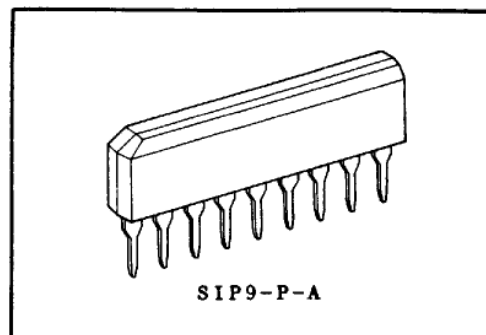


PLL FM STEREO MULTIPLEX (3V USE)

The TA7370P/F are PLL FM stereo multiplex 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 Pilot Lamp Sensitivity
: $V_L(ON)=9mV_{rms}(Typ.)$
- . Operating Supply Voltage Range : $V_{CC}(opr)=1.6\sim 5V$
- . Suitable for LED Driving : $I_{LAMP}=8mA(Max.)$
- . VCO Stop Capability (The VCO is stopped when the L.P.F.2 terminal is connected to the power supply line, and then the stereo indicator is turned off.)
- . Easy Adjustment (The monitored free running frequency of VCO is 38kHz at Stereo Lamp terminal.)



Weight: 0.92g(Typ.)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	6	V
Lamp Voltage		V_{LAMP}	8	V
Lamp Current		I_{LAMP}	8	mA
Power Dissipation (Note)	TA7370P	P_D	500	mW
Operating Temperature		T_{opr}	$-25\sim 75$	$^\circ C$
Storage Temperature		T_{stg}	$-55\sim 150$	$^\circ C$

Note: Derated above $T_a=25^\circ C$ in the proportion of
4mW/ $^\circ C$ for TA7370P.

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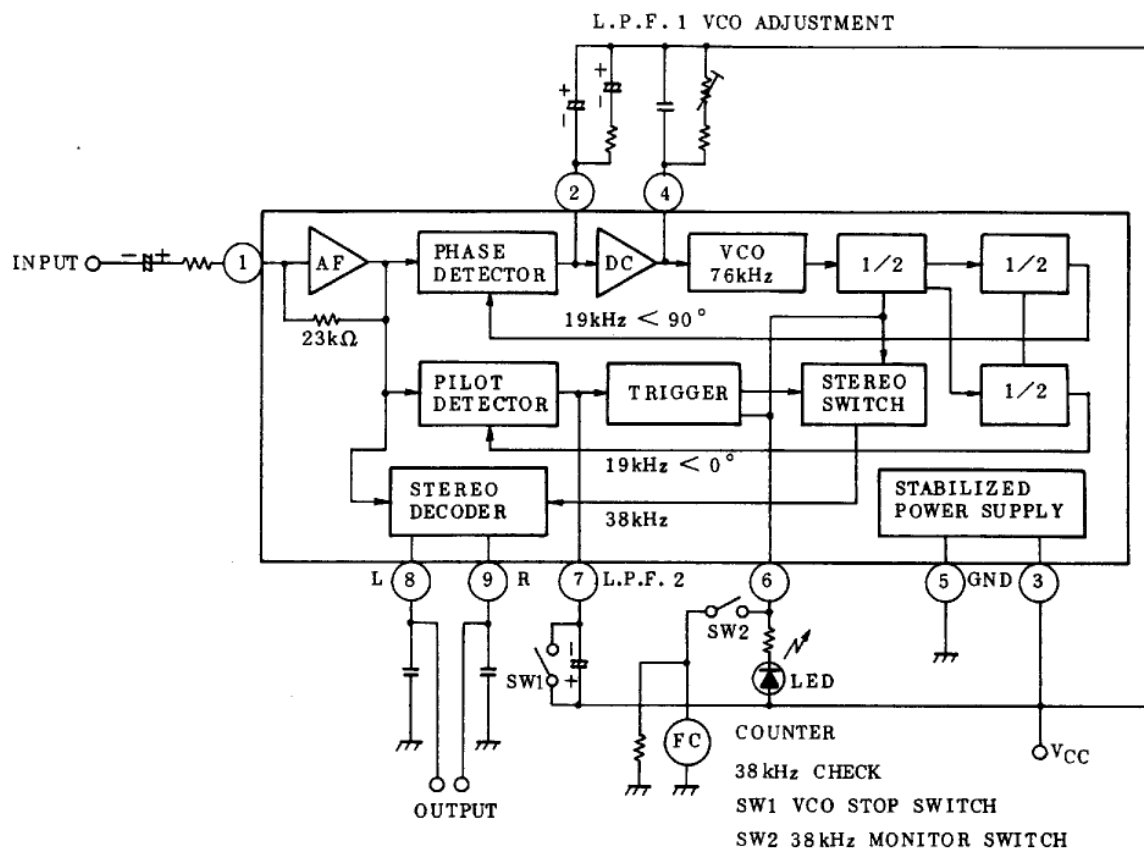
GT1A120D

