

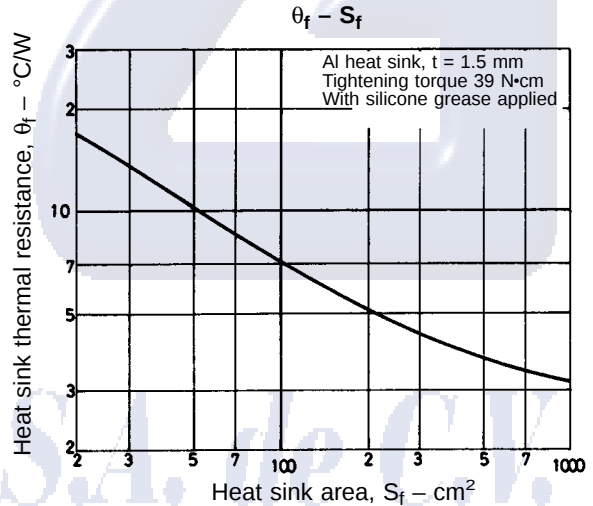
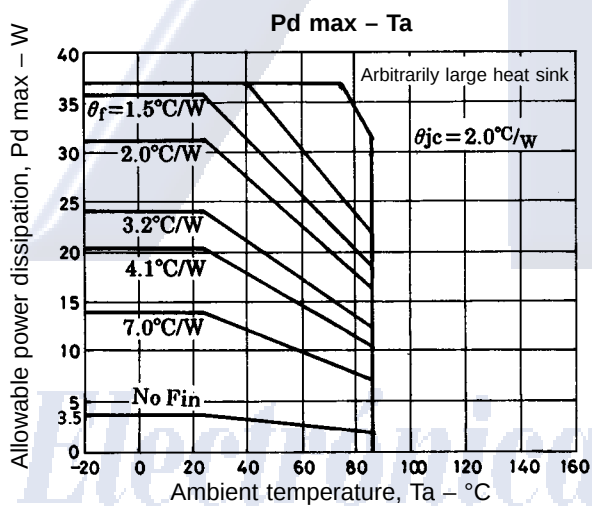
LA4705

Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	VCC		13.2	V
Operating voltage range	VCC op	Range where Pd max is not exceeded	9 to 18	V
Recommended load resistance	RL		4	Ω

Operating Characteristics at Ta = 25°C, VCC = 13.2 V, RL = 4 Ω, f = 1 kHz, Rg = 600 Ω

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	ICCO		80	115	250	mA
Standby current	Ist			10	60	μA
Voltage gain	VG		38	40	42	dB
Total harmonic distortion	THD	PO = 1 W		0.1	0.4	%
Output power	PO1	THD = 10%	11	15		W
	PO2	THD = 10%, VCC = 14.4 V		18		W
	PO3	THD = 10%, RL = 2 Ω		16		W
Output offset voltage	VN offset	Rg = 0	−300		+300	mV
Output noise voltage	VNO	Rg = 0, B.P.F. = 20 Hz to 20 kHz		0.1	0.5	mVrms
Ripple rejection ratio	SVRR	Rg = 0, fR = 100 Hz, VR = 0 dBm	40	50		dB
Channel separation	CHsep	Rg = 10 kΩ, VO = 0 dBm	50	60		dB
Input resistance	ri		21	30	39	kΩ
Standby pin applied voltage	Vst	Amp on, applied through 10 kΩ	2.5		VCC	V

