

TA7640AP
TA7640AF

FM/AM IF SYSTEM

The TA7640AP and TA7640AF are FM/AM IF system IC designed for portable use. As compared with conventional IC, this IC is greatly improved in external parts counts and electrical characteristics, especially tweet and overload distortion.

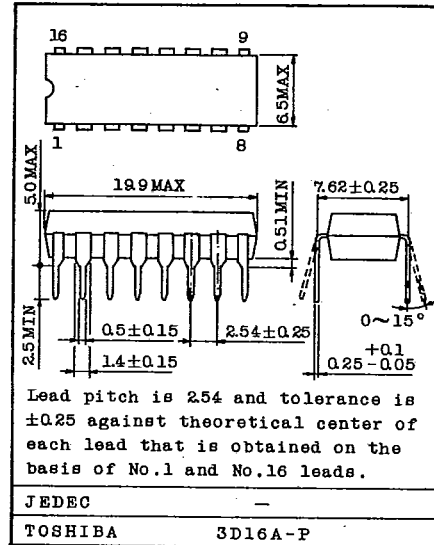
- Low Supply Current, AM:7mA, FM:10mA (Typ.)
- Few External Parts Counts
- Excellent Tweet
- Low Overload Distortion
- Tuning Indicator LED Driving Capability
: $I_{LAMP}=10mA$ (Max.)
- FM/AM Mode Switch Built-in
- Common Output for AM/FM
- Operating Supply Voltage Range : $V_{CC(opr)}=3 \sim 8V$

MAXIMUM RATINGS ($T_a=25^\circ C$)

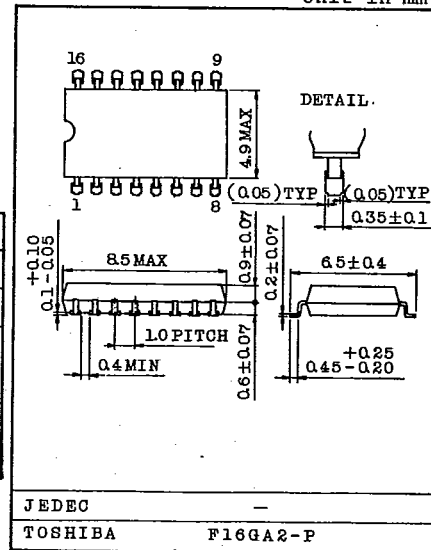
CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	8	V
Lamp Current		I_{LAMP}	10	mA
Power Dissipation (Note)	TA7640AP	P_D	750	mW
	TA7640AF		350	
Operating Temperature		T_{opr}	-25 ~ 75	$^\circ C$
Storage Temperature		T_{stg}	-55 ~ 150	$^\circ C$

Note : Derated above $T_a=25^\circ C$ in the proportion of 6mW/ $^\circ C$ for TA7640AP and 2.8mW/ $^\circ C$ for TA7640AF.

Unit in mm



Unit in mm



TA7640AP
TA7640AF

T-77-05-07

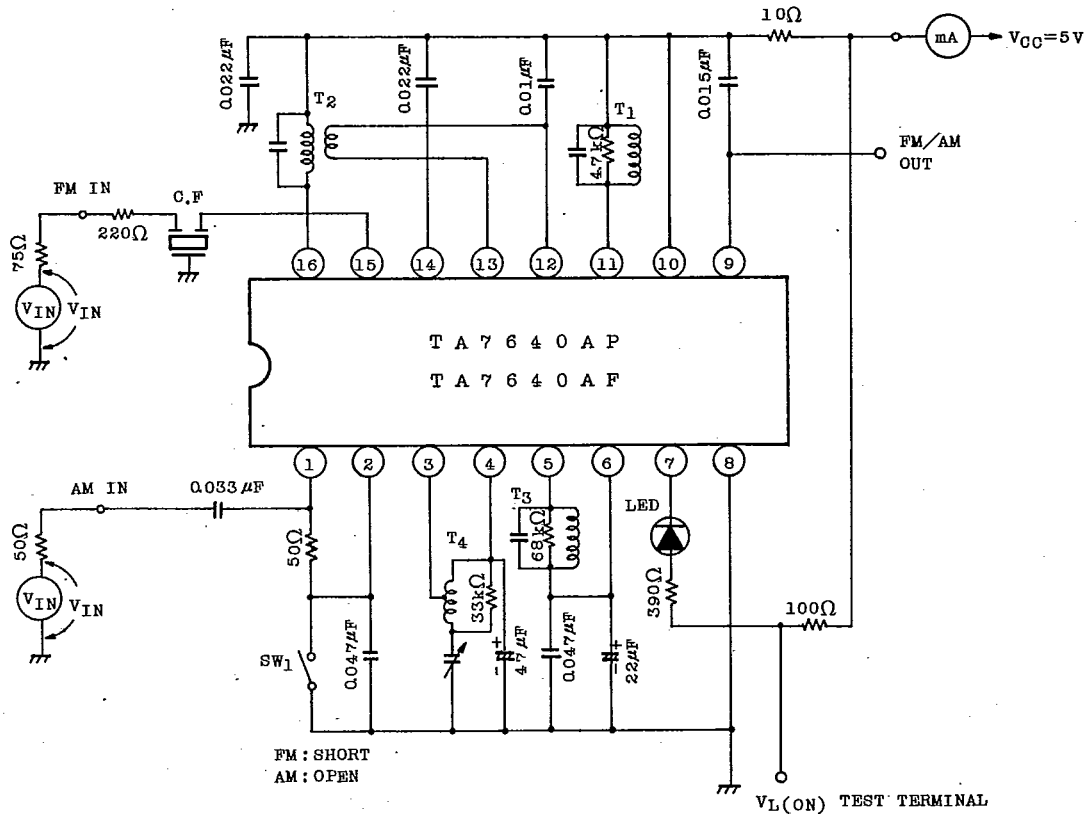
2. AC CHARACTERISTICS (Ta=25°C, VCC=5V, FM : f=10.7MHz, Δf=±22.5kHz, fm=400Hz)
AM : f=1MHz, Mod=30%, fm=400Hz

