

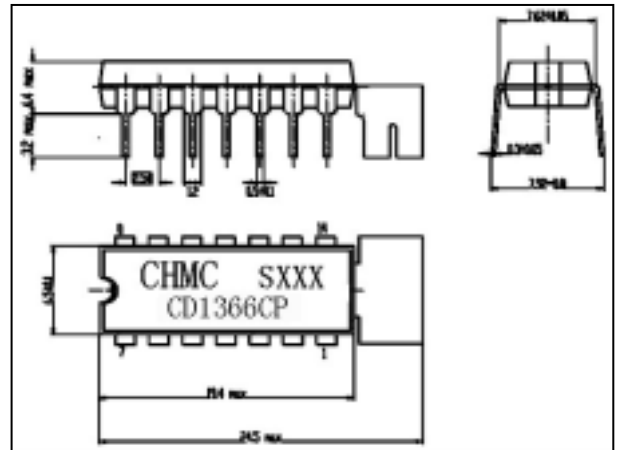


VIDEO IF PROCESSOR FOR B/W TV CD1366CP

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.

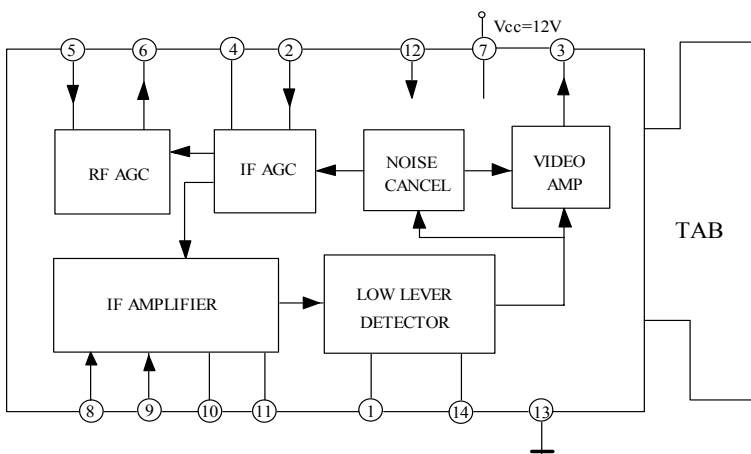
This IC is encapsulated in 14 pin dual in-line package with heat tab.



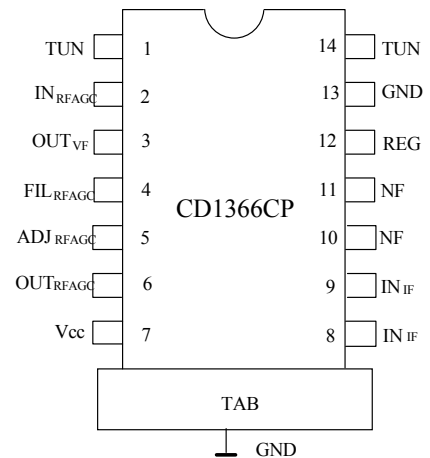
FEATURES

- 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 _{IF}
2	Keying Pulse Input	IN _{IFAGC}	9	VIF Input	IN _{IF}
3	Video Output	OUT _{VF}	10	Capacitor	NF
4	AGC Time Const.	FIL _{IFAGC}	11	Capacitor	NF
5	RF AGC ADJ. VR.	ADJ _{RFAGC}	12	Supply Voltage (2)	REG
6	Tuner AGC Output	OUT _{RFAGC}	13	Ground	GND
7	Supply Voltage (1)	V _{cc}	14	Detector Coil	TUN