TA7370P-1

1991-9-18

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BLOCK DIAGRAM



ELECTRICAL CHARACTERISTICS

1. DC CHARACTERISTICS (Ta=25°C, VCC=3V, Terminal Voltage at No Signal)

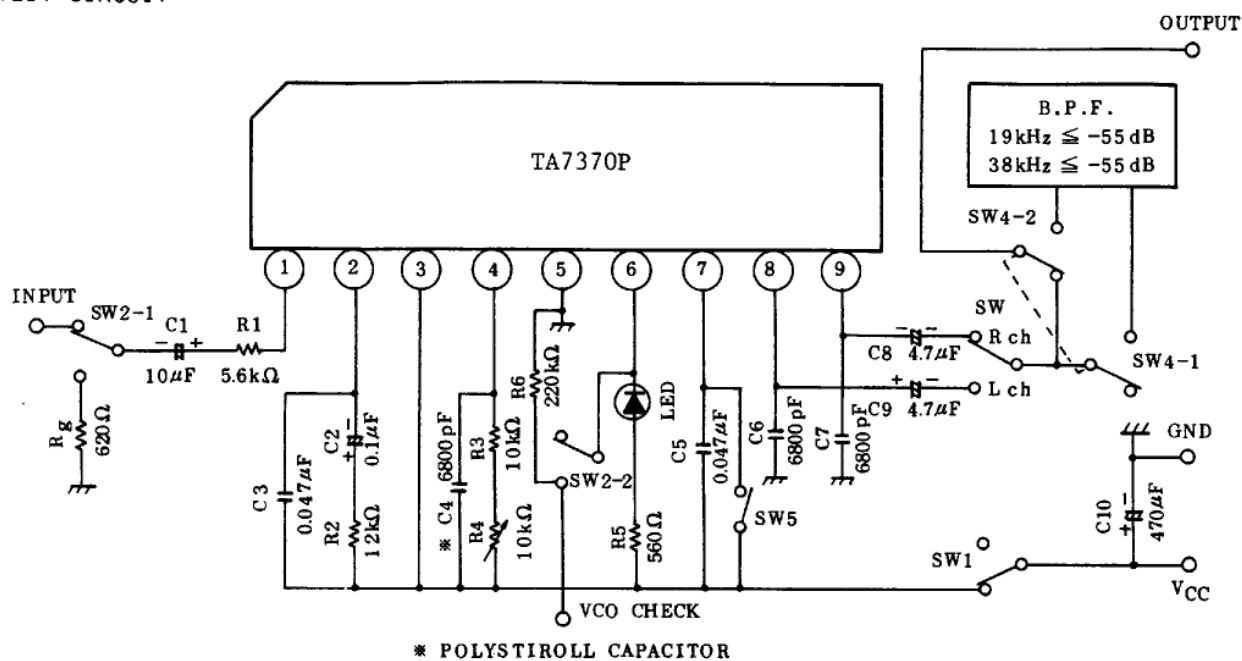
TERMINAL	CHARACTERISTIC	SYMBOL	TYP.	UNIT
1	INPUT	V1	0.2	V
2	L.P.F.1	V2	2.6	V
3	VCC	V3	3.0	V
4	VCO	V4	2.8	V
5	GND	V5	0	V
6	ST. LAMP	V6	-	V
7	L.P.F.2	V7	2.6	V
8	L-CH OUTPUT	V8	1.0	V
9	R-CH OUTPUT	V9	1.0	V

