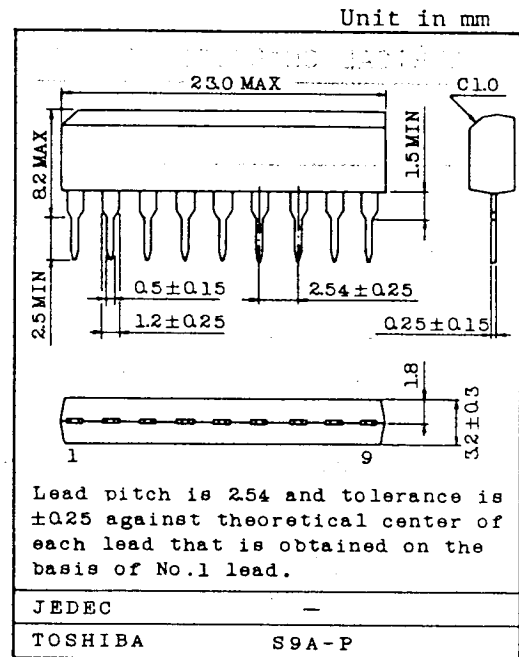


FOR FM IF SYSTEM

- 3 Stage Differential IF Amplifier.
- Differential Peak Detector.
- Muting Circuit.
- Signal Meter Drive Circuit.
- Single In-line Package : 9 pin.
- High Recovered Output Voltage : $V_{OD}=500mV_{rms}$ (Typ.)
- Low Distortion : THD=0.1% (Typ.)
- Wide Operating Supply Voltage Range :
 $V_{CC}=8\sim 15V$ (Typ.)
- Signal Meter Drive Voltage : $V_3=4V$ (Typ.)
- Variable Muting Point.
- Muting Off at Open Terminal.
- Simplified Single Coil Tuning.
- Very Few External Parts.

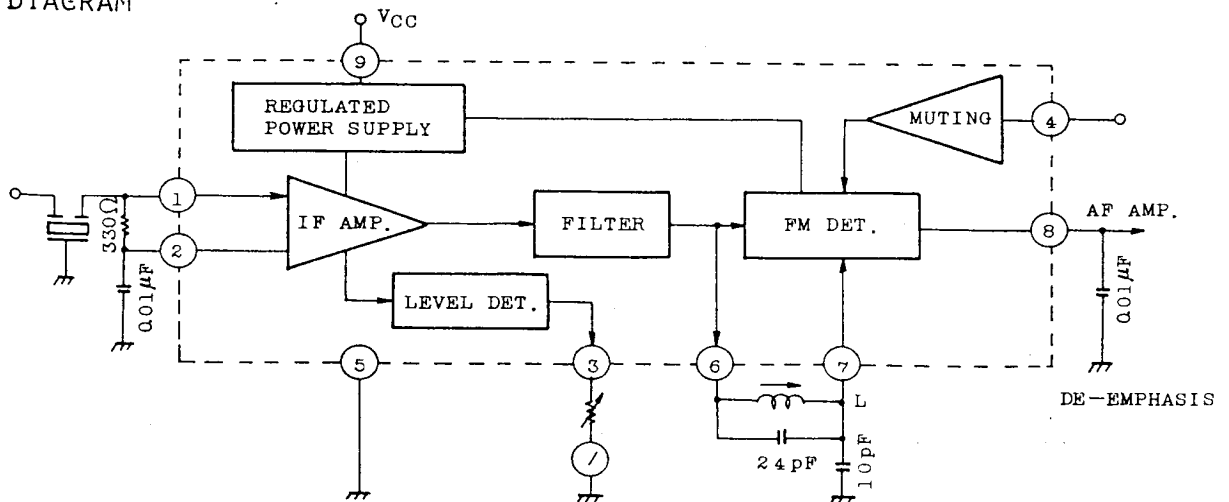


MAXIMUM RATINGS (Ta=25°)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	15	V
Input Voltage	V _{IN}	0.7	V
Power Dissipation (Note)	P _D	750	mW
Operating Temperature	T _{opr}	-25 ~ 75	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C

Note: Derated above $T_a=25^{\circ}\text{C}$
in the proportion of
 $4\text{mW}/^{\circ}\text{C}$.