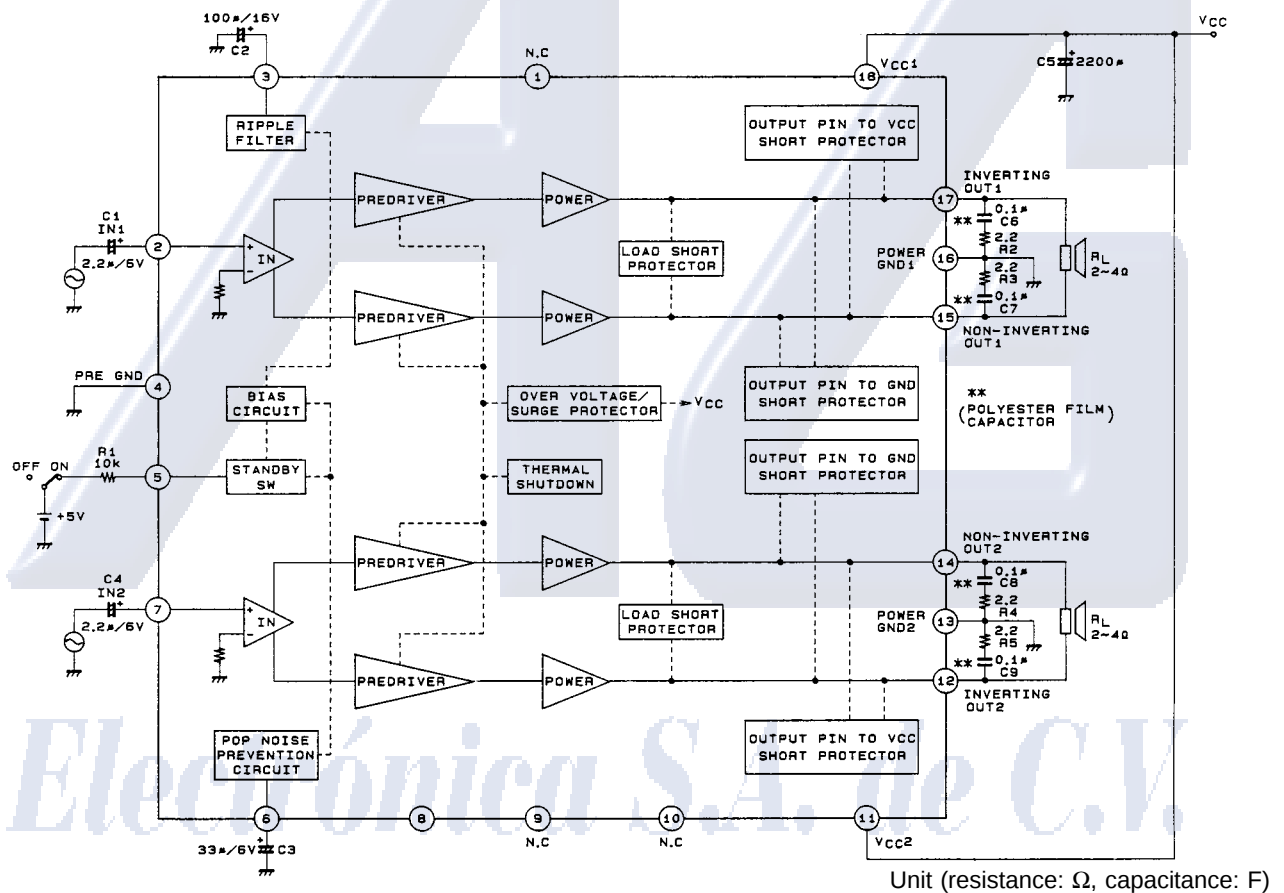


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Features and Usage Notes

- Pin 5 is the standby switch pin. The amplifier is turned on by applying approximately 2 V or more to this pin through an external resistor (R1). The current flowing into pin 5 is 500 μ A or less.
- Pin 6 is the mute pin. The amplifier on time can be set as desired through C3. By grounding pin 6, the amplifier can implement mute operation. In this case, the recovery time depends on C3.
- In order to prevent damage or degradation which may be caused by abnormally heated IC, the LA4705 has a thermal shutdown protector. Accordingly, in the case of inadequate heat dissipation, the thermal shutdown protector will operate to control the output gradually into attenuation.
- Also be fully careful of handling other protectors built in the LA4705.