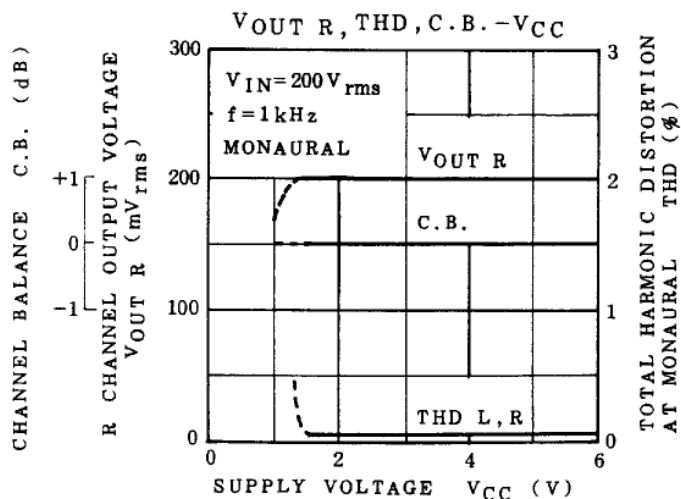
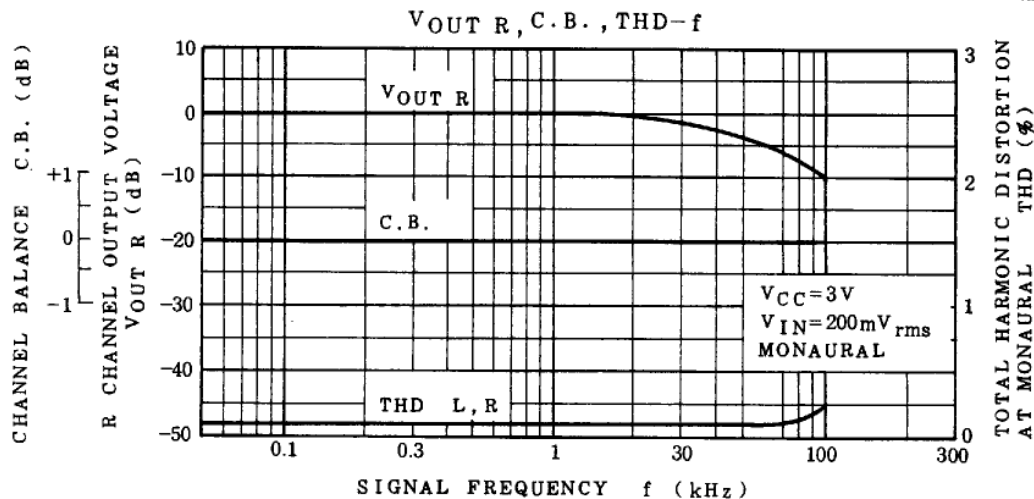
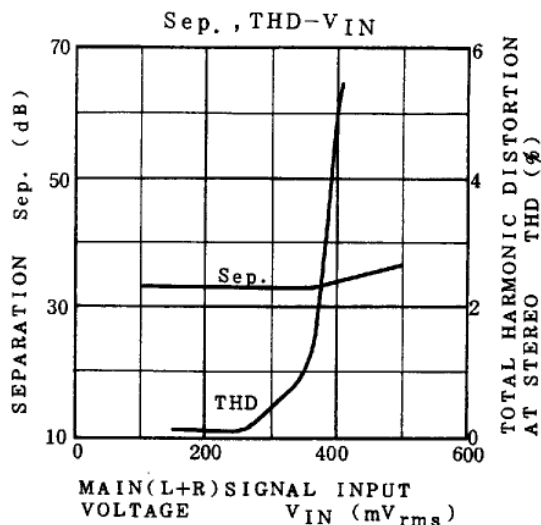
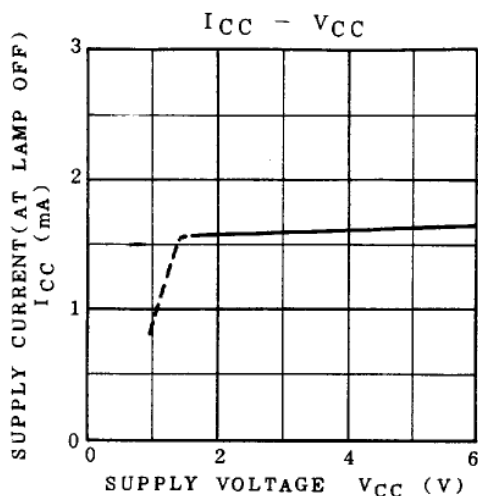
2. AC CHARACTERISTICS (Unless otherwise specified, $T_a=25^\circ\text{C}$, $V_{CC}=3\text{V}$, $f=1\text{kHz}$)