BLOCK DIAGRAM



AUDIO LINEAR IC

ELECTRICAL CHARACTERISTICS (V_{CC}=12V, f=10.7MHz, f_m=400Hz, T_a=25°C)

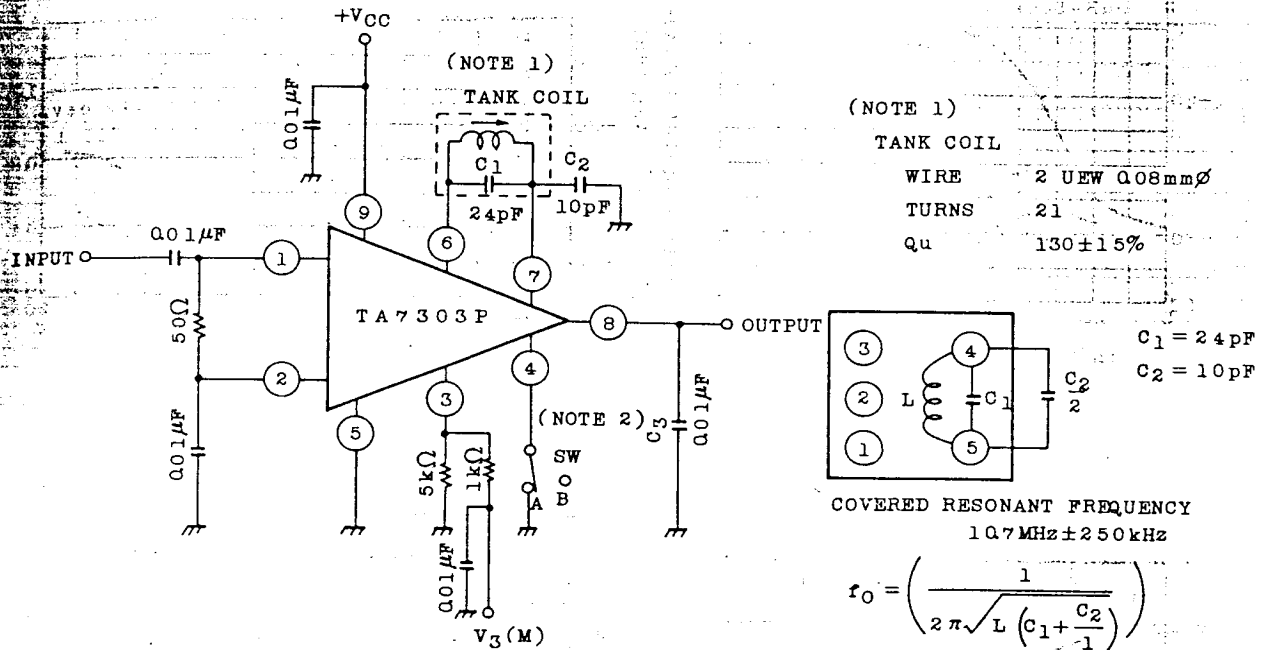
CHARACTERISTIC		SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current		I _{CC}	1	V _{IN} =0	10	14	18	mA
Input Limiting Voltage		V _{IN(lim)}	1	4F=±75kHz dev. -3dB LIMITING	-	50	55	dBμV
AM Rejection Ratio		AMR	1	FM: 4F=±75kHz dev. AM: 30% Mod. V _{IN} =80dBμV	-	50	-	dB
Recovered Output Voltage		V _{OD}	1	4F=±75kHz dev. V _{IN} =80dBμV	300	500	700	mV _{rms}
Total Harmonic Distortion		THD	1	4F=±22.5kHz dev. V _{IN} =80dBμV	-	0.1	-	%
Signal to Noise Ratio		S/N	1	4F=±75kHz dev. V _{IN} =80dBμV	-	75	-	dB
Muting Attenuation		MA	1	4F=±75kHz dev. V _{IN} =80dBμV, V ₄ =0	-	70	-	dB
Meter Drive Voltage		V ₃ (Max.)	1	V _{IN} =110dBμV	-	4	-	V
Input Impedance	Parallel Input Resistance	r _{ip}	-	f=10.7MHz, 1 pin-GND	-	5	-	kΩ
	Parallel Input Capacitance	c _{ip}	-		-	4.5	-	pF
Output Impedance	Parallel Output Resistance	r _{op}	-	f=10.7MHz, 6 pin-GND	-	1.3	-	kΩ
	Parallel Output Capacitance	c _{op}	-		-	4	-	pF
Output Resistance		R _O	-	f=400Hz, 8 pin-GND	-	7.7	-	kΩ

