AGC Time Const.	FIL <sub>IFAGC</sub>	11	Capacitor	NF
5	RF AGC ADJ. VR.	ADJ <sub>RFAGC</sub>	12	Supply Voltage (2)	REG
6	Tuner AGC Output	OUT <sub>RFAGC</sub>	13	Ground	GND
7	Supply Voltage (1)	V <sub>CC</sub>	14	Detector Coil	TUN

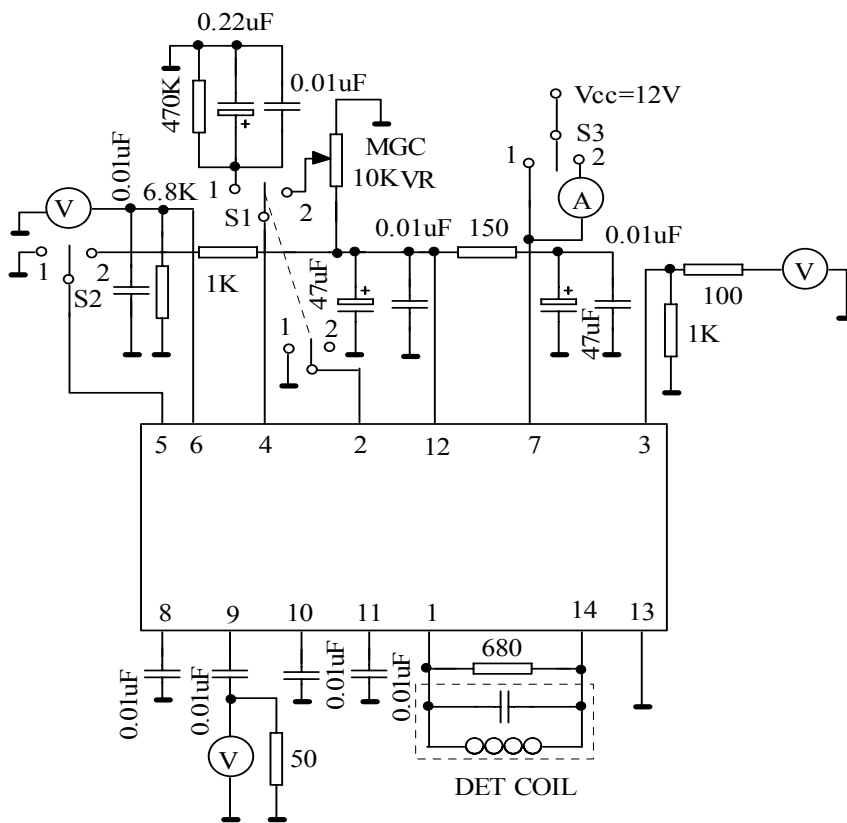
**ABSOLUTE MAXIMUM RATINGS** (Ta=25°C)

Characteristics	Symbol	Value	Unit
Supply Voltage Pin 7	V <sub>7</sub>	15	V
Input Signal Voltage	V <sub>8</sub> V <sub>9</sub>	3	V <sub>pp</sub>
Power Dissipation	P <sub>d</sub>	875(Ta=75°C) Free Air	mW
Operating Temperature	T <sub>opt</sub>	-20~75	°C
Storage Temperature	T <sub>stg</sub>	-40~125	°C