Sample Application Circuit

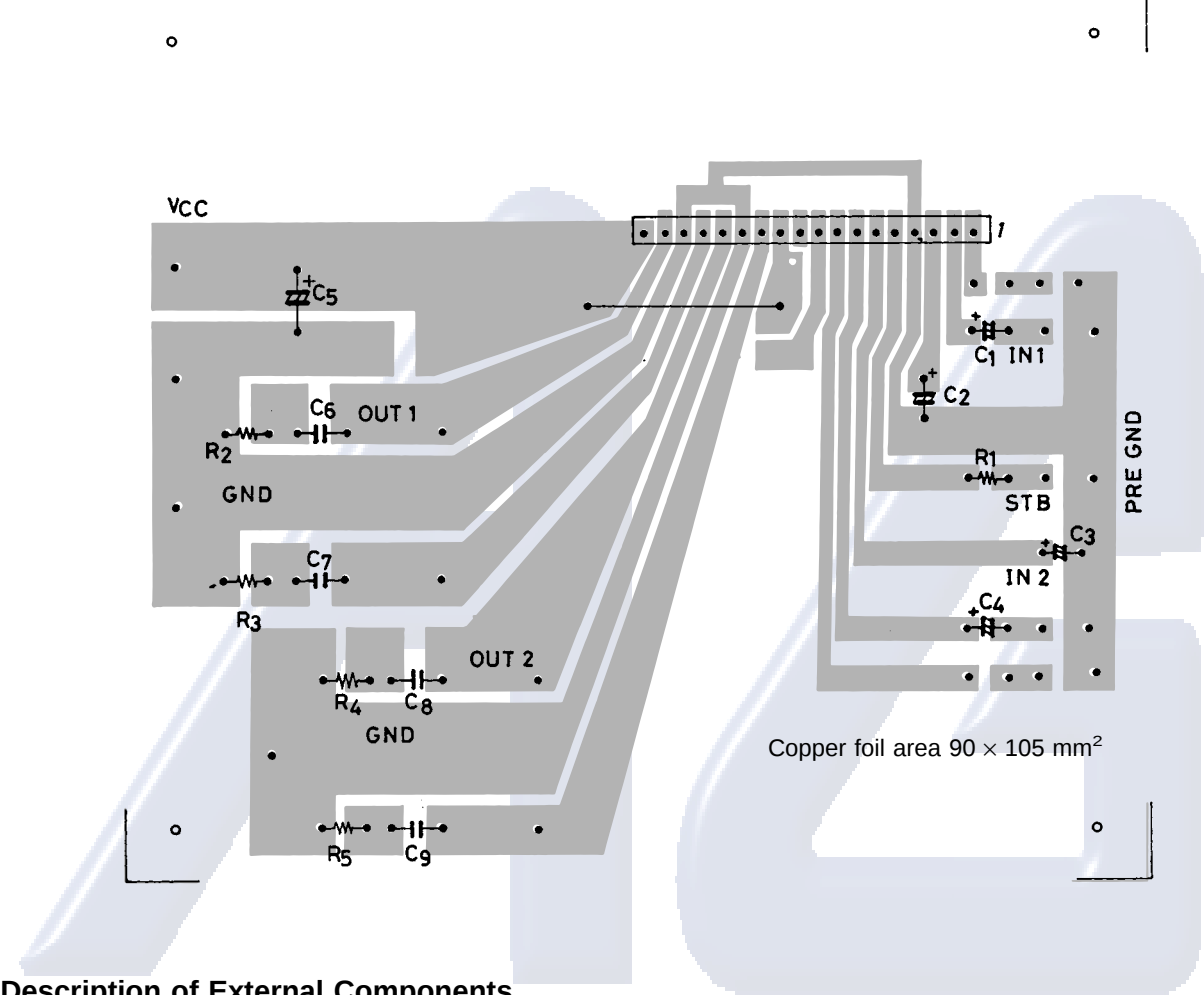


1,9,10pin: Non connect.
8pin: Don't use.