Note: V_{OD} Ranck (at 4f=±22.5kHz)

RANK	MIN.	MAX.	UNIT
B	90	150	mV _{rms}
C	130	210	mV _{rms}

TOSHIBA

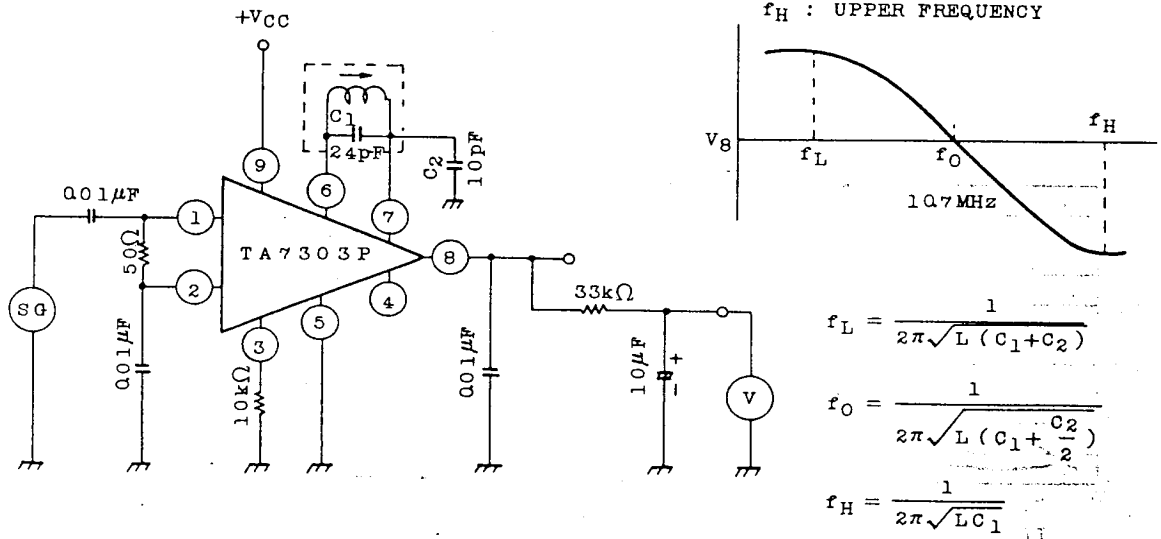
TEST CIRCUIT 1



(Note 1) Tuning coil is adjusted to make recovered output voltage maximum at $f=10.7\text{MHz}$

(Note 2) SW ; To A for muting attenuation test only.

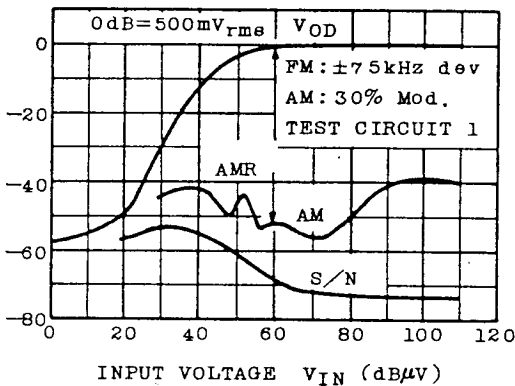
TEST CIRCUIT 2



TA7303P

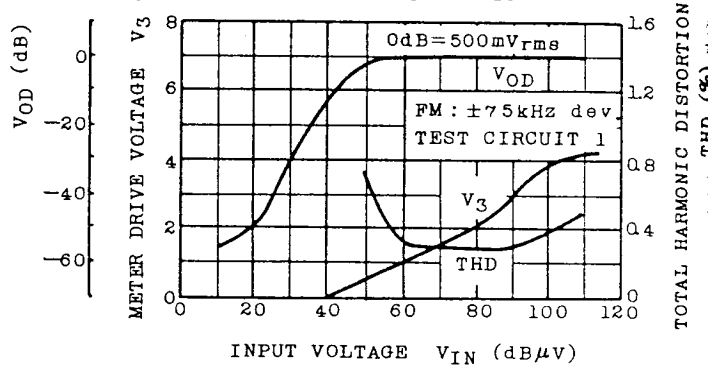
RECOVERED OUTPUT VOLTAGE V_{OD}
AM REJECTION RATIO AMR
SIGNAL TO NOISE RATIO S/N (dB)