**ELECTRICAL CHARACTERISTICS**(V<sub>CC</sub>=12V, Ta=25 ± 3°C, f=58.75MHz, f<sub>M</sub>=15.75kHz)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Total Supply Current	I <sub>CC</sub>	I <sub>7</sub> +I <sub>12</sub> , R <sub>A</sub> =150Ω	40	50	60	mA
Input Sensitivity	V <sub>i</sub> (sens)	Mod=80%, V <sub>o</sub> =1.4V <sub>pp</sub>		30	35	dBμ
Maximum Input Voltage	V <sub>i</sub> (max.)	MOD=80%, -1dB Point	100			dBμ
Video Output Voltage	V <sub>o</sub>	Mod=80%, V <sub>i</sub> =3mV <sub>rms</sub>	1.0	1.4	1.7	V <sub>pp</sub>
Video Output DC Voltage	V <sub>o</sub>	No Signal	3.3	3.8	4.3	V
Signal To Noise Ratio	S/N	MOD=80%~0% V <sub>i</sub> =3mV <sub>rms</sub>	40	50		dB
RF AGC Voltage (High)	V <sub>6H</sub>	V <sub>5</sub> =0V	8	9	11	V
RF AGC Voltage (Low)	V <sub>6L</sub>	V <sub>5</sub> =7V		0	0.5	V
Differential Gain	D.G.	Stair Step f <sub>M</sub> =3.58MHz			10	%
Differential Phase	D.P.	Stair Step f <sub>M</sub> =3.58MHz			10	deg
Video Detector Band Width	BW	-3dB Point	5.5			MHz
Input Resistance	R <sub>in</sub>			1.5		kΩ
Input Capacitance	C <sub>in</sub>			3.3		pF