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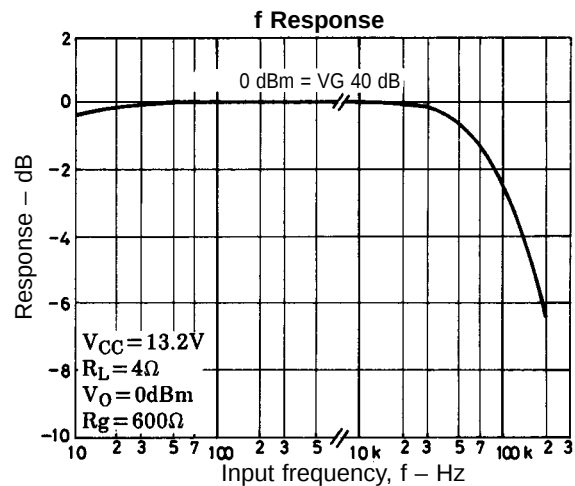
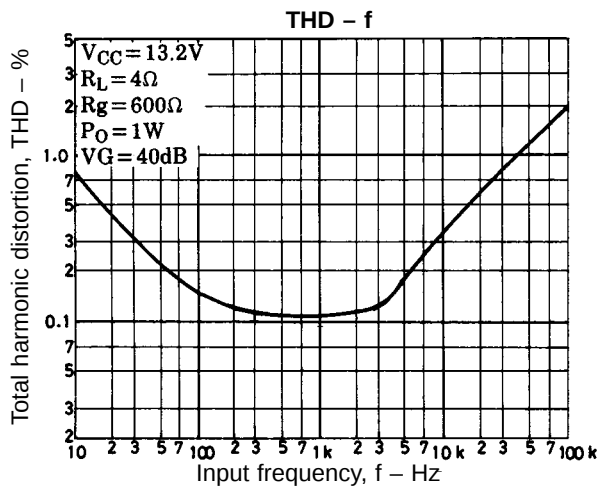
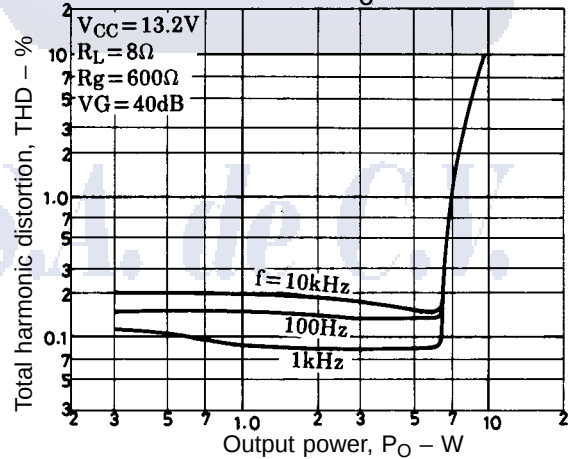
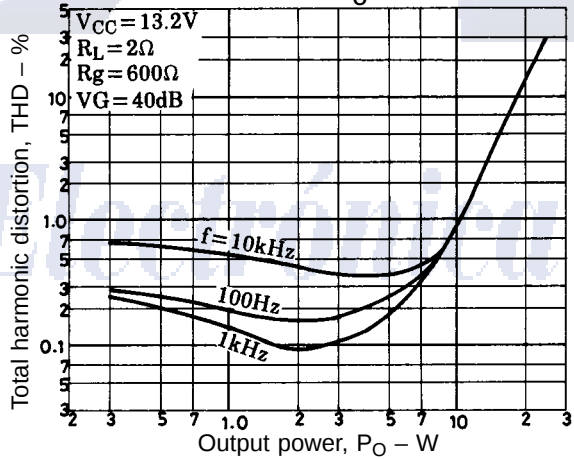
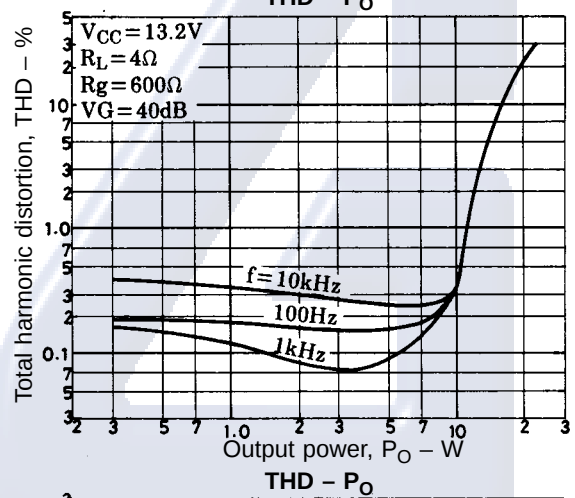
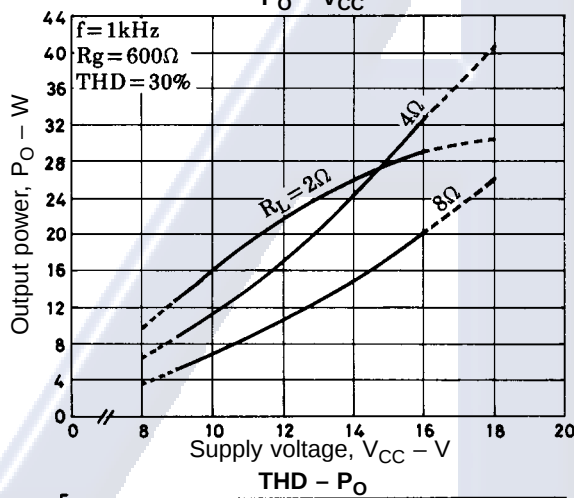
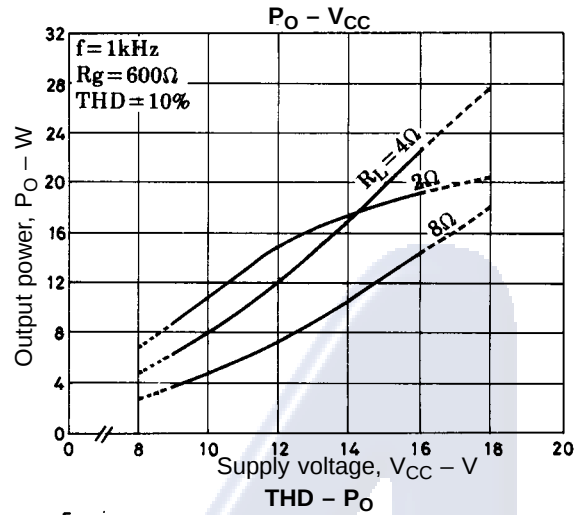
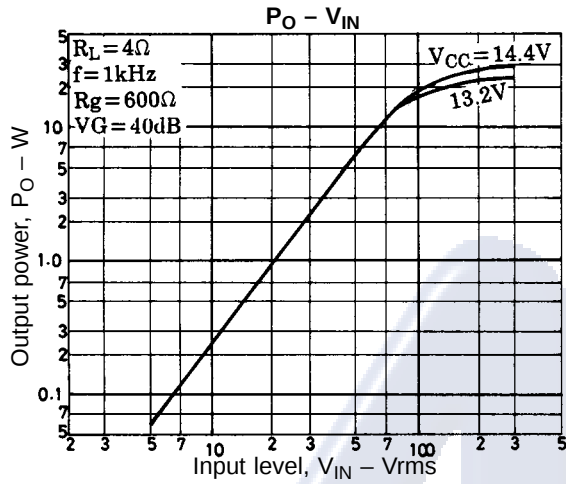
Sample Print Pattern