$V_{OD}, AMR, S/N - V_{IN}$



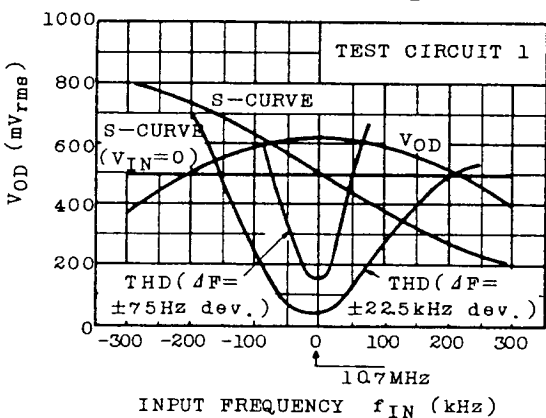
METER DRIVE VOLTAGE V_3 (V)

$V_{OD}, THD, V_3 - V_{IN}$



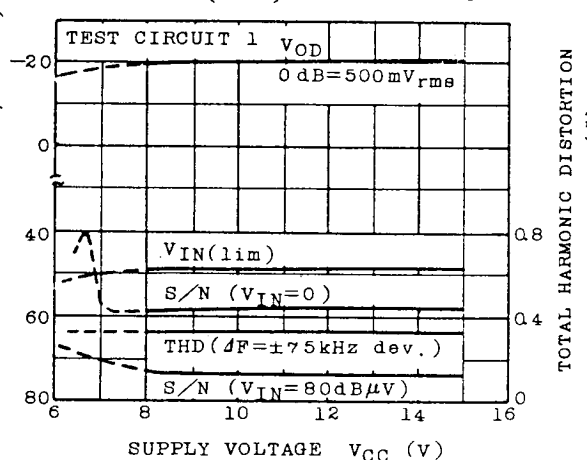
RECOVERED OUTPUT VOLTAGE V_{OD} (mV_{rms})

$V_{OD}, THD - f_{IN}$



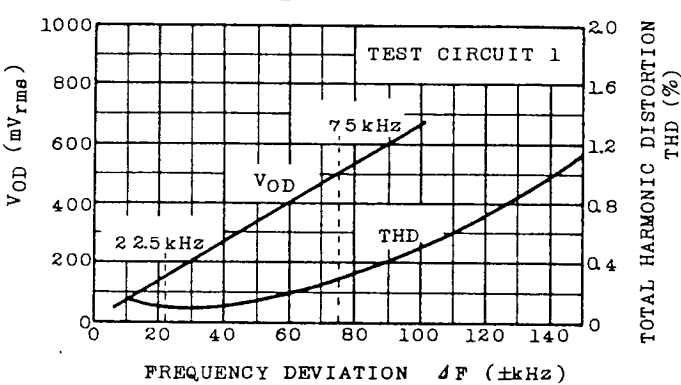
RECOVERED OUTPUT VOLTAGE V_{OD} (dB)
LIMITING VOLTAGE $V_{IN(lim)}$ (dBμV)
SIGNAL TO NOISE RATIO S/N (dB)

$V_{OD}, V_{IN(lim)}, THD, S/N - V_{CC}$



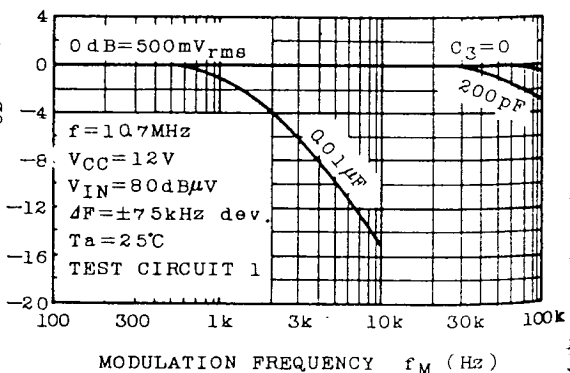
RECOVERED OUTPUT VOLTAGE V_{OD} (mV_{rms})

