

UTC TA7343AP LINEAR INTEGRATED CIRCUIT

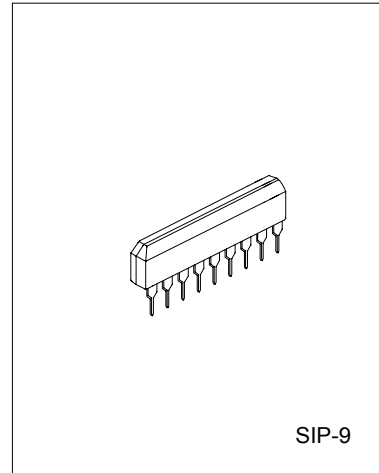
FM STEREO MULTIPLEX DECODER

DESCRIPTION

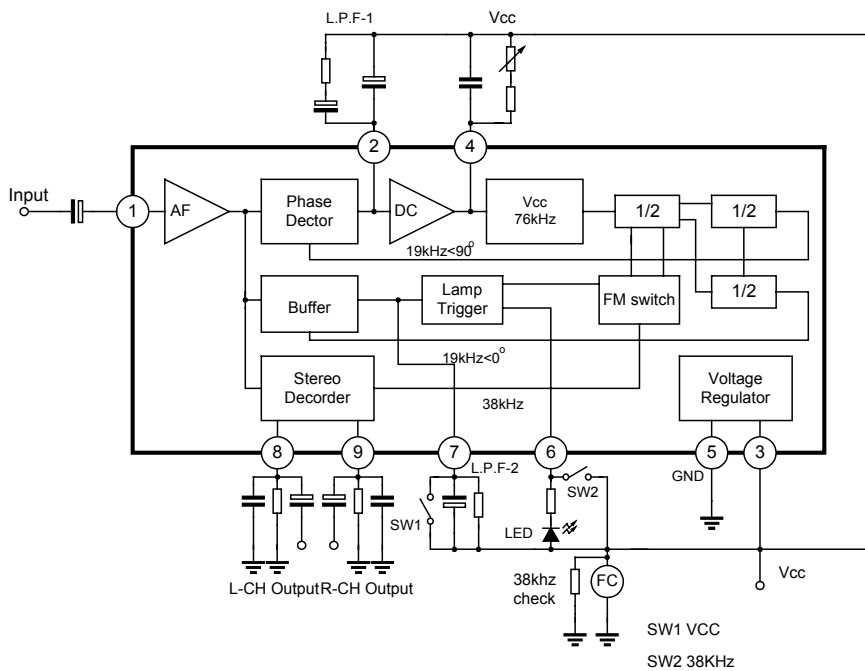
The UTC TA7343AP is a monolithic integrated circuit consisting of a phase locked loop FM stereo demodulator. It is designed for Car stereo, cassette recorder and other equipment.

FEATURES

- *Wide operating supply voltage : $V_{cc}=3V \sim 12V$
- *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



UTC TA7343AP LINEAR INTEGRATED CIRCUIT

ABSOLUTE MAXIMUM RATING(Ta=25°C)

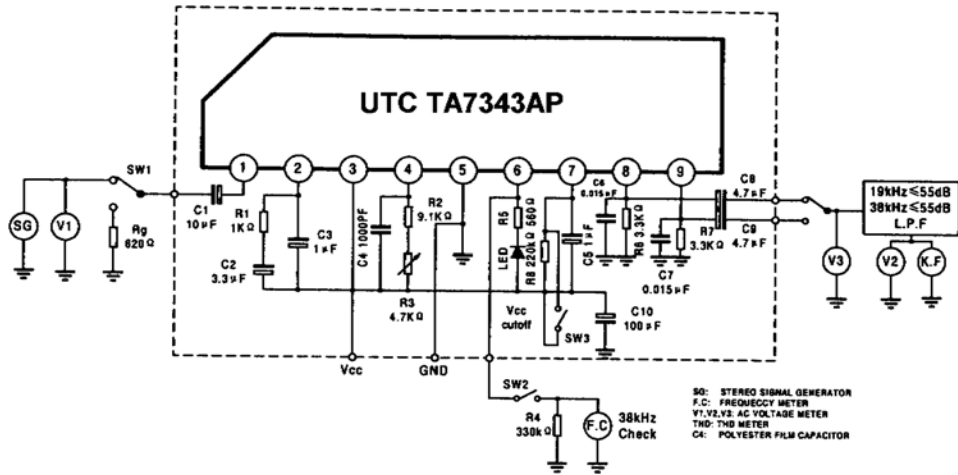
PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	VCC	12	V
Lamp Voltage	VLAMP	16	V
Lamp Current (Continuous)	ILAMP	20	mA
Power Dissipation	PD	500	mW
Operating Temperature Range	TOPR	-20 - +70	°C
Storage Temperature Range	TSTG	-40 - +125	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	I _{CCQ}	V _i =0		11	18	mA
Maximum Input Voltage	V _{i(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	V _i =200mV		0.08	0.3	%
Total Harmonic Distortion (Stereo)	THD2	L+R=1800mV, P=20mV		0.08		%
Voltage Gain	G _v	V _i =200mV	-2.0	0	+2.0	dB
Channel Balance	CB	V _i =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	V _{leak}	19kHz, L+R=180mV		34		dB
		38kHz, P=20mV		42		dB

