

# TA7343AP LINEAR INTEGRATED CIRCUIT

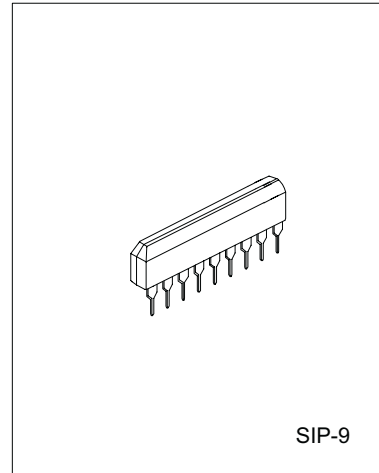
## FM STEREO MULTIPLEX DECODER

### DESCRIPTION

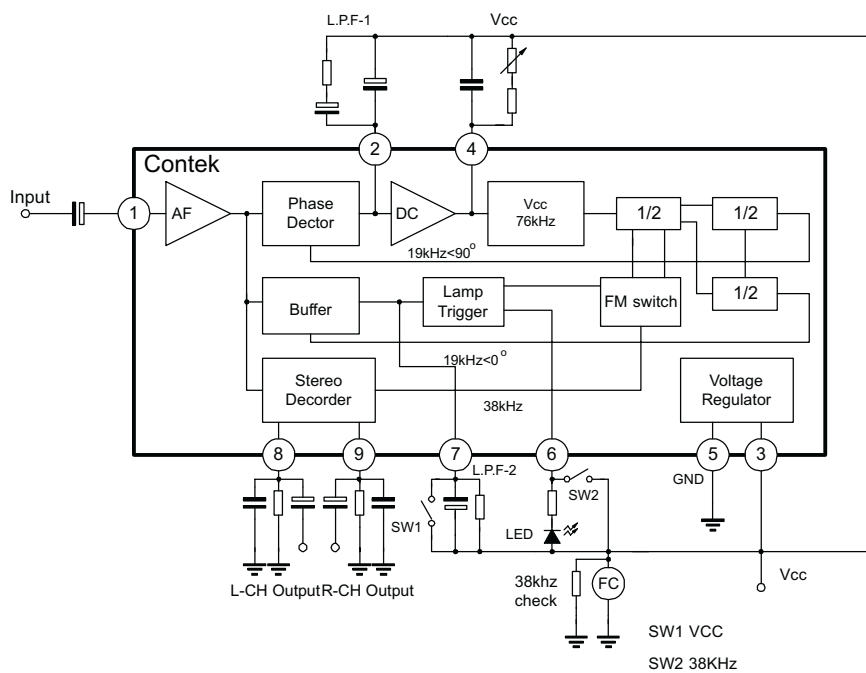
The Contek TA7343AP is a monolithic integrated circuit consisting of a phase locked loop FM stereo demodulator. It is designed for Car stereo, cassette recorder and other equipment.

### FEATURES

- \*Wide operating supply voltage :  $V_{cc}=3V \sim 12V$
- \*High pilot lamp ON sensitivity ( $V_{L(on)}=9mV$ )
- \*Built-in indicator lamp drive circuit.
- \*High distortion THD=0.08% at  $V_i+200mV$



### BLOCK DIAGRAM



Contek Microelectronics Co.,Ltd.

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## ABSOLUTE MAXIMUM RATING (Ta=25 °C)

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	VCC	12	V
Lamp Voltage	VLAMP	16	V
Lamp Current (Continuous)	ILAMP	20	mA
Power Dissipation	PD	500	mW
Operating Temperature Range	TOPR	-20 - +70	°C
Storage Temperature Range	TSTG	-40 - +125	°C

## ELECTRICAL CHARACTERISTICS (Ta=25 °C, VCC=8V, f=1KHZ, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	I <sub>CCQ</sub>	Vi=0		11	18	mA
Maximum Input Voltage	Vi(max)	L+R=90%, P=10%, THD=1%		550		mV
Channel Separation	CS	L+R=180mV, P=20mV	36	45		dB
Total Harmonic Distortion (mono)	THD1	Vi=200mV		0.08	0.3	%
Total Harmonic Distortion (Stereo)	THD2	L+R=180mV, P=20mV		0.08		%
Voltage Gain	Gv	Vi=200mV	-2.0	0	+2.0	dB
Channel Balance	CB	Vi=200mV		0	1.5	dB
Lamp ON Level	V <sub>L(ON)</sub>	pilot only		9	15	mV
Lamp OFF Level	V <sub>L(OFF)</sub>	pilot only	2	6		mV
Lamp Hysteresis	HY			3		mV
Carrier Leakage	Vleak	19kHz, L+R=180mV		34		dB
		38kHz, P=20mV		42		dB



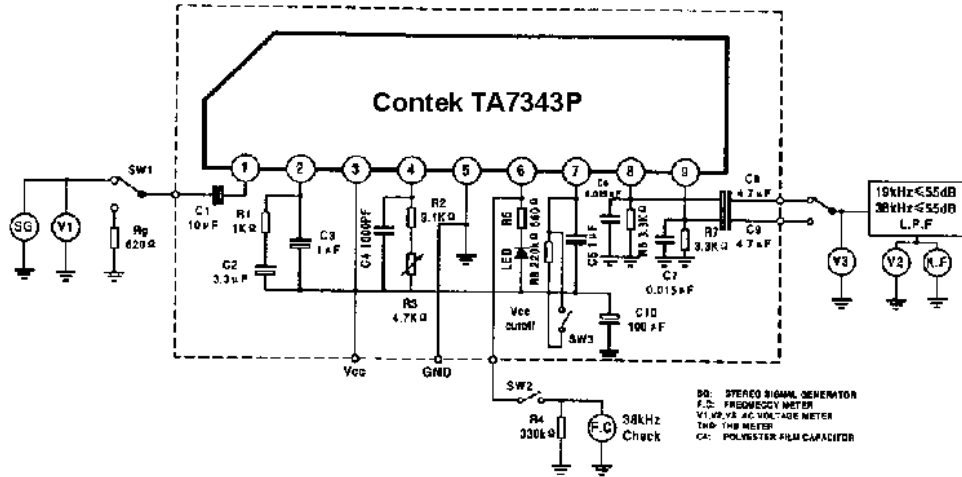
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## TEST CIRCUIT