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

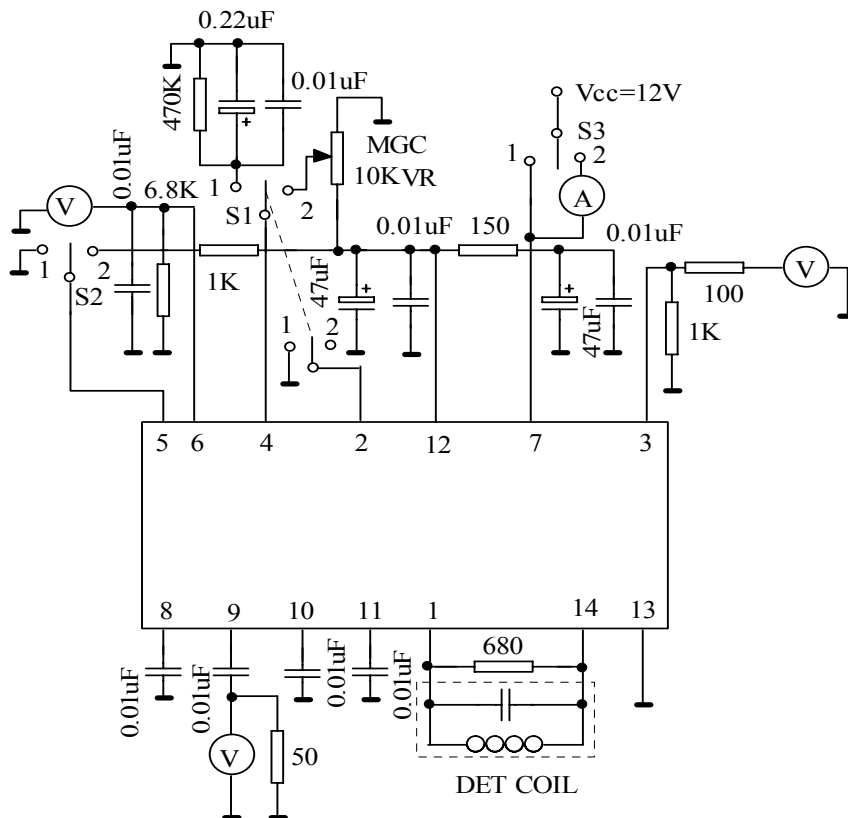
Characteristics	Symbol	Value	Unit
Supply Voltage Pin 7	V7	15	V
Input Signal Voltage	V8 V9	3	V _{pp}
Power Dissipation	Pd	875(Ta=75°C) Free Air	mW
Operating Temperature	Topt	-20~75	°C
Storage Temperature	Tstg	-40~125	°C

ELECTRICAL CHARACTERISTICS

(V_{cc}=12V, Ta=25 ± 3°C, f=58.75MHz, f_M=15.75kHz)

