

9097247 TOSHIBA. ELECTRONIC

02E 17556 D

TA7758P

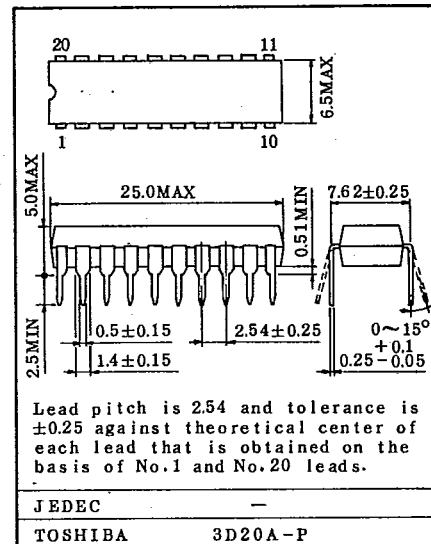
T-77-05-07

AM/FM IF SYSTEM

TA7758P has developed for music centers and radio cassette recorders. It is included many functions and it can be used for Digital Tuning System. High sensitivity of FM gain is obtained by use this IC with TA7358P.

- . FM IF Amp is 2 block.
- . Including the muting circuit using the low distortion VCA (Voltage Controlled Amplifier) and the muting attenuation and bandwidth are randomly adjusted by this circuit.
- . Including the excellent response of the directly LED driver circuit and it is capable to use the auto stop pulse for the DTS.
- . Excellent strong signal characteristics.
- . Randomly adjustable frequency characteristics of the AM detection output.
- . Built-in the AM/FM switch.
- . Common output for AM/FM.
- . Low quiescent current : AM=8mA(Typ.), FM=11mA(Typ.)
- . Few external parts.
- . Operating supply voltage range : $V_{CC}=3\sim 8V$

Unit in mm



Lead pitch is 2.54 and tolerance is ± 0.25 against theoretical center of each lead that is obtained on the basis of No.1 and No.20 leads.

JEDEC

TOSHIBA 3D20A-P

Weight : 1.4g

MAXIMUM RATINGS (Ta=25°C)

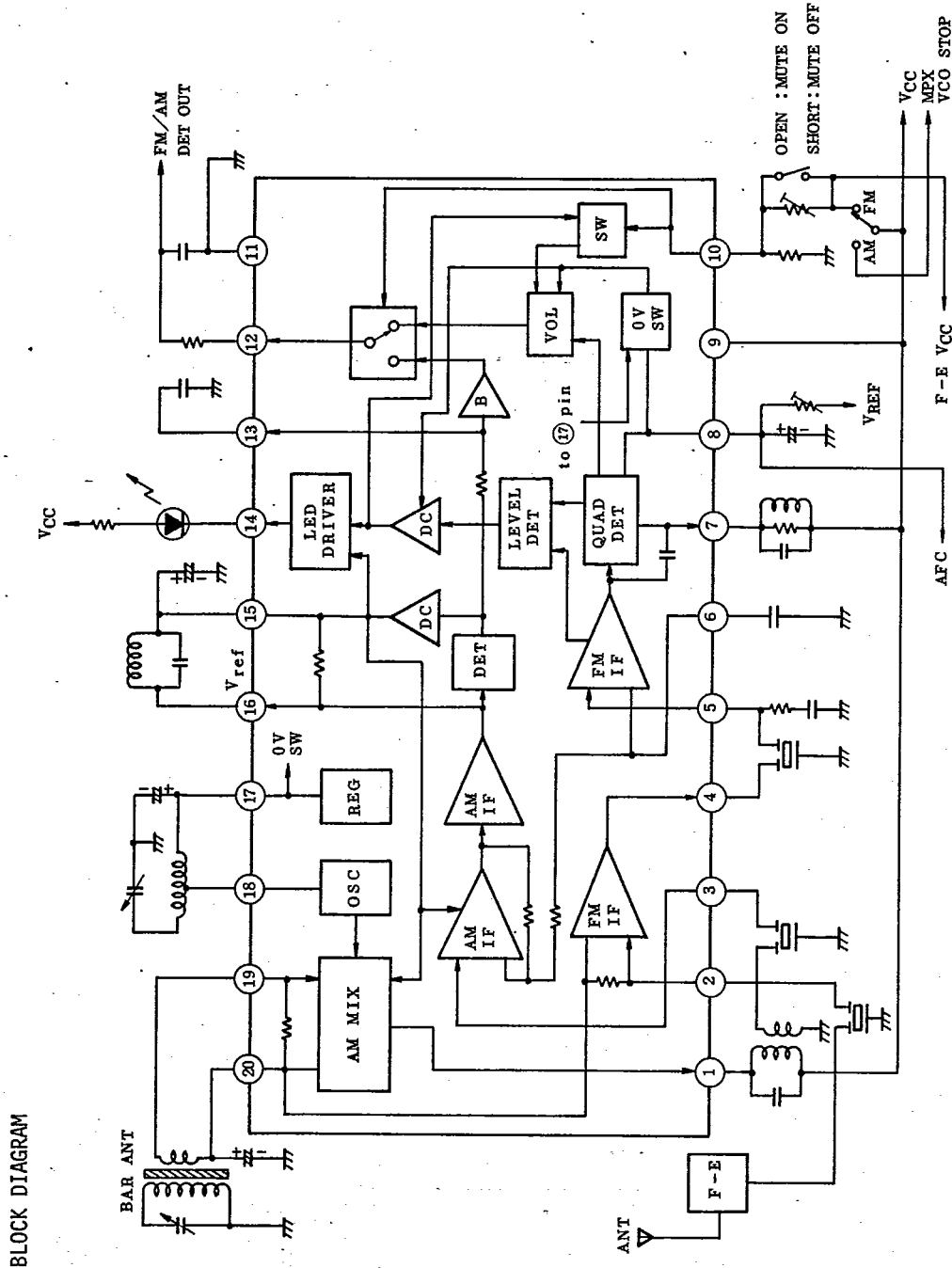
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	8	V
Lump Current	I_{LAMP}	10	mA
Power Dissipation (Note)	PD	1200	mW
Operating Temperature	T_{opr}	-25~75	°C
Storage Temperature	T_{stg}	-55~150	°C