$V_{OD}, THD - \Delta F$

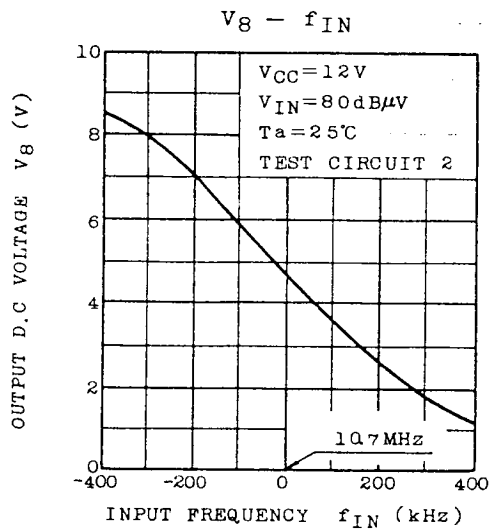
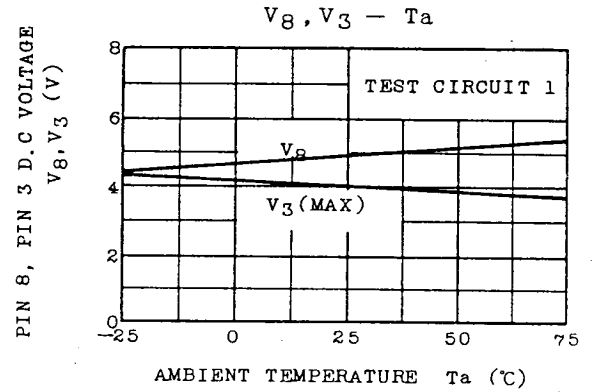
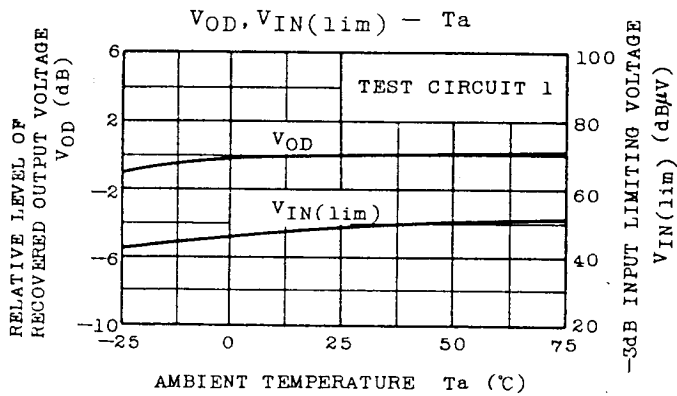
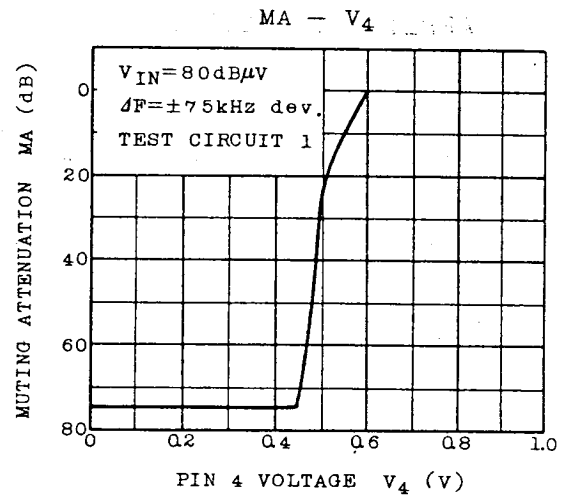
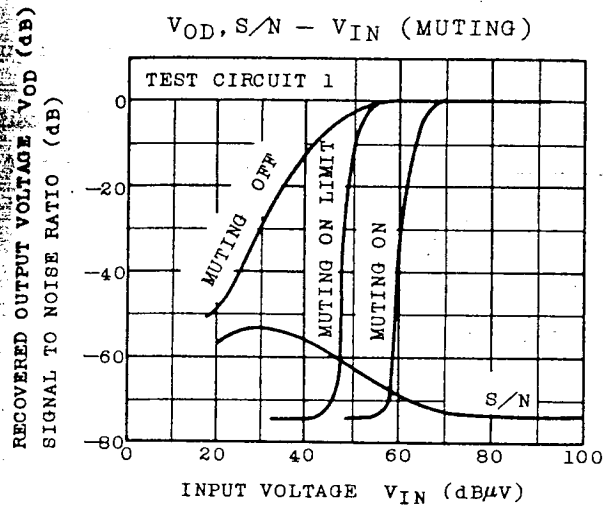