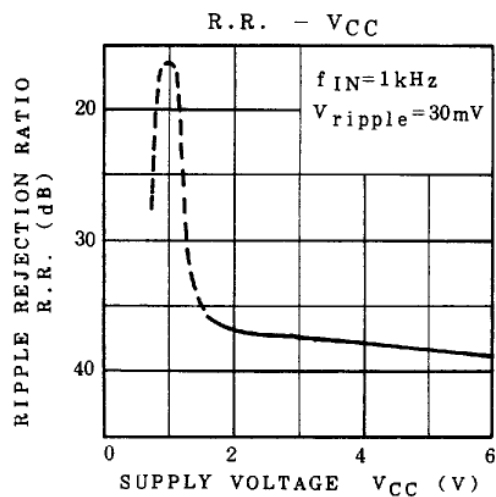
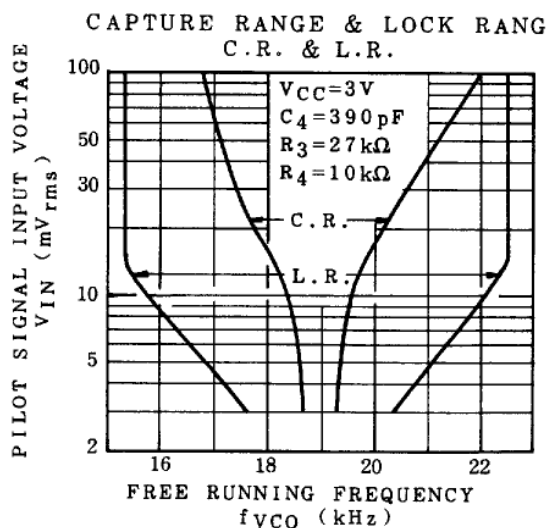
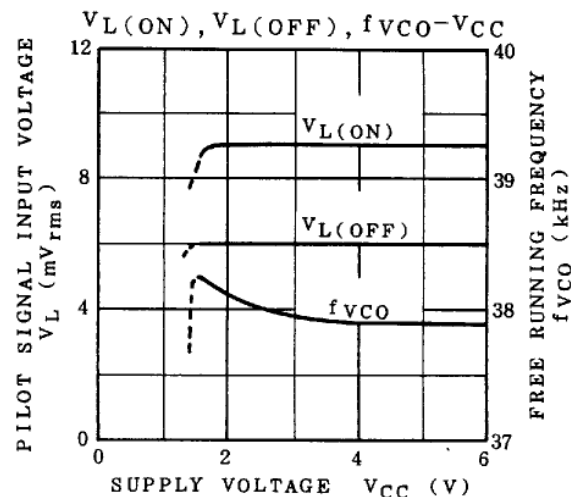
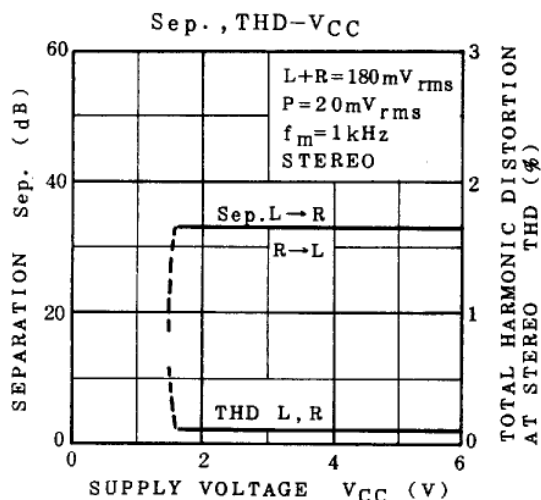
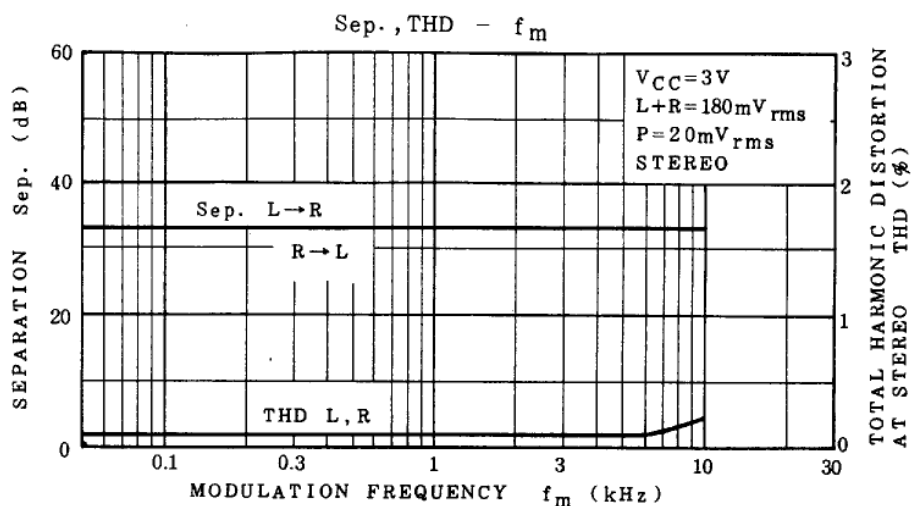
CHARACTERISTIC		SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current		I_{CC}	-	at Lamp off	-	1.6	3.0	mA
Input Resistance		R_{IN}	-		-	23	-	$k\Omega$
Output Resistance		R_{OUT}	-		-	6.8	-	$k\Omega$
Max. Composite Signal Input Voltage		$V_{IN(MAX)}$ STEREO	-	L+R 90%, P=10% $f_m=1\text{kHz}$, THD=5%	-	300	-	mVrms
Separation		Sep.	-	L+R=135mVrms P=15mVrms $f_m=100\text{Hz}$	-	33	-	dB
				$f_m=1\text{kHz}$	25	33	-	
				$f_m=10\text{kHz}$	-	33	-	
Total Harmonic Distortion	MONAURAL	THD (MONAURAL)	-	$V_{IN}=150\text{mVrms}$	-	0.1	1.0	%
	STEREO	THD (STEREO)		L+R=135mVrms P=15mVrms, $f_m=1\text{kHz}$	-	0.1	-	
Voltage Gain		G_v	-	$V_{IN}=150\text{mVrms}$	-1.5	0	1.5	dB
Channel Balance		C.B.	-	$V_{IN}=150\text{mVrms}$	-	0	1.5	dB
Lamp ON Sensitivity		$V_L(ON)$	-	Pilot Input	-	9	15	mVrms
Lamp OFF Sensitivity		$V_L(OFF)$	-		2	6	-	
Stereo Lamp Hysteresis		V_H	-	To turn Off from turn On	-	3	-	mVrms
Capture Range		C.R.	-	P=15mVrms	-	± 3	-	%
Carrier Leak (Note)	19kHz	C.L.	-	P=15mVrms L+R=135mVrms	-	30	-	dB
	38kHz				-	50	-	
SCA Rejection Ratio		SCA Rej.	-	P=15mVrms, L+R=120mVrms SCA=15mVrms, $f_{SCA}=67\text{kHz}$	-	70	-	dB
Signal to Noise Ratio		S/N	-	$V_{IN}=150\text{mVrms}$, $R_g=620\Omega$	-	78	-	dB