Note: Derated above $T_a=25^\circ C$ in the proportion of 9.6mW/°C.

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BLOCK DIAGRAM

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ELECTRICAL CHARACTERISTICS

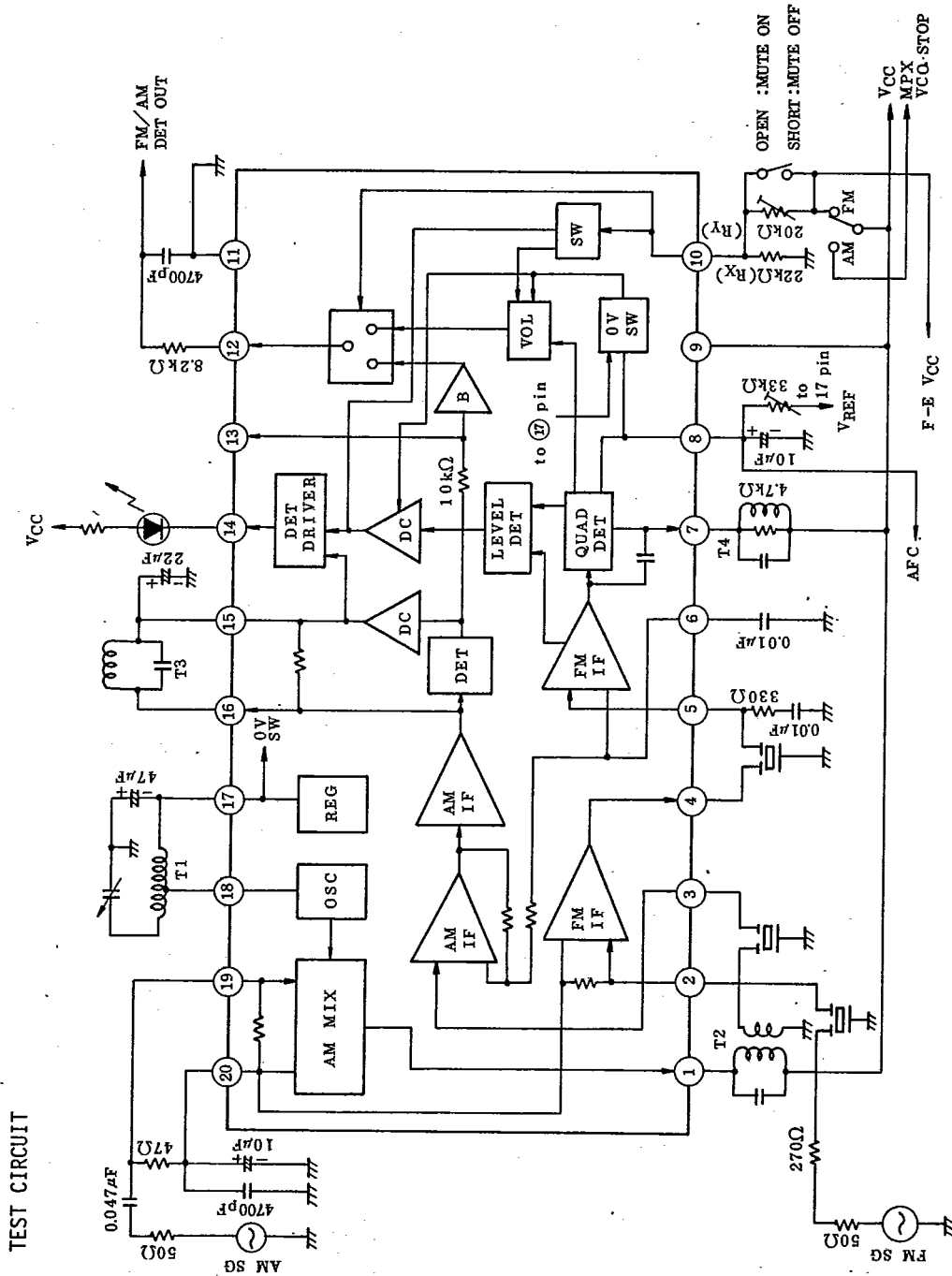
Unless otherwise specified: $V_{CC}=5V$, $T_a=25^\circ C$ FM : $f=10.7MHz$, $f_m=1kHz$, $\Delta f=\pm 22.5kHz$ dev.AM : $f=1MHz$, $f_m=1kHz$, Mod=30%

