

9097247 TOSHIBA, ELECTRONIC

02E 17547 D

TA7757P
TA7757F

T-77-05-07

FM/AM IF SYSTEM (3V USE)

The TA7757P/F are FM/AM IF system ICs designed for portable radio applications.

It is especially suitable for small-sized low-voltage sets because of flat package and low current.

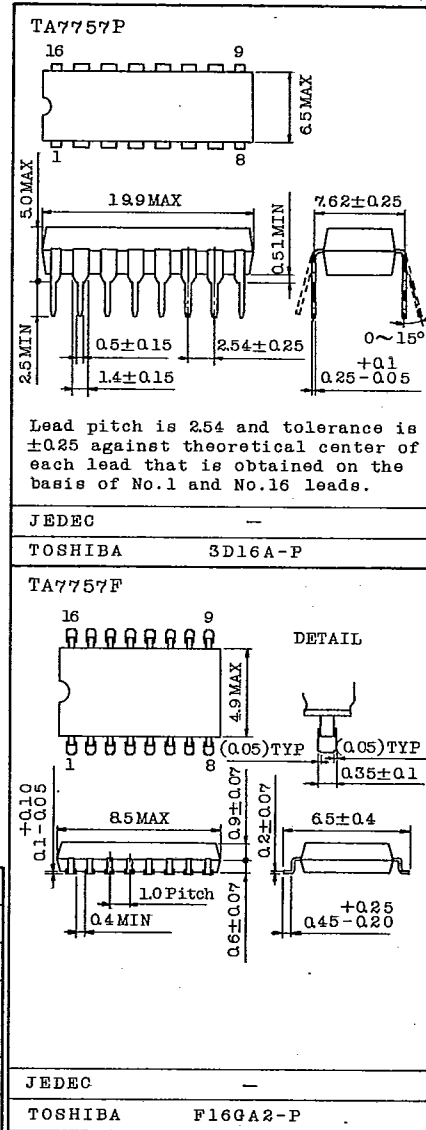
- . Small Installed Area and Few External Parts
- . Excellent Tweet
- . Low Overload Distortion
- . Low Supply Current AM : $I_{CC}=4.5\text{mA}$ (Typ.)
FM : $I_{CC}=8\text{mA}$ (Typ.)
- . Tuning Indicator LED Driving Capability
 $I_{LAMP}=10\text{mA}$ (Max.)
- . FM/AM Mode Switch Built-in
- . Common Output for AM/FM
- . Operating Supply Voltage Range : $V_{CC(opr)}=1.7\sim 6\text{V}$
- . Recommended Supply Voltage : $V_{CC}=3\text{V}$
- . The Item is Different Each Outlines
TA7757P : Dual in Line Package....Outline 3D16A-P
TA7757F : Flat Package.....Outline F16GA2-P

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	VCC	6	V
Lamp Current	I_{LAMP}	10	mA
Power Dissipation (Note)	TA7757P	750	mW
	TA7757F	350	
Operating Temperature	T_{opr}	$-25\sim 75$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55\sim 150$	$^\circ\text{C}$
Lamp Voltage	V_{LAMP}	8	V

Note : Derated above $T_a=25^\circ\text{C}$ in the proportion of $6\text{mW}/^\circ\text{C}$ for TA7757P and of $2.8\text{mW}/^\circ\text{C}$ for TA7757F.