CHARACTERISTIC		SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current		ICC(1)	1	FM VIN=0	-	10	15	mA
		ICC(2)		AM VIN=0	-	7	10	
F M	Input Limiting Voltage	VIN(1im)	1	-3dB Limiting	-	40	46	dBμ
	Recovered Output Voltage	VOD	1	VIN=66dBμV	57	85	114	mVrms
	Signal to Noise Ratio	S/N	1	VIN=80dBμV	-	65	-	dB
	Total Harmonic Distortion	THD	1	VIN=80dBμV	-	0.05	-	%
	AM Rejection Ratio	AMR	1	VIN=80dBμV	-	38	-	dBμ
	Meter Drive Voltage	VM	1	VIN=100dBμV	1.6	1.75	1.9	V
	Lamp ON Sensitivity	VL	1	IL=1mA	-	46	52	dBμ
A M	Gain	Gv	1	VIN=26dBμV	20	30	60	mVrms
	Recovered Output Voltage	VOD	1	VIN=60dBμV	65	95	125	mVrms
	Signal to Noise Ratio	S/N	1	VIN=60dBμV	-	47	-	dB
	Total Harmonic Distortion	THD	1	VIN=60dBμV	-	1.0	-	%
	Meter Drive Voltage	VM	1	VIN=100dBμV	1.6	1.75	1.9	V
	Lamp ON Sensitivity	VL	1	IL=1mA	-	32	-	dBμ
	Local OSC Stop Voltage	Vstop	1	RDUMP=∞	-	1.5	-	V
Pin 5 Output Resistance		RO9	-	f=1kHz	-	3.0	-	kΩ

TA7640AP
TA7640AF

T-77-05-07

TEST CIRCUIT



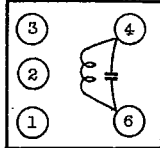
AUDIO LINEAR IC

TA7640AP TA7640AF

T-77-05-07

COIL DATA (TEST CIRCUIT)

T₁ FM DETECTOR COIL

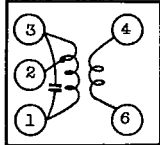


(BOTTOM VIEW)

C ₀ (pF)	f	Q ₀	TURNS
4-6	(MHz)	4-6	4-6
47	10.7	150	14

SUMIDA ELECTRIC CO., LTD.
: 44M-933A or SIMILAR
WIRE : 0.12mm ϕ UEW

T₂ AM IFT (MIX OUT)

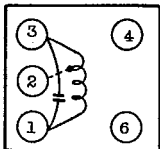


(BOTTOM VIEW)

C ₀ (pF)	f	Q ₀	TURNS		
1-3	(kHz)	1-3	1-2	2-3	4-6
180	455	110	90	62	8

SUMIDA ELECTRIC CO., LTD.
: 48T-423 or SIMILAR
WIRE : 0.07mm ϕ UEW

T₃ AM IFT (DET)

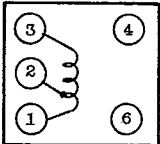


(BOTTOM VIEW)

