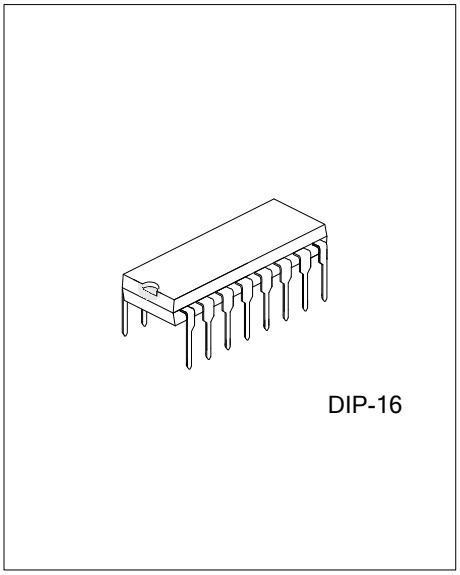
TA7640AP

LINEAR INTEGRATED CIRCUIT

AM/FM IF PROCESSOR



■ DESCRIPTION

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

■ FEATURES

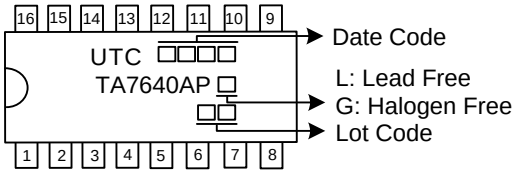
* Low operating current
* Low external component
* Internal AM/FM switch
* Wide operating voltage: V_{CC}=3.8V

■ ORDERING INFORMATION

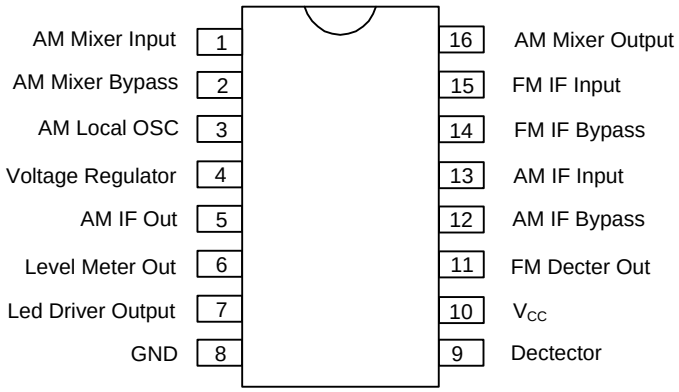
Ordering Number		Package	Packing
Lead Free	Halogen Free		
TA7640AP-D16-T	TA7640APL-D16-T	DIP-16	Tube

TA7640APG-D16-T (1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube (2) D16: DIP-16 (3) G: Halogen Free and Lead Free, L: Lead Free

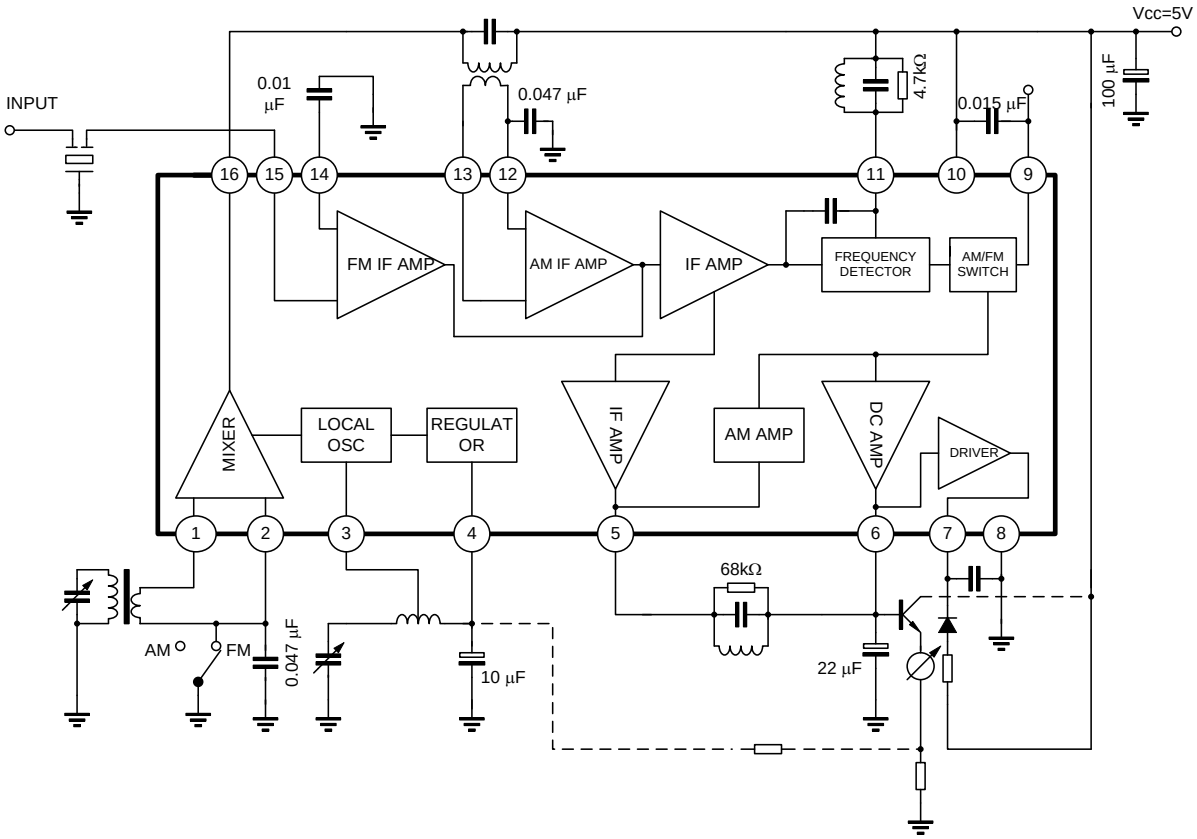
■ MARKING



■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

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

(T_A=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	dBμ
Detector Output	$V_{OD(FM)}$	V_{IN}=66dBμ	57	85	114	mVrms
Signal Noise Ratio	S/N	V_{IN}=80dBμ		65		dB
Total Harmonic Distortion	THD	V_{IN}=80dBμ		0.05		%
AM Rejection	AMR	V_{IN}=80dBμ		38		dBμ
Level Meter Driving Voltage	V_M	V_{IN}=100dBμ	1.6	1.75	1.9	V
Led Driving Sensitivity	V_L	I_L=1mA		46	52	dB
AM						
Gain	G_V	V_{IN}=26dBμ	20	30	60	mVrms
Detector Output Voltage	$V_{OD(AM)}$	V_{IN}=60dBμ	65	95	125	mVrms
Signal To Noise Ratio	S/N	V_{IN}=60dBμ		47		dB
Total Harmonic Distortion	THD	V_{IN}=60dBμ		1		%
Signal Meter Output	V_M	V_{IN}=100dBμ	1.6	1.75	1.9	V
Level Meter Driving Voltage	V_L	I_L=1mA		32		dBμ
Oscillation Stop Voltage	V_{OSC}	RDUMP=∝		1.5		V
Pin 5 Output Impedance	R09	f=1KHZ		3		KΩ

■ TEST CIRCUIT