Unit in mm



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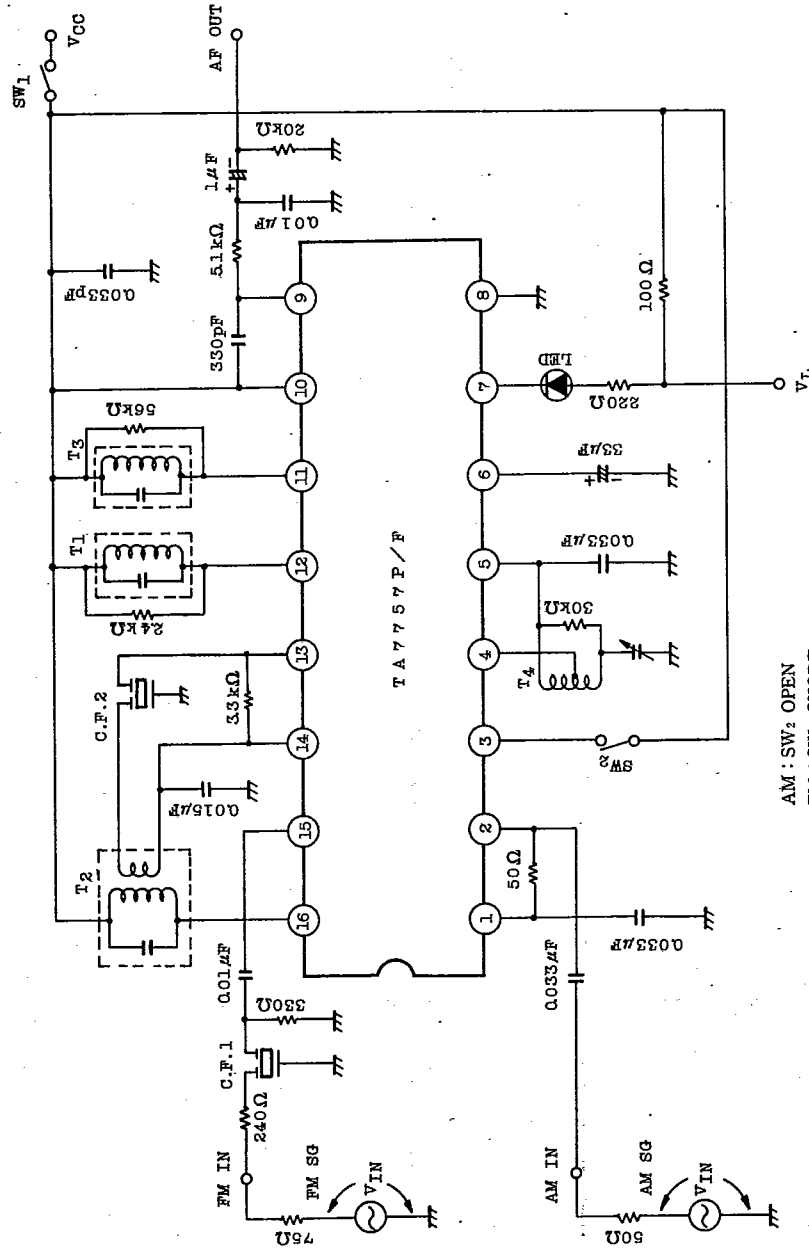
2. AC CHARACTERISTICS (Ta=25°C, VCC=3V, FM : f=10.7MHz, Af=±22.5kHz, fm=1kHz)
 AM : f=1MHz, Mod=30%, fm=1kHz

CHARACTERISTIC		SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	ICC(1)	1	FM VIN=0	-	8	11	mA	
	ICC(2)		AM VIN=0	-	4.5	7		
F M	Input Limiting Voltage	VIN(lim)	1	-3dB Limiting	-	49	54	dBμ
	Recovered Output Voltage	VOD	1	VIN=86dBμ	45	65	90	mVrms
	Signal to Noise Ratio	S/N	1	VIN=86dBμ	-	65	-	dB
	Total Harmonic Distortion	THD	1	VIN=86dBμ	-	0.1	-	%
	AM Rejection Ratio	AMR	1	VIN=86dBμ	-	40	-	dB
	Lamp ON Sensitivity	VL	1	IL=1mA	-	49	54	dBμ
A M	Gain	Gv	1	VIN=26dBμ	20	48	80	mVrms
	Recovered Output Voltage	VOD	1	VIN=60dBμ	50	71	110	mVrms
	Signal to Noise Ratio	S/N	1	VIN=60dBμ	-	42	-	dB
	Total Harmonic Distortion	THD	1	VIN=60dBμ	-	1.0	-	%
	Lamp ON Sensitivity	VL	1	IL=1mA	-	27	-	dBμ
	Local OSC Stop Voltage	Vstop	1	-	-	1.2	-	V
Output Resistance	RO9(FM)		f=1kHz	-	0.7	-	kΩ	
	RO9(AM)			-	4.4	-		

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TEST CIRCUIT



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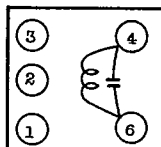
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COIL DATA (TEST CIRCUIT)

T1 FM DETECTOR COIL

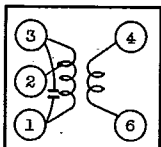


(BOTTOM VIEW)

C_0 (pF)	f	Q_0	TURNS
4-6	(MHz)	4-6	4-6
100	10.7	110	10

SUMIDA ELECTRIC Co., Ltd.
: 0133-3099-182 or SIMILAR
WIRE : 0.12mm ϕ UEW

T2 AM IFT (MIX OUT)

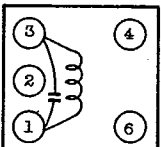


(BOTTOM VIEW)