C ₀ (pF)	f	Q ₀	TURNS
1-3	(kHz)	1-3	1-
180	455	110	152

SUMIDA ELECTRIC CO., LTD.
: 44M-935C or SIMILAR
WIRE : 0.07mm ϕ UEW

T₄ MW OSC



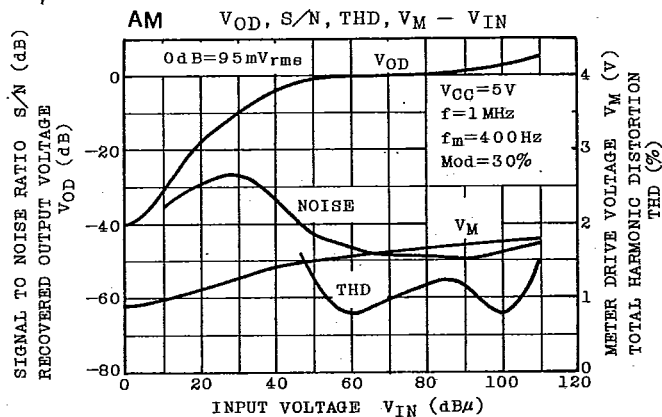
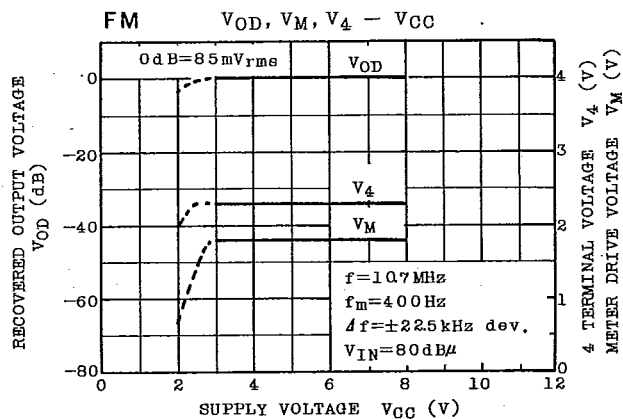
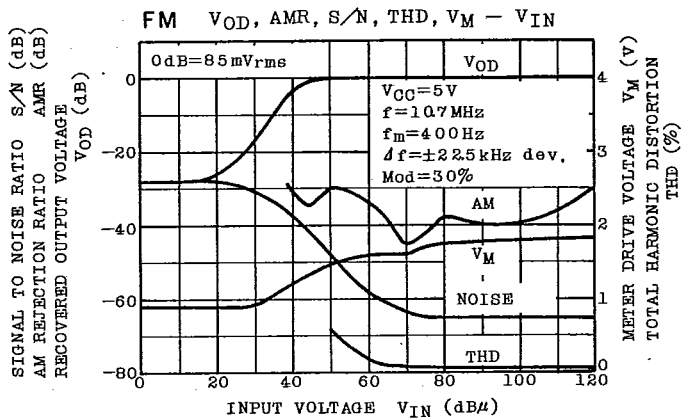
(BOTTOM VIEW)

f	L(μ H)	Q ₀	TURNS	
(kHz)	1-3	1-3	1-2	2-3
796	288	120	13	75

SUMIDA ELECTRIC CO., LTD.
: 0137-262 or SIMILAR
WIRE : 0.08mm ϕ UEW

TA7640AP
TA7640AF

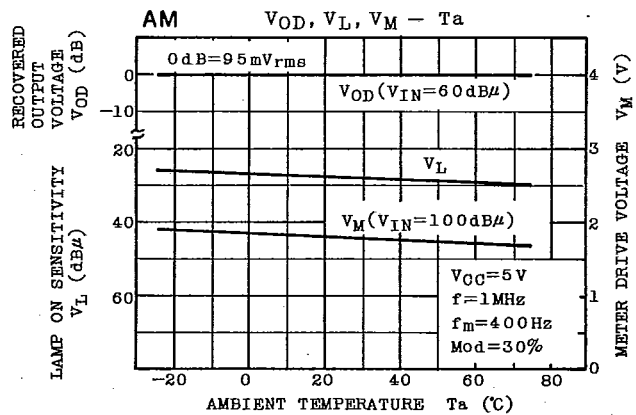
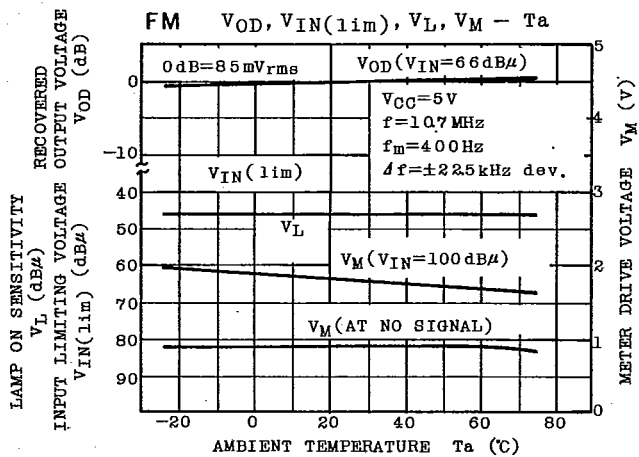
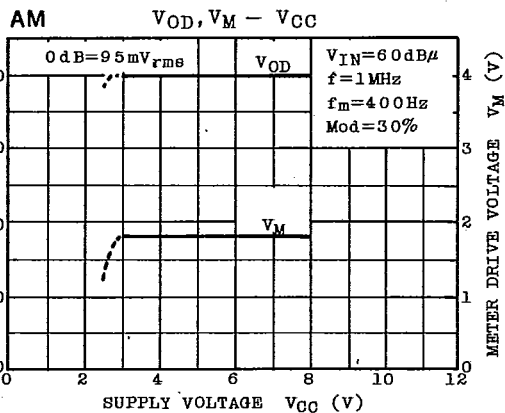
T-77-05-07



AUDIO LINEAR IC

TA7640AP
TA7640AF

T-77-05-07



TOSHIBA

