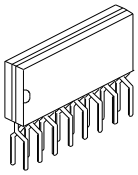
PLL FM MULTIPLEXER STEREO DEMODULATOR

DESCRIPTIONS

The SA3370 is a multiplex IC for FM car stereo. It integrates two functions: stereo noise control and high-cut control.



ZIP-16

FEATURES

* Low distortion factor
* Power supply ripple rejection
* Wide operating voltage range

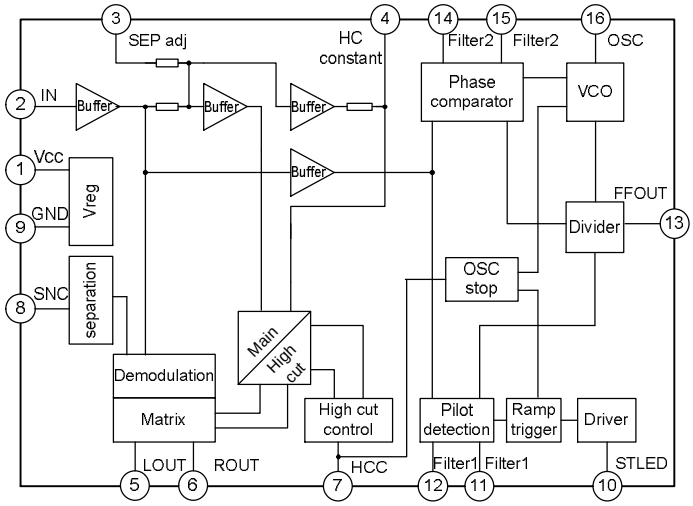
APPLICATIONS

* FM car stereo

ORDERING INFORMATION

Device	Package
SA3370	ZIP-16

BLOCK DIAGRAM



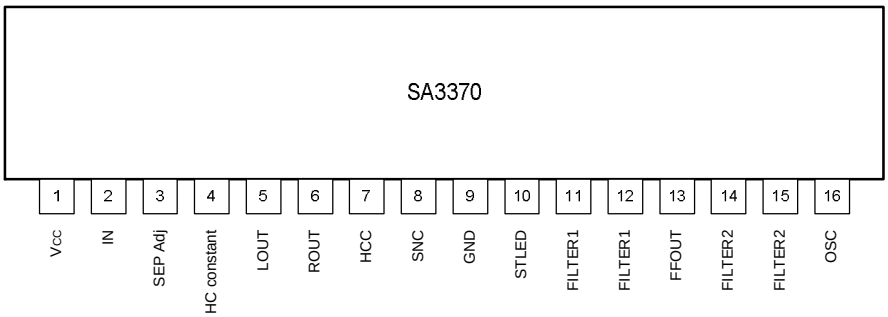
ABOSOLUTE MAXIMUM RATINGS (Tamb=25°C)

Characteristics	Symbol	Rating	Unit
Maximum Supply Voltage	V_{CCmax}	16	V
Lamp Driving Current	I_L	40	mA
Allowable Power Dissipation	$P_{d\ max}$	520	mW
Operating Temperature	T_{opr}	-20~+70	°C
Storage Temperature	T_{stg}	-40~+125	°C
Recommended Supply Voltage	V_{CC}	6.5 ~ 14	V
Input Signal Voltage	V_{IN}	200 ~300	mV

ELECTRICAL CHARACTERISTICS (At T_{amb}=25°C, V_{CC}=10V, V_{IN}=300mV, f=1 kHz, L+R=90%, pilot=10%, see specified test circuit.)

Characteristics	Symbol	Test condition	Min.	Typ.	Max.	Unit
Quiescent Current	I_{CCO}		--	21	27	mA
Channel Separation	Sep		40	50	--	dB
Monaural Distortion Factor	Mono THD	mono=300mV	--	0.05	0.2	%
Stereo Distortion Factor	ST THD	main	--	0.05	0.2	%
Lamp Lighting Level	V_L	L+R=90%, pilot=10%	60	85	120	mV
Hysteresis	Hy		--	3	6	dB
Capture Range	C_R	Pilot=30mV	--	±3	--	%
Output Signal Level	V_O	Sub	140	200	280	mV
S/N Ratio	S/N		70	78	--	dB
Input Resistance (pin3)	R_{IN}		--	20	--	kΩ
SCA Rejection Ratio	SCArej		--	80	--	dB
Allowable Input Voltage	V_{IN}	THD=1%, Rg=20kΩ	700	800	--	mV
SNC Output Attenuation	Att SNC	V8=0.6V, L-R=90%, pilot=10%	-8.5	-3.0	-0.3	dB
SNC Output Voltage	VO sub	V8=0.1V, L-R=90%, pilot=10%	--	--	5	mV
HCC Output Attenuation	Att HCC (1)	V7=0.6V, L+R=90%, pilot=10%	-15.0	-6.0	-0.5	dB
	Att HCC (2)	V7=1V, L+R=90%, pilot=10%	-2.0	--	0	dB
Power Supply Ripple Rejection	Rr		--	35	--	dB
VCO Stopping Voltage	$V_{CO\ stop}$		--	6.8	--	V
Channel Balance	CH Ba		--	0.5	1.5	dB