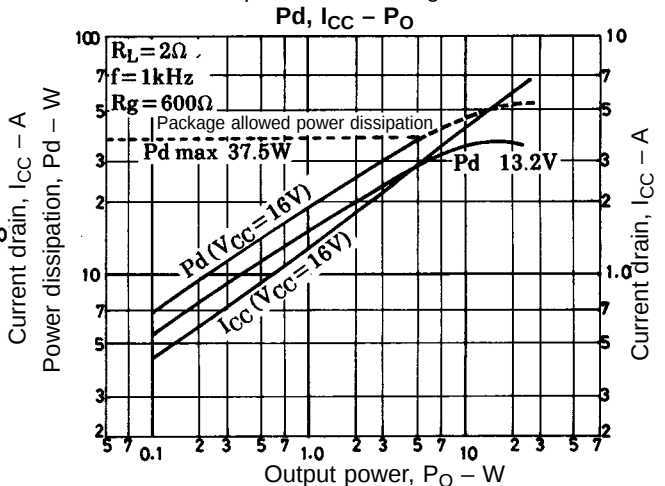
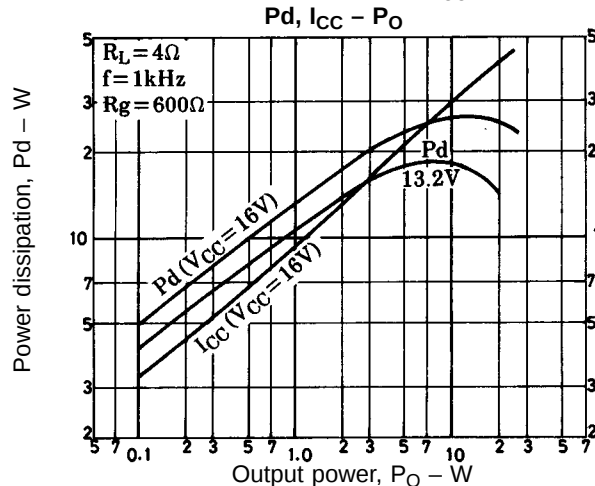
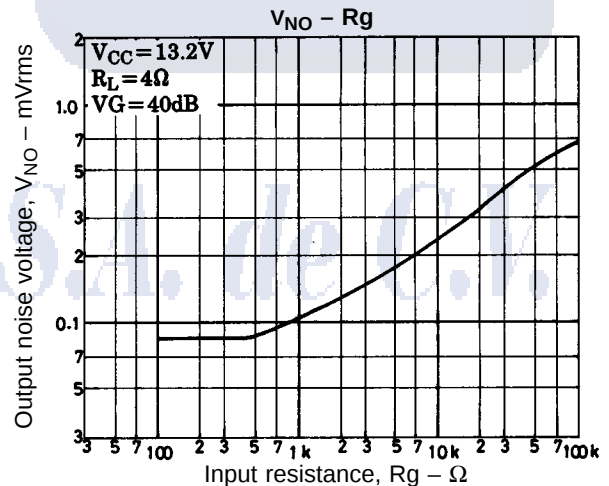
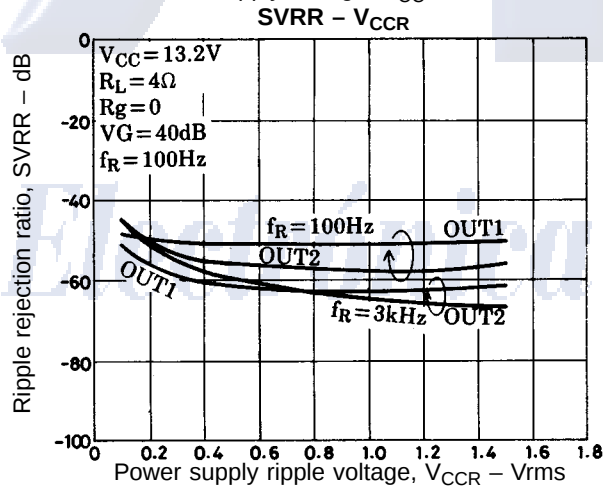
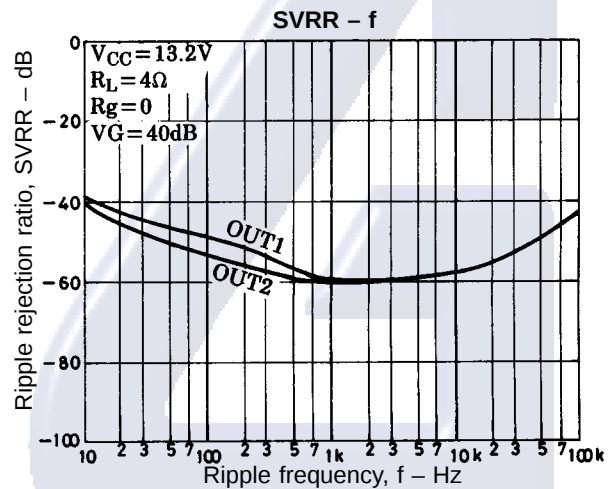
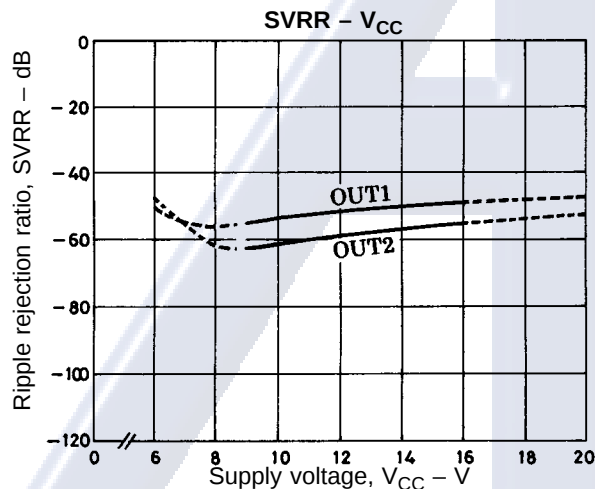
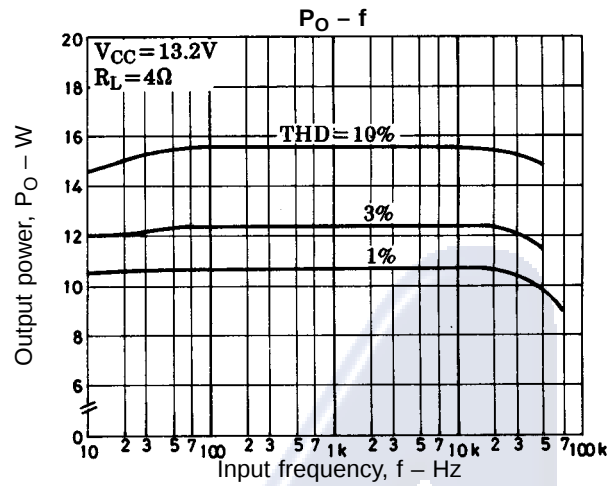
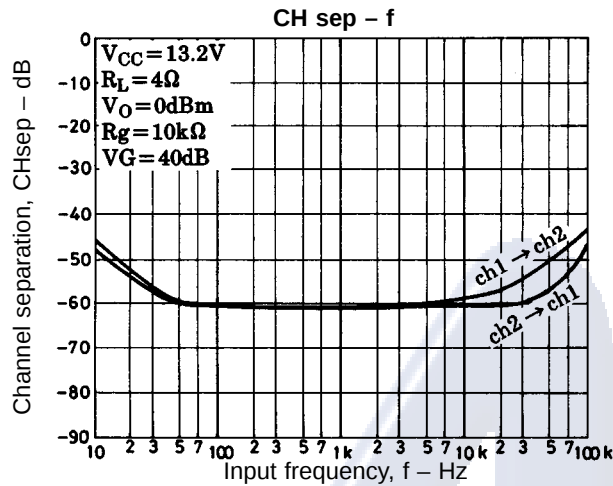
Description of External Components

