



TA7640AP

LINEAR INTEGRATED CIRCUIT

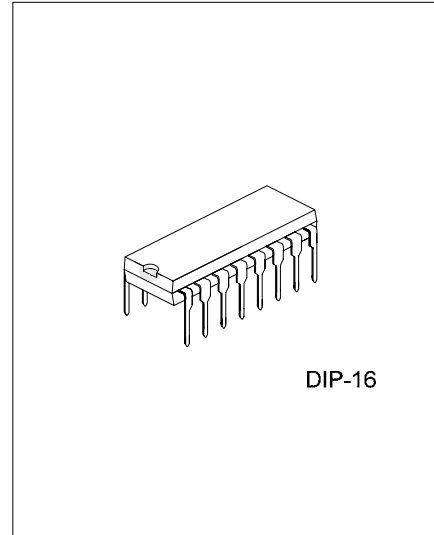
AM/FM IF PROCESSOR

DESCRIPTION

The UTC TA7640AP is a monolithic integrated circuit designed for the radios cassette tape recorder.

FEATURES

- * Low operating current
- * Low external component
- * Internal AM/FM switch
- * Wide operating voltage: $V_{CC}=3.8V$



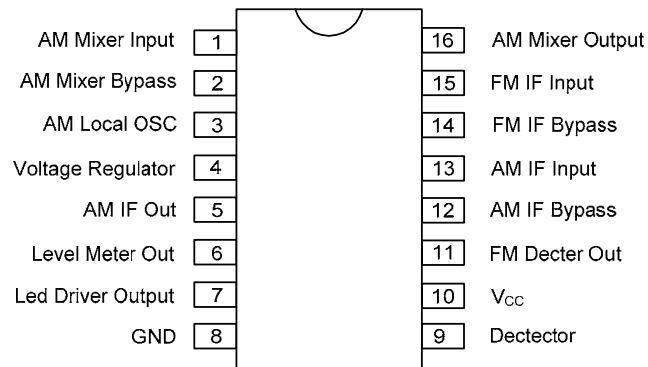
*Pb-free plating product number:TA7460APL

ORDERING INFORMATION

Ordering Number		Package	Packing
Normal	Lead Free Plating		
TA7640AP-D16-T	TA7640APL-D16-T	DIP-16	Tube

<p>TA7640APL-D16-T</p> <p>(1)Packing Type (2)Package Type (3)Lead Plating</p>	<p>(1) T: Tube (2) D16: DIP-16 (3) L: Lead Free Plating, Blank: Pb/Sn</p>
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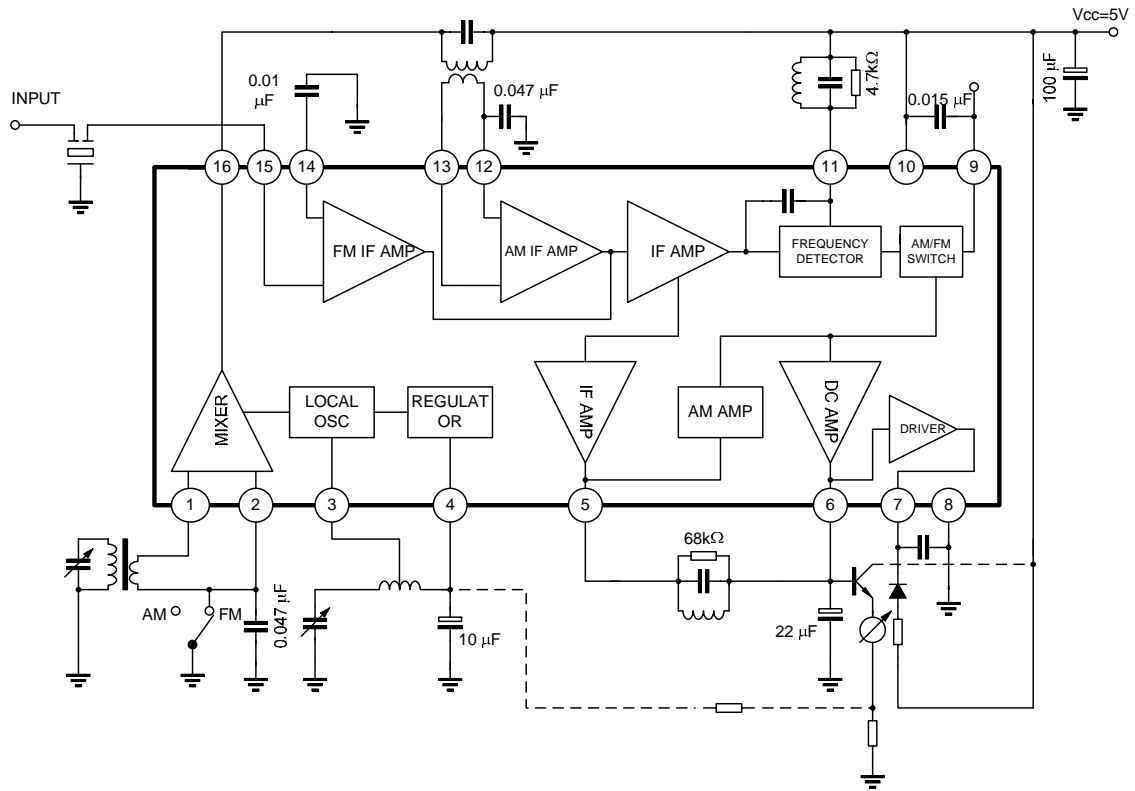
■ PIN CONFIGURATION