RECOVERED OUTPUT VOLTAGE V_{OD} (dB)

$V_{OD} - f_M$

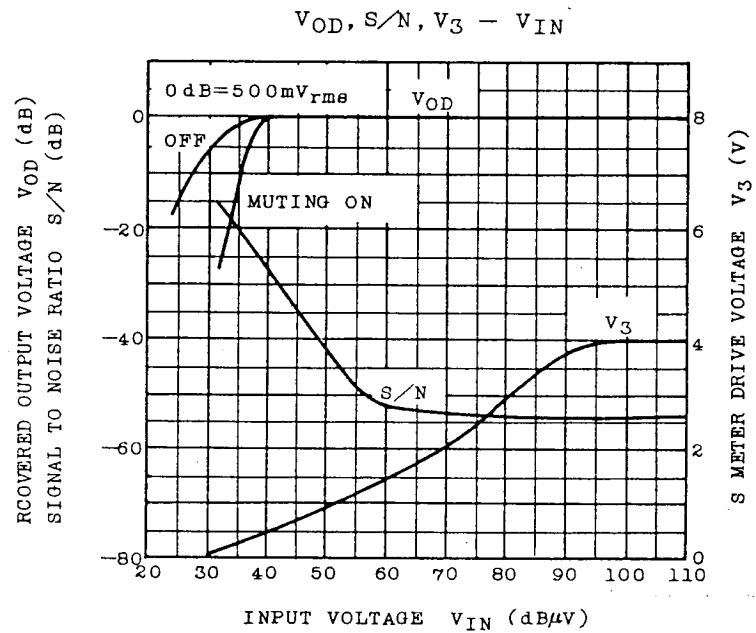
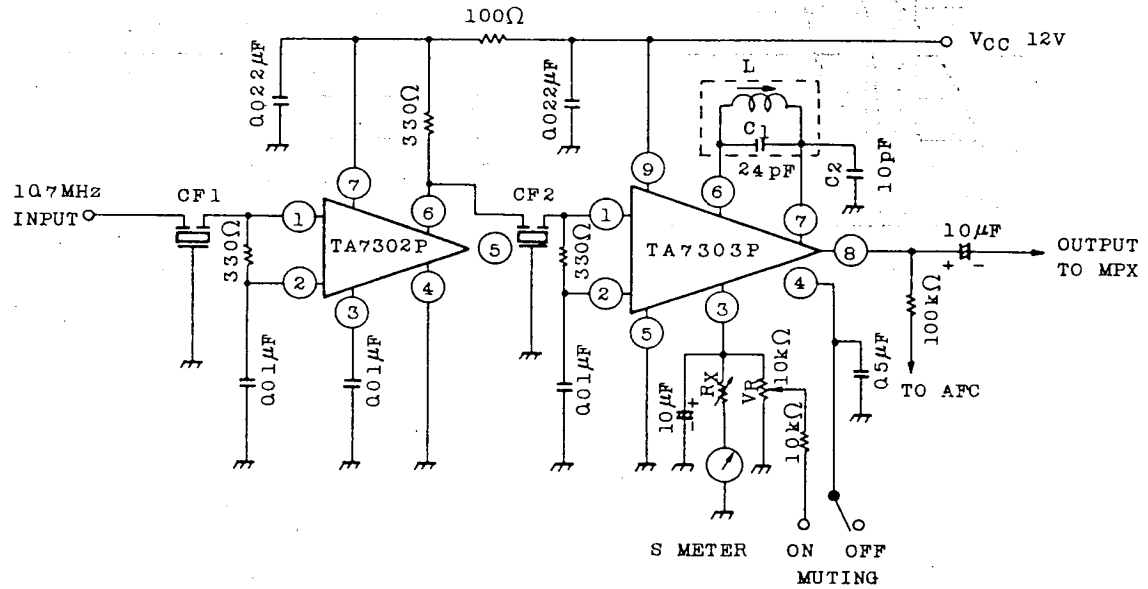


TOSHIBA



TA7303P

APPLICATION CIRCUIT



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