C_0 (pF)	f	Q_0	TURNS		
1-3	(kHz)	1-3	1-2	2-3	4-6
180	455	110	88	60	8

SUMIDA ELECTRIC Co., Ltd.
: 0130-1289-217 or SIMILAR
WIRE : 0.07mm ϕ UEW

T3 AM IFT (DET)

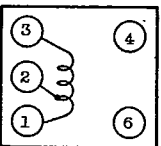


(BOTTOM VIEW)

C_0 (pF)	f	Q_0	TURNS		
1-3	(kHz)	1-3	1-2	2-3	4-6
180	455	110	146	6	13

SUMIDA ELECTRIC Co., Ltd.
: 0130-1289-218 or SIMILAR
WIRE : 0.07mm ϕ UEW

T4 MW OSC



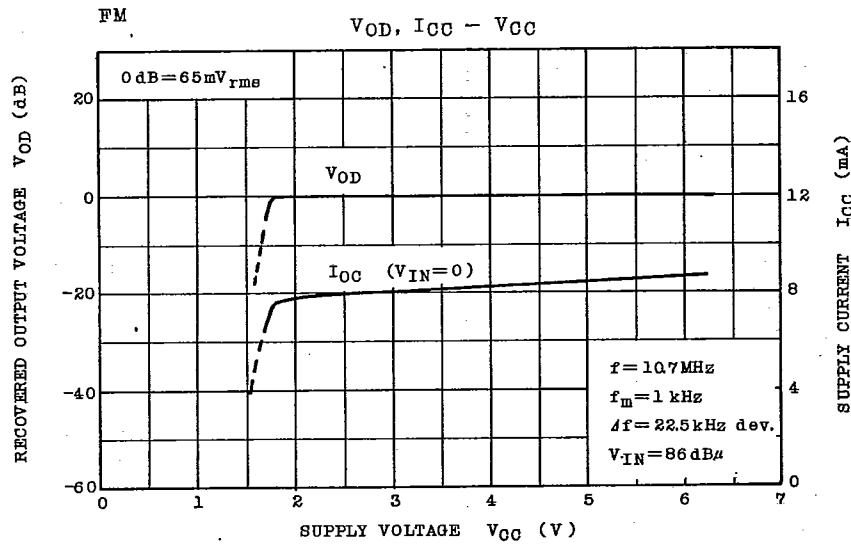
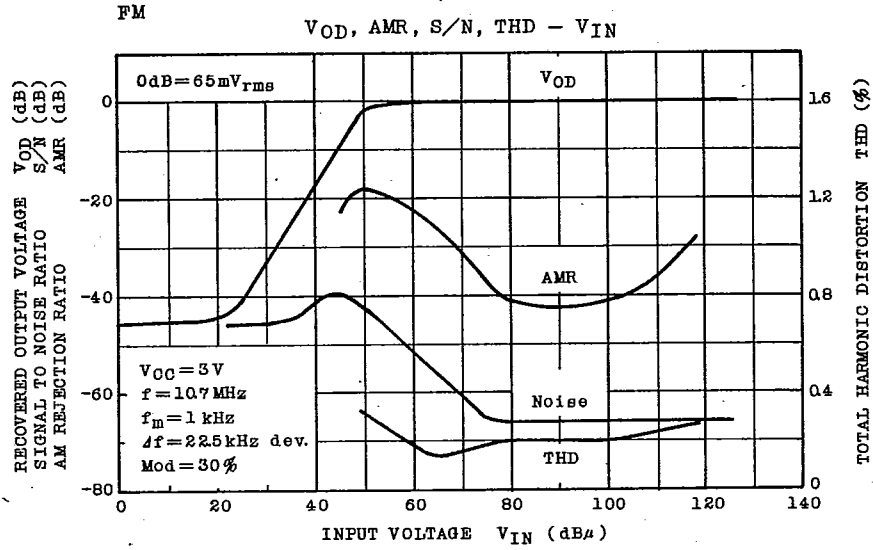
(BOTTOM VIEW)