C1, C4	Input capacitors	2.2 μ F is recommended. f_L can be varied by C1, C4 capacitances to adjust the bass range.
C2	Decoupling capacitor (ripple filter)	
C3	Amplifier on time setting capacitor	Approximately 0.6 to 0.7 second for 33 μ F. Since the on time is proportional to this capacitance, it can be set as desired by varying this capacitance. The amplifier can implement mute operation by setting C3 to GND potential.
C5	Power supply capacitor	
C6, C7, C8, C9	Oscillation blocking capacitors	Use polyester film capacitors (Mylar capacitors) with good temperature characteristics. (R2, R3, R4, and R5 used jointly.) Since stability may be affected slightly by the pattern layout, etc., 0.1 μ F or more is recommended.
R1	Standby switch current limiting resistor	10 k Ω is recommended. This resistor cannot be removed.

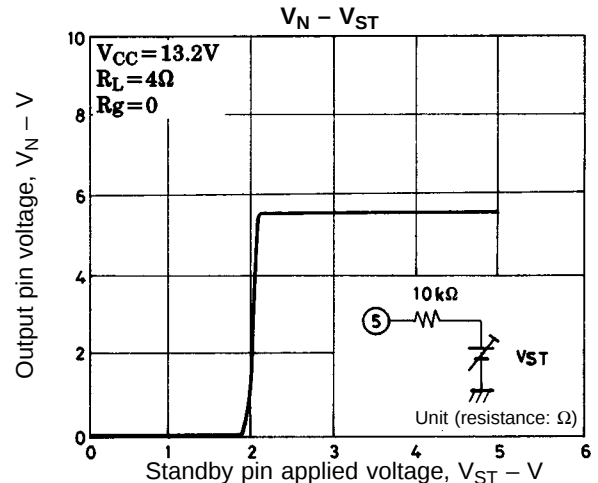
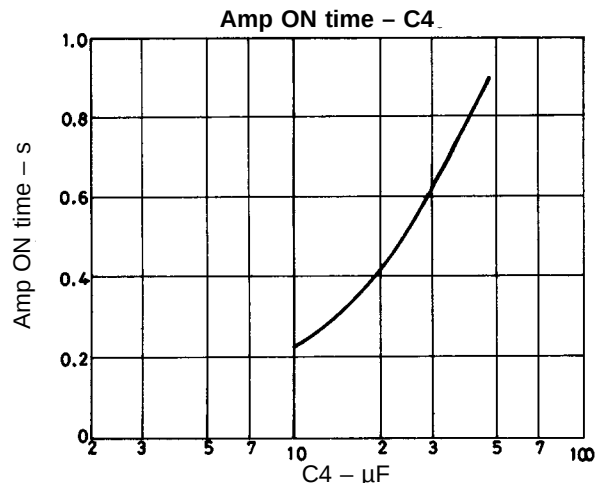
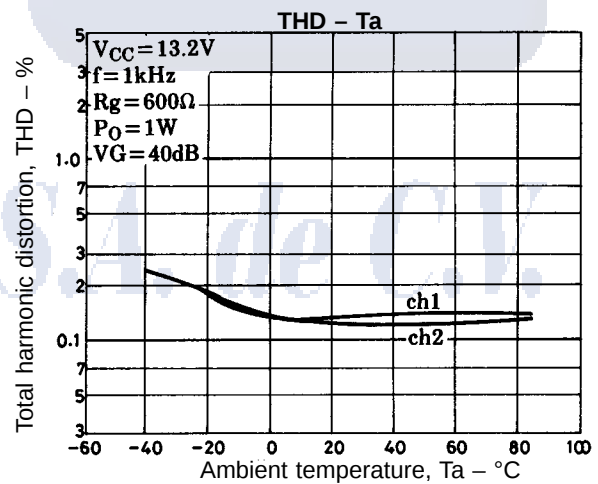
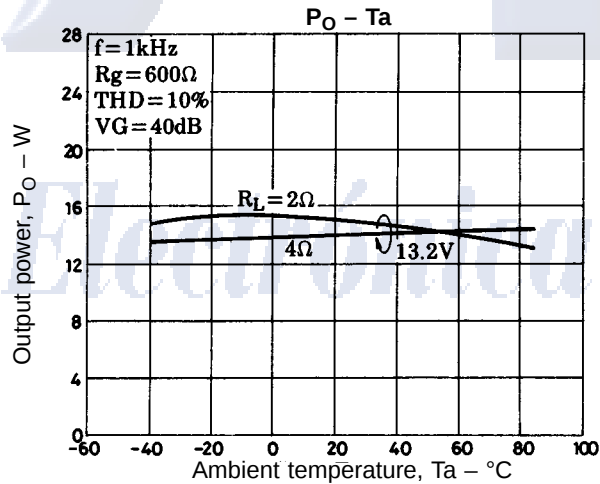
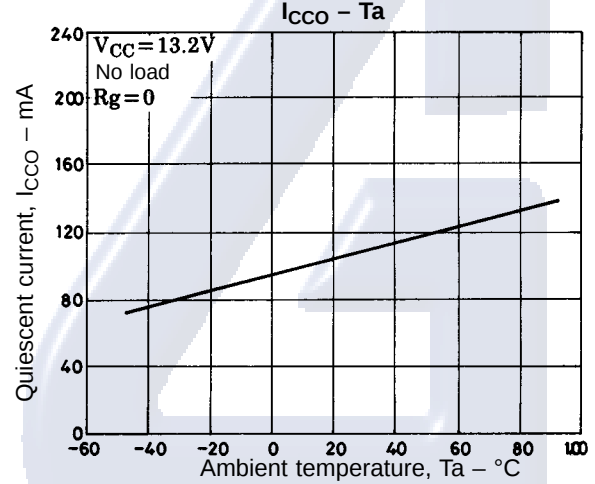
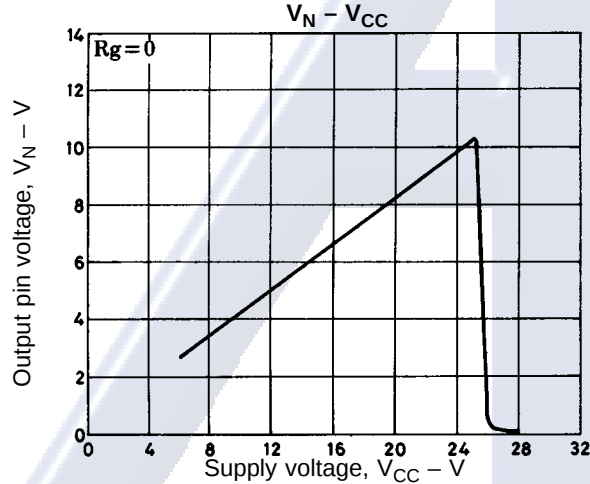
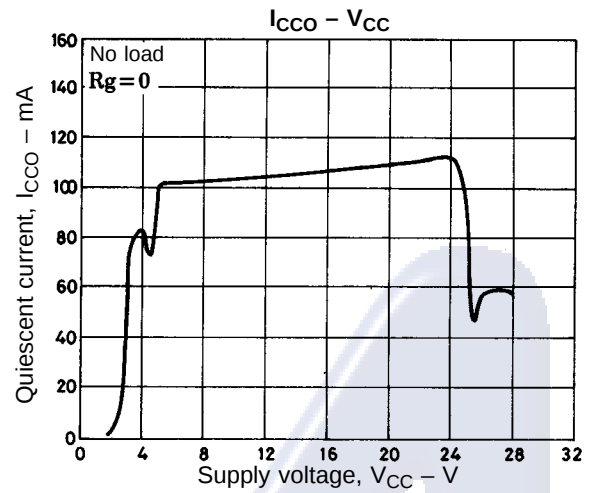
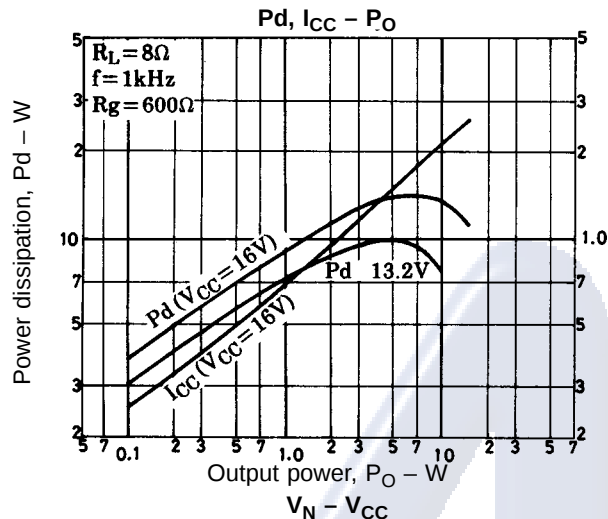
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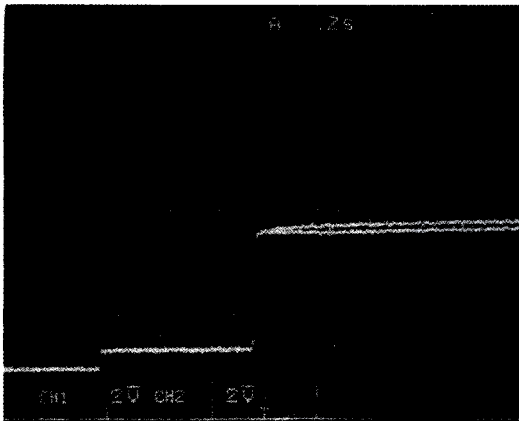