CHARACTERISTIC		SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Current		$I_{CC}(FM)$		$V_{IN}=0$	-	10	16	mA	
		$I_{CC}(AM)$		$V_{IN}=0$	-	6.5	10.4		
FM	Input Limiting Voltage	$V_{IN}(lim)$		-3dB Limiting	-	35	40	dB μ	
	Recovered Output Voltage	VOD		$V_{IN}=80dB\mu$	83	110	138	mVrms	
	Signal to Noise Ratio	S/N		$V_{IN}=80dB\mu$	-	70	-	dB	
	Total Harmonic Distortion	THD		$V_{IN}=80dB\mu$	-	0.1	-	%	
	AM Rejection Ratio	AMR		$V_{IN}=80dB\mu$	-	40	-	dB	
	Muting	Attenuation	ATT		$K=0.6$	50	80	-	dB
		Band Width	BWMUTE		$K=0.6, -3dB, R=33k\Omega$	-	175	-	kHz
	Lamp ON Sensitivity	V_L		$I_L=1mA$	-	38	44	dB μ	
	Meter Drive Voltage	V_M		$V_{IN}=80dB\mu$	1.6	1.7	1.9	V	
	Gain	G_v		$V_{IN}=26dB\mu$	37	60	85	mVrms	
AM	Recovered Output Voltage	VOD		$V_{IN}=60dB\mu$	61	83	110	mVrms	
	Signal to Noise Ratio	S/N		$V_{IN}=60dB\mu$	-	51	-	dB	
	Total Harmonic Distortion	THD		$V_{IN}=60dB\mu$	-	0.4	-	%	
	Lamp ON Sensitivity	V_L		$I_L=1mA$	-	25	31	dB μ	
	Meter Drive Voltage	V_M		$V_{IN}=60dB\mu$	1.3	1.4	1.5	V	
	Local OSC Stop Voltage	VSTOP			-	-	2.0	V	
	Output Resistor	FM	$R_o(FM)$			-	2.0	-	k Ω
AM		$R_o(AM)$			-	2.0	-		

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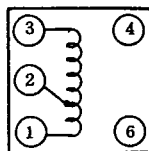
TEST CIRCUIT

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T-77-05-07

COIL DATA

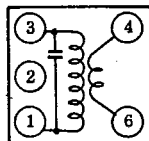
T1 AM OSC



f (kHz)	L (μ H)	Q _o	TURN		WIRE (mm ϕ)
	1-3		1-3	1-2	
796	288	115	13	73	0.08 UEW

SUMIDA ELECTRIC Co., Ltd : 4147-1356-038 or SIMILAR

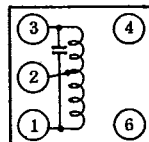
T2 AM MIX



f (kHz)	C _o (pF)	Q _o	TURN		WIRE (mm ϕ)
	1-3		1-3	1-3	
455	180	120	180	15	0.06 UEW

SUMIDA ELECTRIC Co., Ltd : 2150-2162-165 or SIMILAR

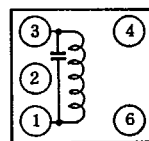
T3 AM DET



f (kHz)	C _o (pF)	Q _o	TURN		WIRE (mm ϕ)
	1-3		1-3	1-2	
455	180	95	105	73	0.06 UEW

SUMIDA ELECTRIC Co., Ltd : 2150-2173-137 or SIMILAR

T4 FM DET



f (MHz)	C _o (pF)	Q _o	TURN	WIRE (mm ϕ)
	1-3		1-3	
10.7	47	165	16	0.09 UEW

SUMIDA ELECTRIC Co., Ltd : 2153-4095-122 or SIMILAR

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