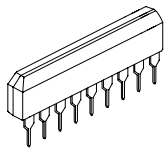
UTC TA7343AP LINEAR INTEGRATED CIRCUIT

FM STEREO MULTIPLEX DECORDER



SIP-9

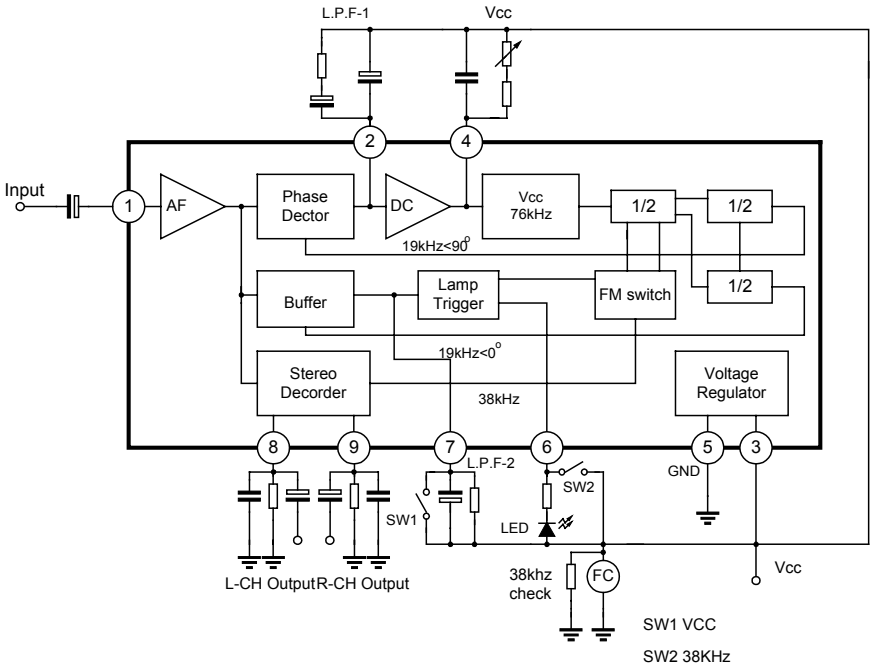
DESCRIPTION

The UTC 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 : Vcc=3V ~ 12V
*High pilot lamp ON sensitivity (VL(on)=9mV)
*Built-in indicator lamp drive circuit.
*High distortion THD=0.08% at Vi+200Mv

BLOCK DIAGRAM



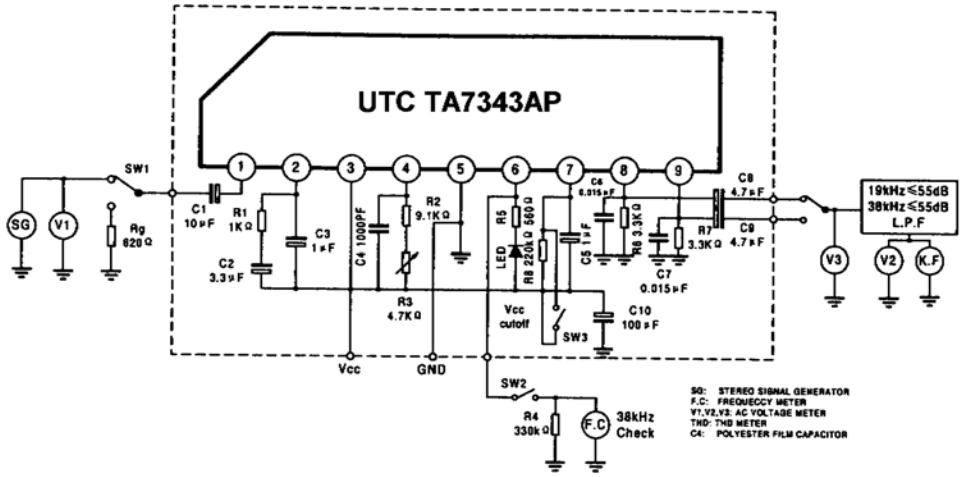
ABSOLUTE MAXIMUN RATING(Ta=25°C)

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_{CCQ}	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=1800mV, 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	$V_{L(ON)}$	pilot only		9	15	mV
Lamp OFF Level	$V_{L(OFF)}$	pilot only	2	6		mV
Lamp Hysteresis	HY			3		mV
Carrier Leakage	Vleak	19kHz, L+R=180mV		34		dB
		38kHz, P=20mV		42		dB

TEST CIRCUIT



APPLICATION INFORMATION (refer to test circuits)

External Components

1.) Input coupling capacitor(C1)

The recommended value is 10μF. If smaller vlaues than 10ΩF are used, low frequency separation will worsens, and is larger values are used, POP noise occurs strongly.

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

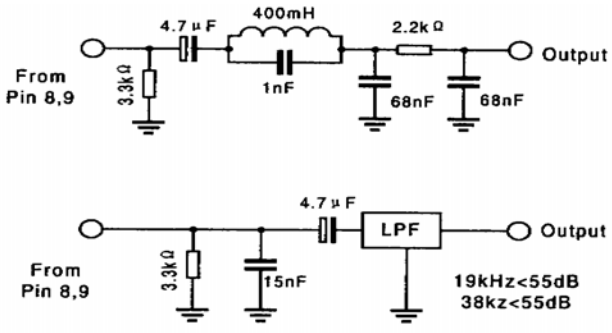
This is the low pass filter fr the PLL, which is determined the capture range and THD at low frequency.

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:



TYPICAL PERFORMANCE CHARACTERISTICS