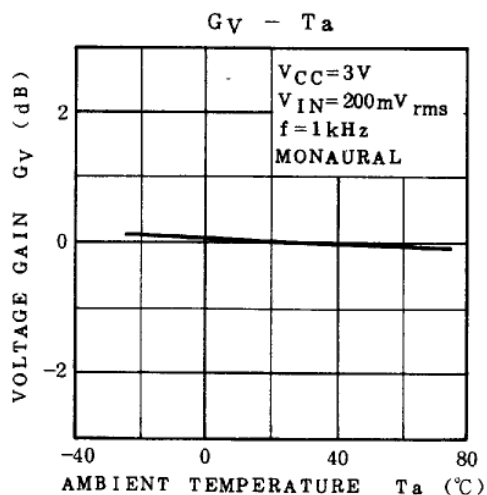
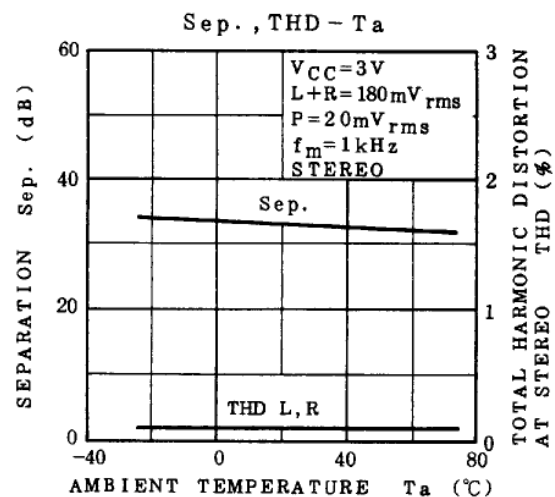
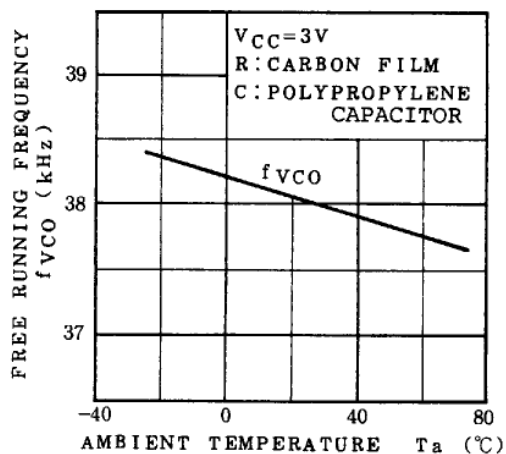
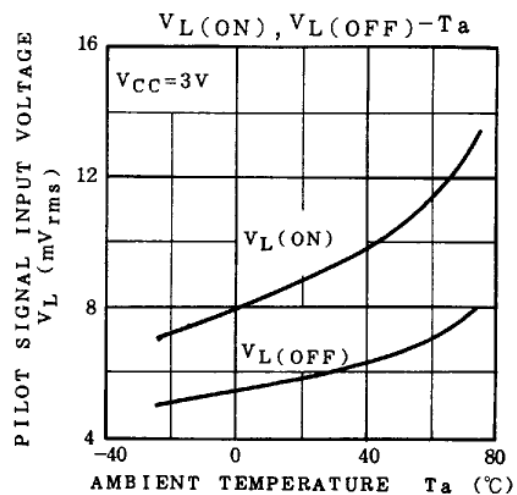
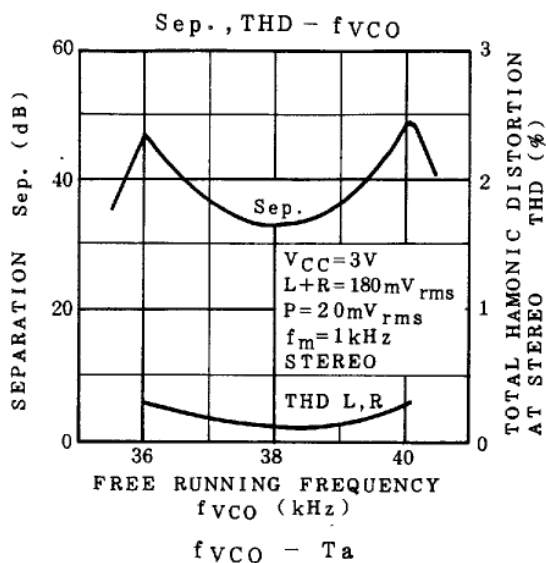
Note: Carrier Leak of 38kHz is only carrier.