f	L (μ H)	Q_0	TURNS	
(kHz)	1-3	1-3	1-2	2-3
796	288	125	13	75

SUMIDA ELECTRIC Co., Ltd.
: 0137-135-262 or SIMILAR
WIRE : 0.08mm ϕ UEW

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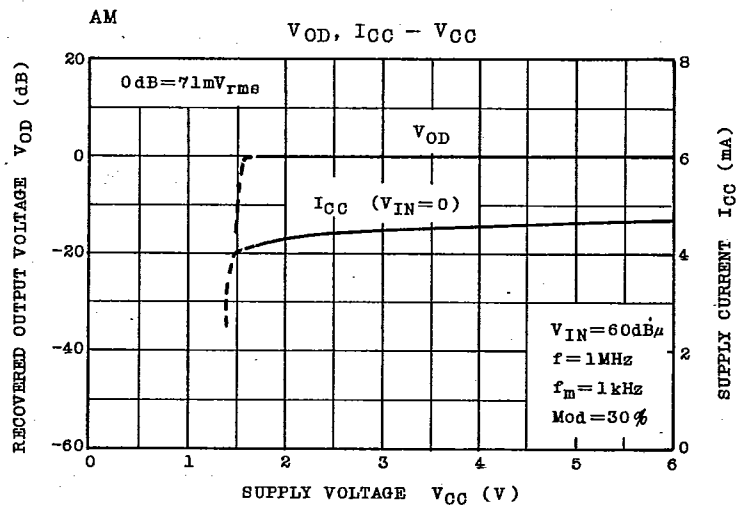
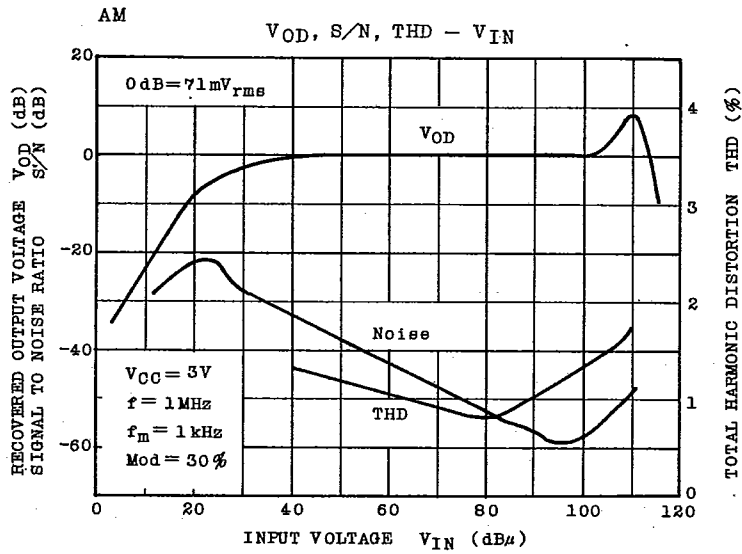
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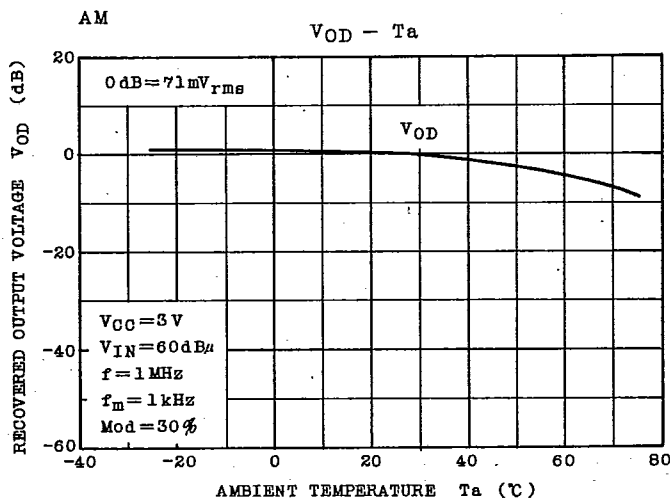
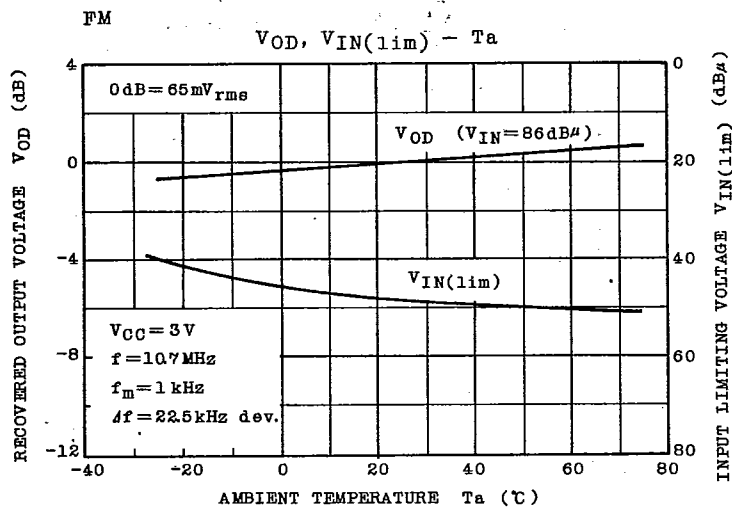
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