PIN CONFIGURATIONS



PIN DESCRIPTIONS

Pin no.	Pin name	Description
1	V_{CC}	Power supply.
2	IN	Composite input
3	SEP adj	Separation adjust

(To be continued)

(Continued)

Pin no.	Pin name	Description
4	HC constant	High cut constant
5	LOUT	Left channel output
6	ROUT	Right channel output
7	HCC	When a voltage of 7.5V or higher is applied to this pin, VCO stopped
8	SNC	Forced monaural mode when this pin is connected to ground
9	GND	Ground
10	STLED	Open-collector output can directly drive LED
11, 12	Filter1	Pilot detector low-pass filter
13	FFOUT	19KHz out
14, 15	Filter2	Ripple Filter
16	OSC	Connected a semi-fixed resister

FUNCTION DESCRIPTIONS

1. SNC (stereo noise control) and HCC (high-cut control)

The SA3370 has SNC and HCC terminals for improved S/N ratios when operating in weak radio fields. By adjusting.

The S/N ratios will be improved through the SNC (stereo noise control) and HCC (high-cut control) terminals.

2. Muting function

Muting in the neighborhood of 37dB are feasible by utilizing HCC functions as muting functions.

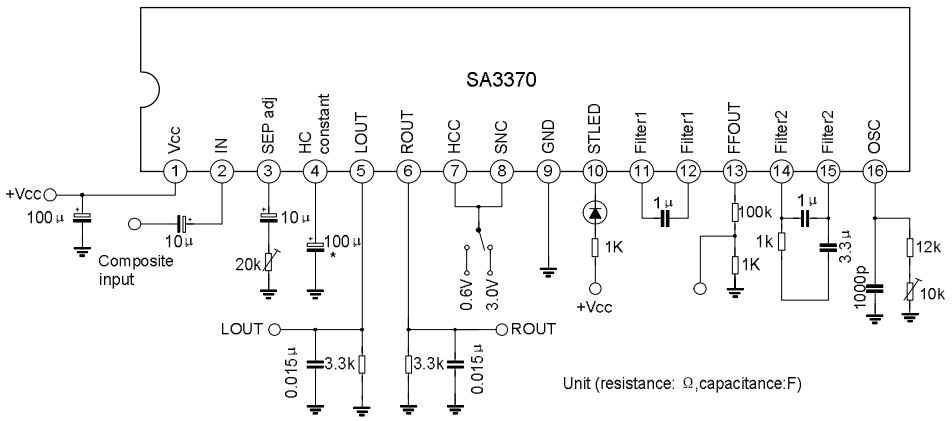
3. VCO stopped

When applying a voltage not less than 7V to the HCC terminal, VCO will be stopped and the circuit will work in monaural mode.

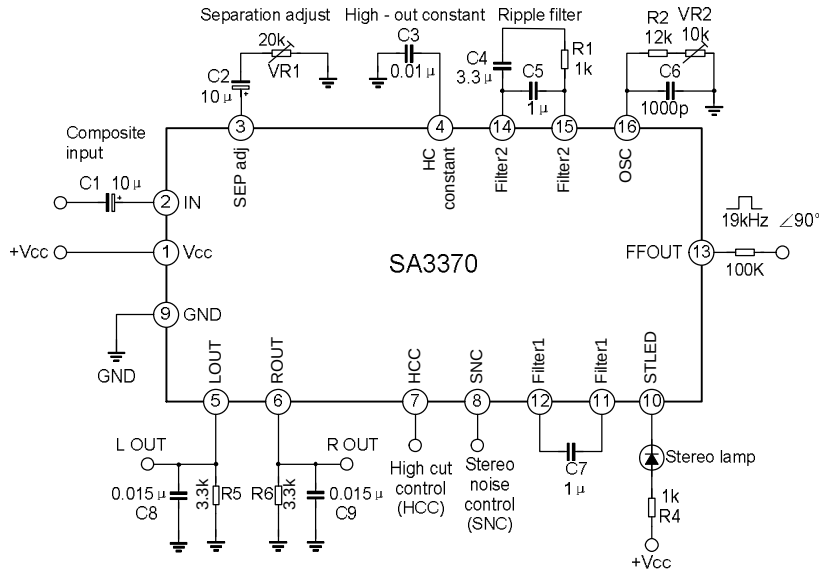
4. Separation control

The separation of SA3370 can be changed by the external semi-resistor.

TEST CIRCUIT



TYPICAL APPLICATION CIRCUIT



PACKAGE OUTLINE

ZIP-16 **UNIT: mm**