TEST CIRCUIT



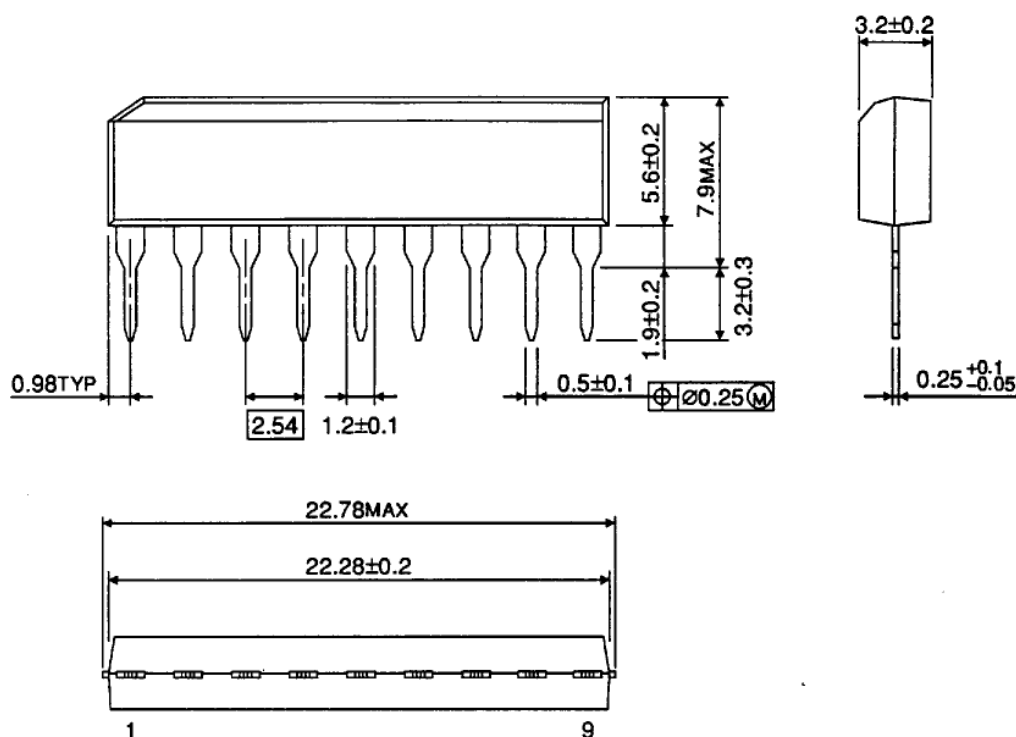






OUTLINE DRAWING
SIP9-P-A

Unit in mm



Weight : 0.92g (Typ.)

TA7370P-8 *

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