UTC TA7343AP LINEAR INTEGRATED CIRCUIT

TEST CIRCUIT



APPLICATION INFORMATION (refer to test circuits)

External Components

1.) Input coupling capacitor(C1)

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

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

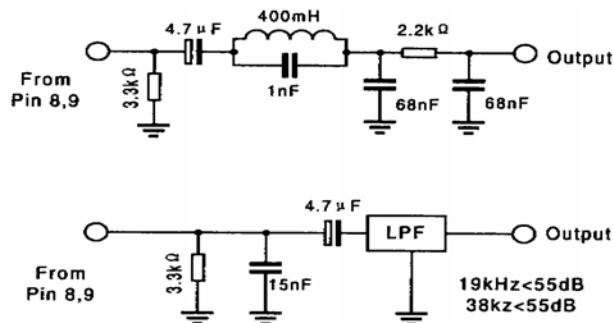
This is the low pass filter for the PLL, which is determined the capture range and THD at low frequency.

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.

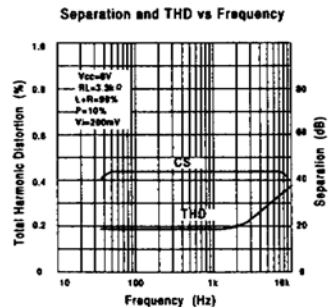
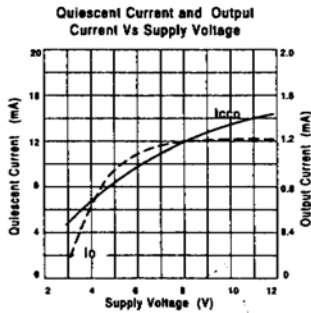
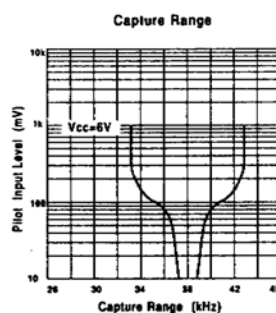
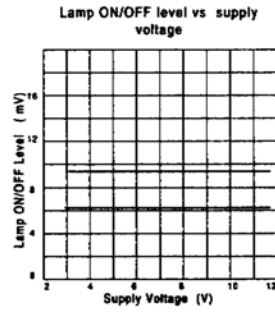
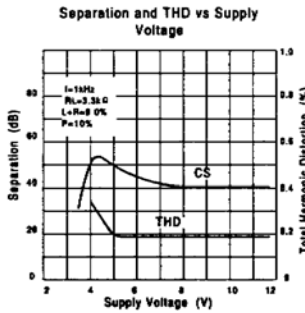
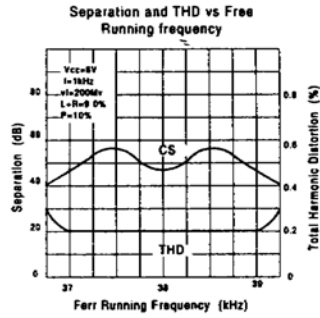
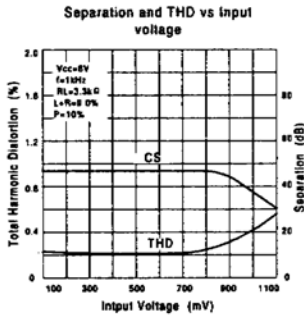
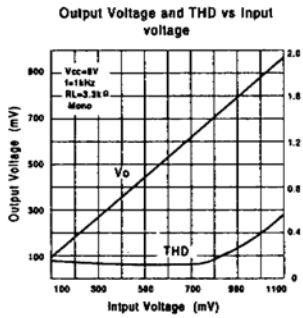
4.) Decoder output (Pin8,9)

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



UTC TA7343AP LINEAR INTEGRATED CIRCUIT

TYPICAL PERFORMANCE CHARACTERISTICS



UTC TA7343AP LINEAR INTEGRATED CIRCUIT

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.