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

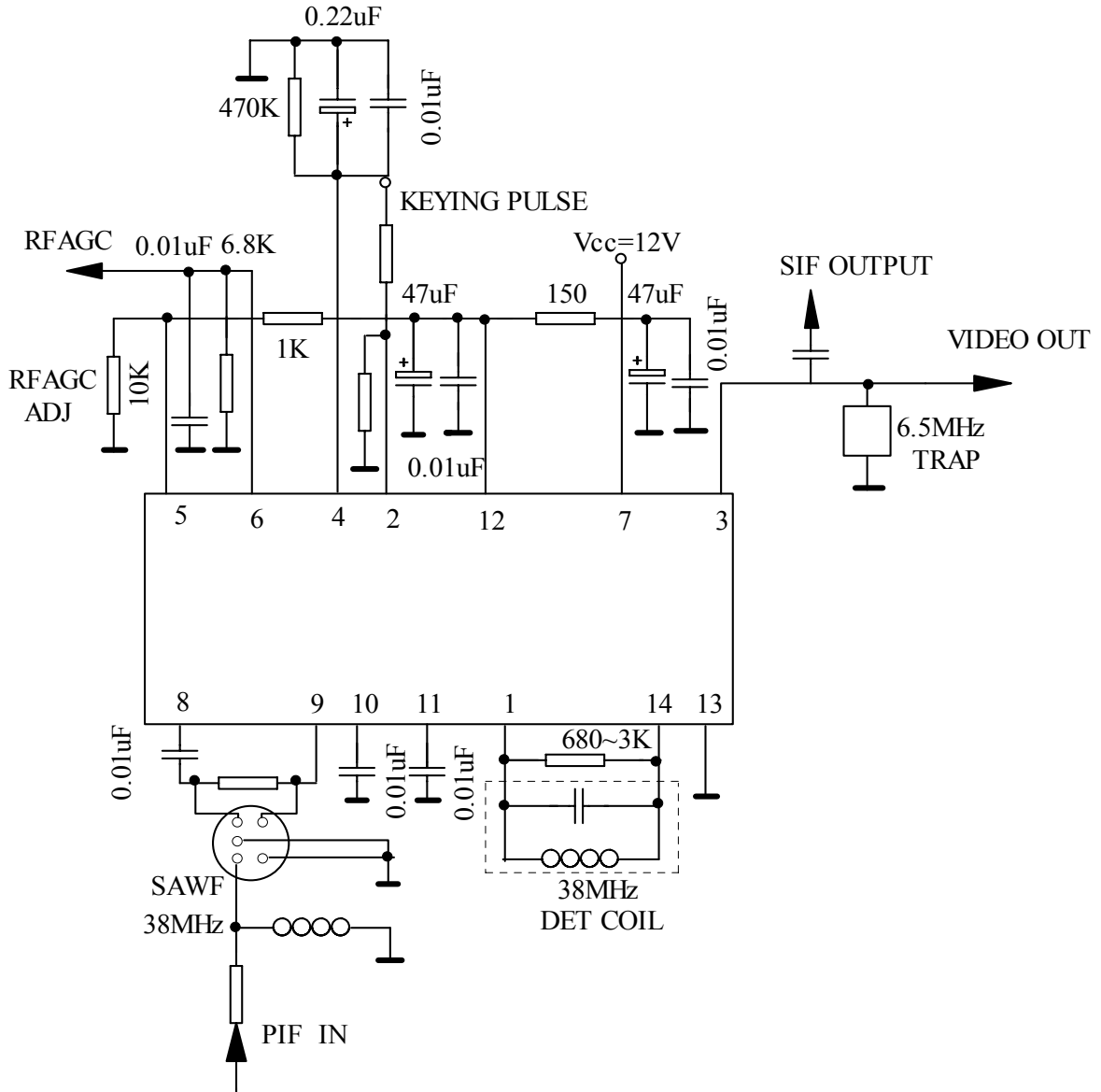
TEST CIRCUIT



TEST CIRCUIT SWITCH SITUATION TABLE

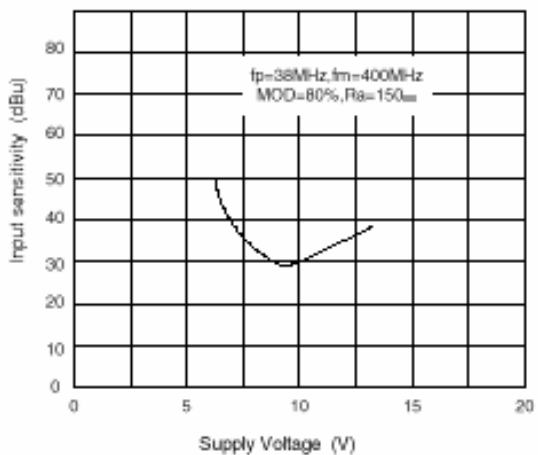
CHARACTERISTICS	S1	S2	S3	CHARACTERISTICS	S1	S2	S3
I _{cc}	1	2	2	V _{6L}	1	2	1
V _{IS}	1	2	1	DG	1	2	1
V _{IM}	1	2	1	DP	1	2	1
V _{OVF(pp)}	1	2	1	BW _v	1	2	1
V _o	1	2	1	R _I	1	2	1
S/N	2	2	1	C _I	1	2	1
V _{6H}	1	1	1				

APPLICATION CIRCUIT

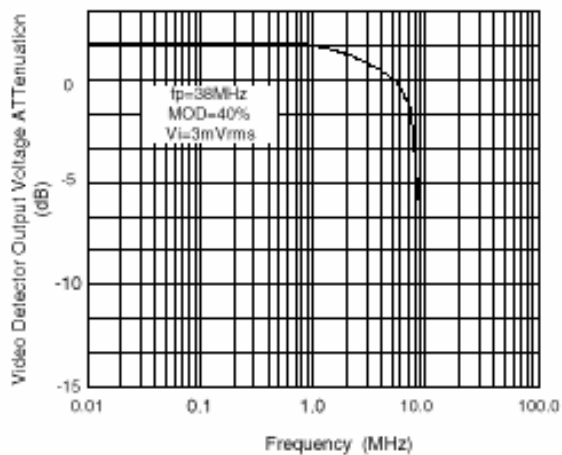


CHARACTERISTICS CURVES

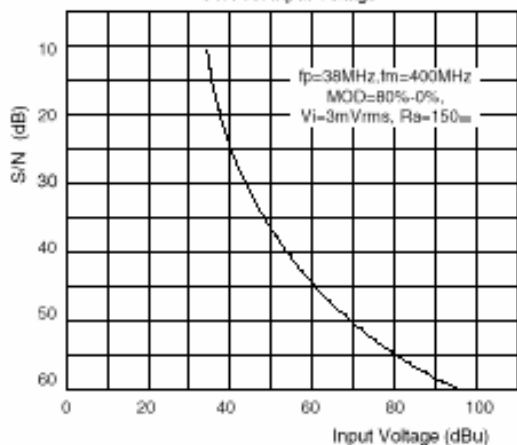
INPUT SENSITIVITY



Video Detector Output Voltage vs, Frequency



S/N vs. Input Voltage



Video Detector Output Voltage vs, Supply Voltage