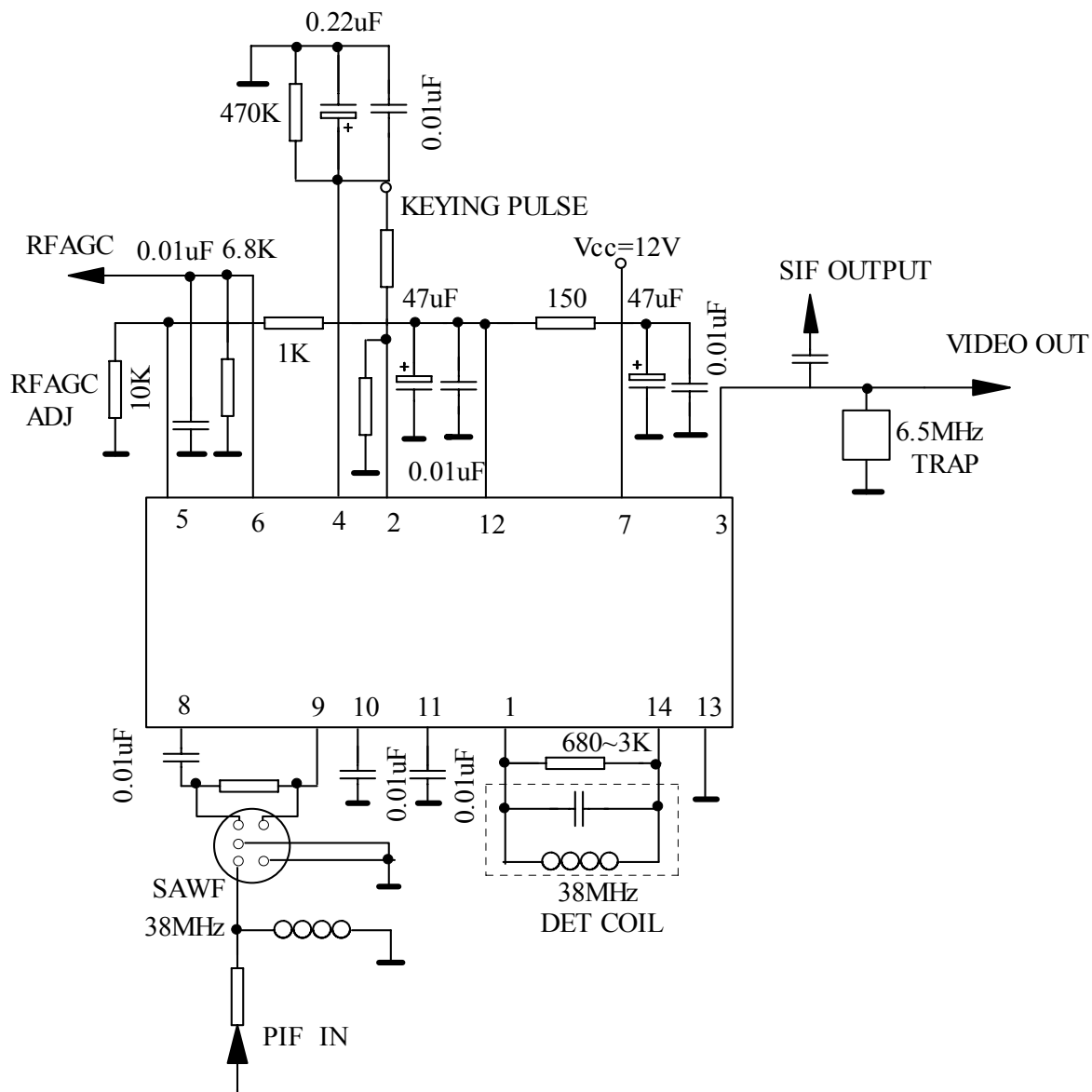
TEST CIRCUIT



TEST CIRCUIT SWITCH SITUATION TABLE

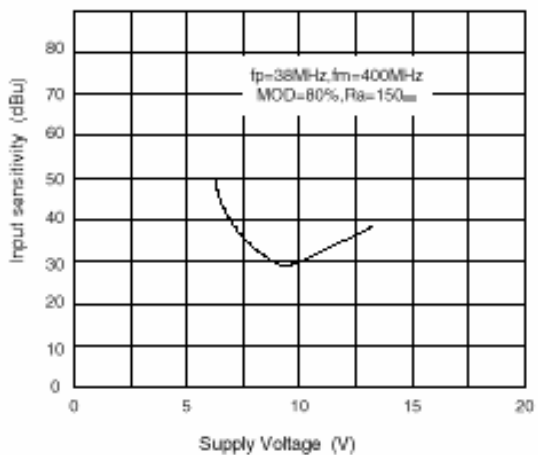
CHARACTERISTICS	S1	S2	S3	CHARACTERISTICS	S1	S2	S3
I <sub>cc</sub>	1	2	2	V <sub>6L</sub>	1	2	1
V <sub>IS</sub>	1	2	1	DG	1	2	1
V <sub>IM</sub>	1	2	1	DP	1	2	1
V <sub>OVF(pp)</sub>	1	2	1	BW <sub>v</sub>	1	2	1
V <sub>o</sub>	1	2	1	R <sub>I</sub>	1	2	1
S/N	2	2	1	C <sub>I</sub>	1	2	1
V <sub>6H</sub>	1	1	1				

## APPLICATION CIRCUIT

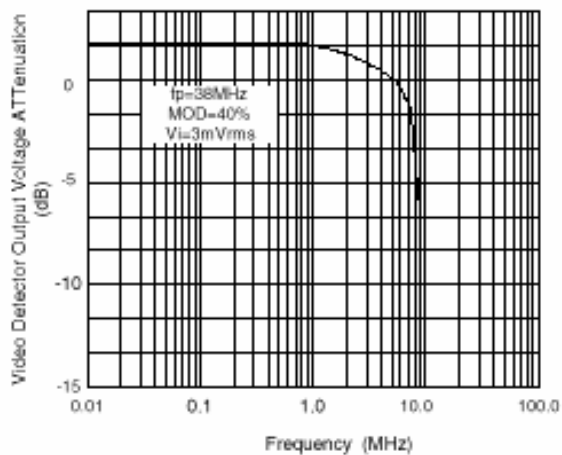


CHARACTERISTICS CURVES

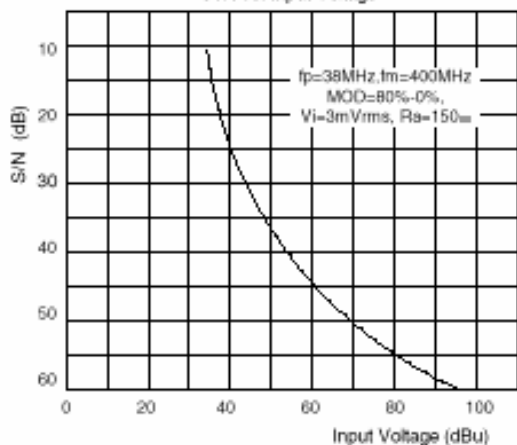
INPUT SENSITIVITY



Video Detector Output Voltage vs, Frequency



S/N vs. Input Voltage



Video Detector Output Voltage vs, Supply Voltage