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■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Voltage	V _{CC}	8	V
Led Driving Current	I _{LAMP}	10	mA
Power Dissipation	P _D	750	mW
Operating Temperature	T _{OPR}	-25 ~ +75	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ DC ELECTRICAL CHARACTERISTICS (V_{CC}=5V)

PARAMETER	SYMBOL	TYP		UNIT
		AM	FM	
Pin 1 AM Mixer Input	V1	1.5	0	V
Pin 2 AM Mixer Bypass	V2	1.5	0	V
Pin 3 AM Local OSC	V3	2.3	2.3	V
Pin 4 Voltage Regulator	V4	2.3	2.3	V
Pin 5 AM IF Out	V5	1	0.9	V
Pin 6 Level Meter Out	V6	1	0.9	V
Pin 7 Led Driver Output	V7			V
Pin 8 GND	V8	0	0	V
Pin 9 Detector	V9	1.4	1.5	V
Pin 10 Vcc	V10	5	5	V
Pin 11 FM Decter Out	V11	5	5	V
Pin 12 AM IF Bypass	V12	1.5	1.5	V
Pin 13 AM IF Input	V13	1.5	1.5	V
Pin 14 FM IF Bypass	V14	1.5	1.5	V
Pin 15 FM IF Input	V15	1.5	1.5	V
Pin 16 AM Mixer Output	V16	5	5	V

■ AC ELECTRICAL CHARACTERISTICS

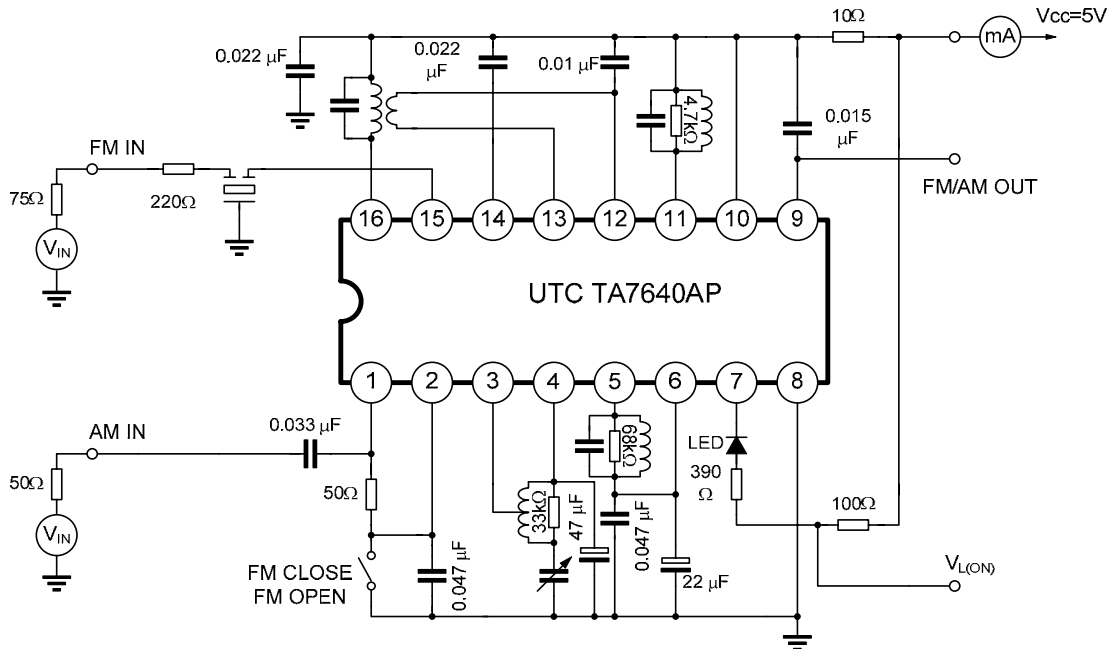
(Ta=25°C, V_{CC}=5V, FM; f=10.7MHz, Δf=22.5KHz, FM=400Hz AM; f=1MHz, Mod=30%,FM=400Hz)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Current	I _{CC(1)}	FM V _{IN} =0		10	15	mA
	I _{CC(2)}	AM V _{IN} =0		7	10	
FM						
Input Limiting Voltage	V _{IN(LIMIT)}	-3dB		40	46	dB _μ
Detector Output	V _{OD(FM)}	V _{IN} =66dB _μ	57	85	114	mVrms
Signal Noise Ratio	S/N	V _{IN} =80dB _μ		65		dB
Total Harmonic Distortion	THD	V _{IN} =80dB _μ		0.05		%
AM Rejection	AMR	V _{IN} =80dB _μ		38		dB _μ
Level Meter Driving Voltage	V _M	V _{IN} =100dB _μ	1.6	1.75	1.9	V
Led Driving Sensitivity	V _L	I _L =1mA		46	52	dB
AM						
Gain	G _V	V _{IN} =26dB _μ	20	30	60	mVrms
Detector Output Voltage	V _{OD(AM)}	V _{IN} =60dB _μ	65	95	125	mVrms
Signal To Noise Ratio	S/N	V _{IN} =60dB _μ		47		dB
Total Harmonic Distortion	THD	V _{IN} =60dB _μ		1		%
Signal Meter Output	V _M	V _{IN} =100dB _μ	1.6	1.75	1.9	V
Level Meter Driving Voltage	V _L	I _L =1mA		32		dB _μ
Oscillation Stop Voltage	V _{OSC}	RDUMP=∞		1.5		V
Pin 5 Output Impedance	R _{O9}	f=1KHZ		3		KΩ

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■ TEST CIRCUIT



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