## APPLICATION INFORMATION (refer to test circuits)

### External Components

#### 1.) Input coupling capacitor(C1)

The recommended value is 10  $\mu$ F. If smaller values than 10 $\mu$ F are used, low frequency separation will worsen, and if larger values are used, POP noise occurs strongly.

#### 2.) Low Pass Filter (C2,C1,R1)

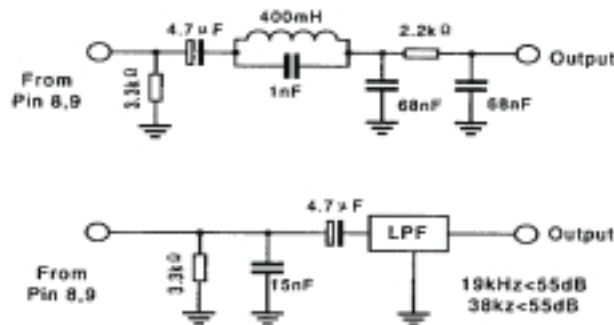
This is the low pass filter for the PLL, which is determined the capture range and THD at low frequency.

#### 3.) VCO network (C4,R2,R7)

The VCO free running frequency is adjusted by connecting a frequency counter to monitor the 38kHz output of Pin6.

#### 4.) Decoder output (Pin8,9)

These components provide Right and Left channel output load circuits. The recommended circuits as follows:

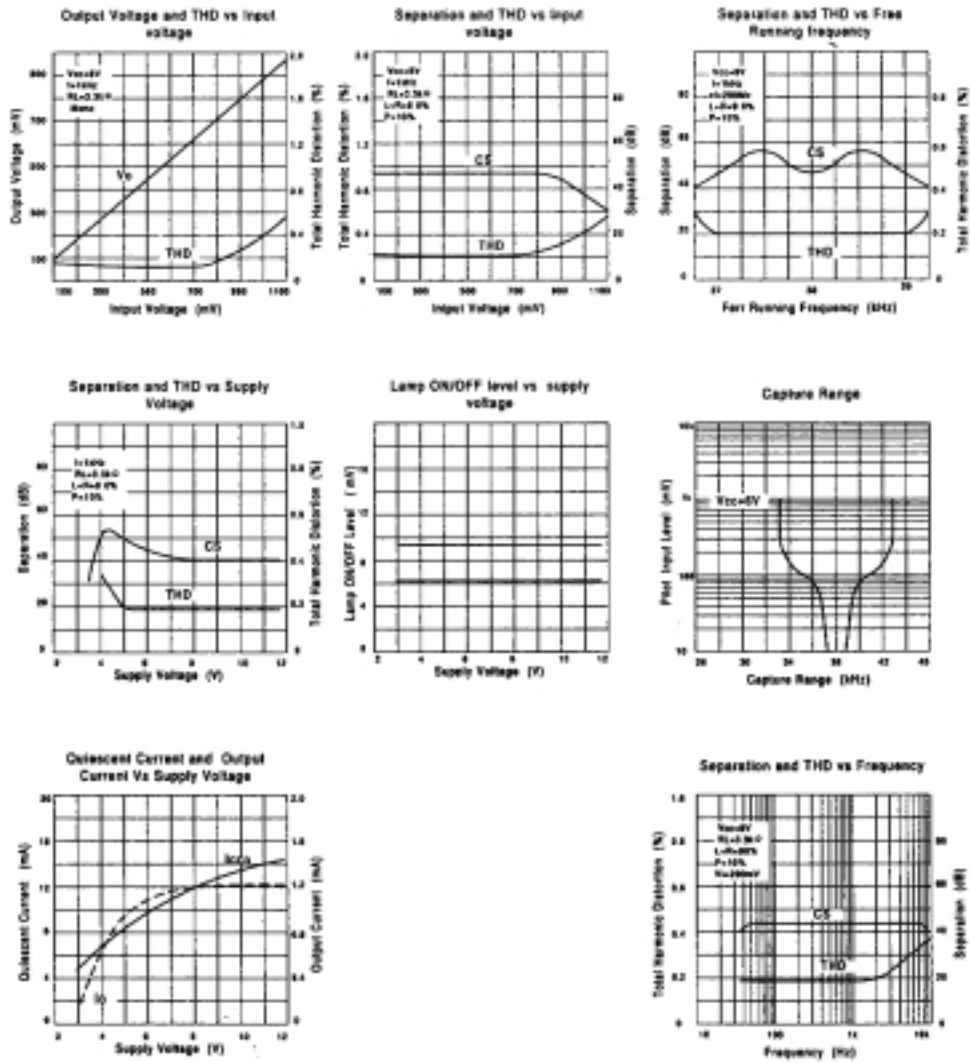


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## TYPICAL PERFORMANCE CHARACTERISTICS



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