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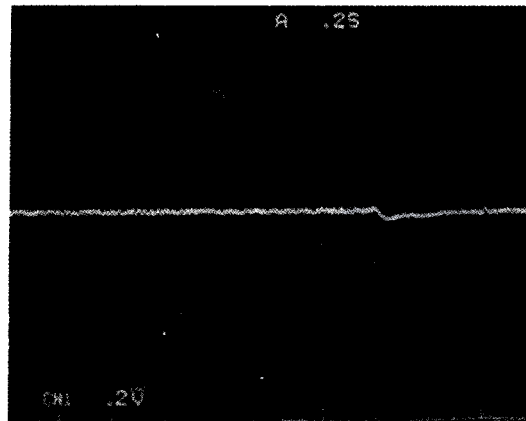
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BTL output DC locus

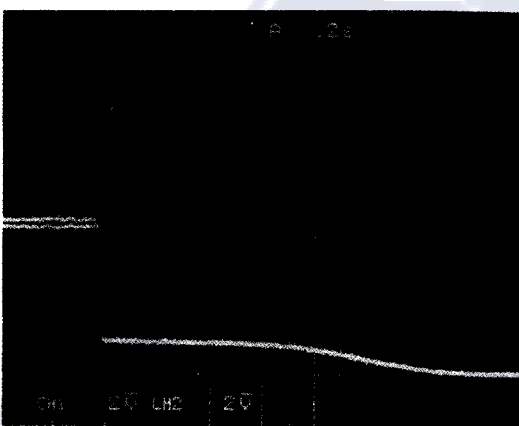


Power ON

AC Level



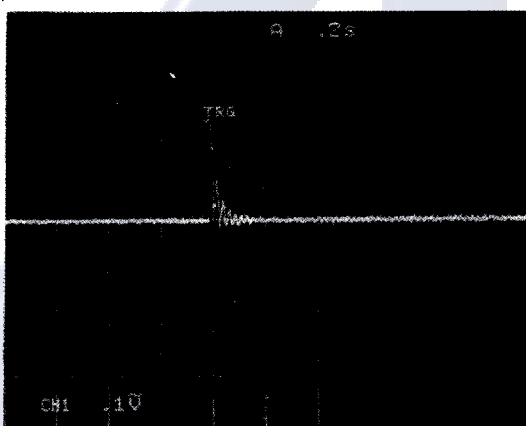
BTL output DC locus



Standby OFF

Locus when ON
Power ON
 $V_{CC} = 13.2V$
 $R_L = 4\Omega$
 $R_g = 0$

AC Level



Locus when OFF
Standby SW OFF
 $V_{CC} = 13.2V$
 $R_L = 4\Omega$
 $R_g = 0$

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