

Ordering number:ENN2681B

Monolithic Linear IC

**LA4597**

2-Channel Power Amplifier for Radio-Cassette Recorders

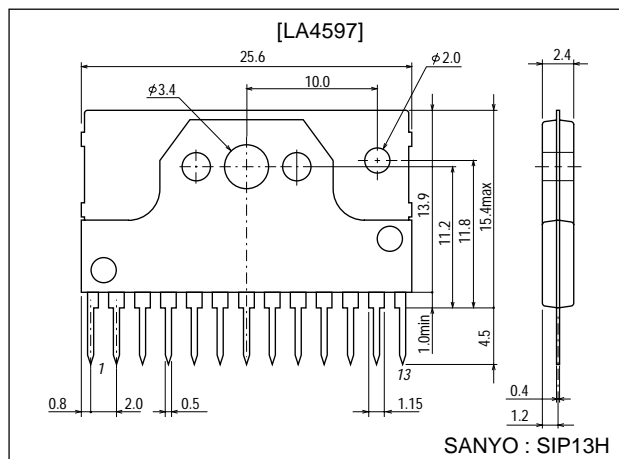
Functions

- On-chip thermal shutdown circuit.
- On-chip standby switch.

Package Dimensions

unit:mm

3107-SIP13H



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		18	V
Allowable power dissipation	P _d max	With 100×100×1.5mm ³ Al heat sink	11.4	W
Operating temperature	T _{opr}		-20 to +75	°C
Storage temperature	T _{stg}		-40 to +150	°C

Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V _{CC}		9, 12	V
Recommended load resistance	R _L		3.2	Ω
Operating voltage range	V _{CCop}		4.2 to 16.0	V

Operating Characteristics at Ta = 25°C, V_{CC}=9V, f=1kHz, R_g=600Ω, R_L=3.2Ω, V_G=50dB

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I _{cco}		10	20	40	mA
Voltage gain	V _G		47	49	51	dB
Output power	P _{O1}	THD=10%	2.2	2.9		W
	P _{O2}	THD=10%, V _{CC} =12V		4.6		W
Total harmonic distortion	THD	V _O =2V		0.3	1.0	%
Input resistance	r _i		20	30		kΩ

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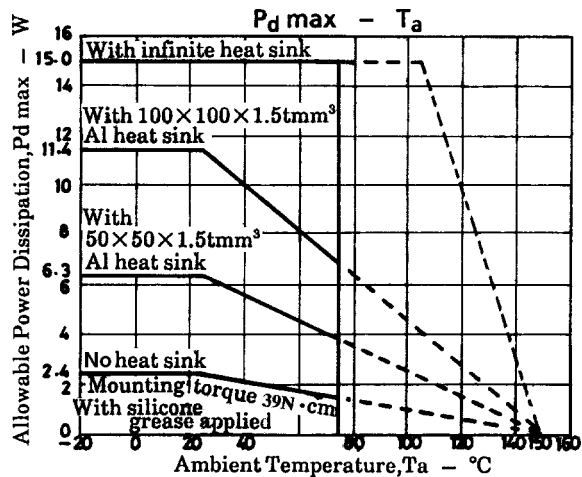
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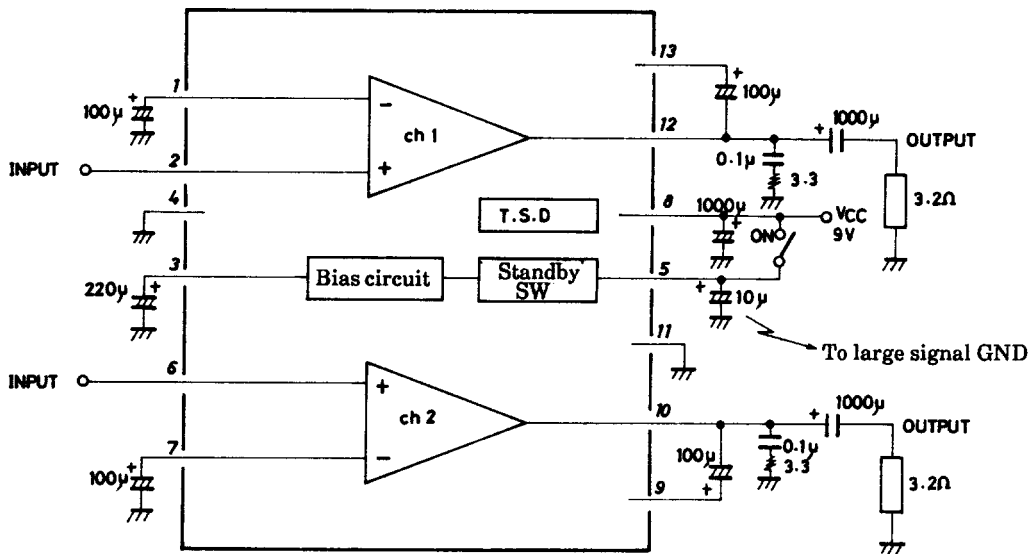
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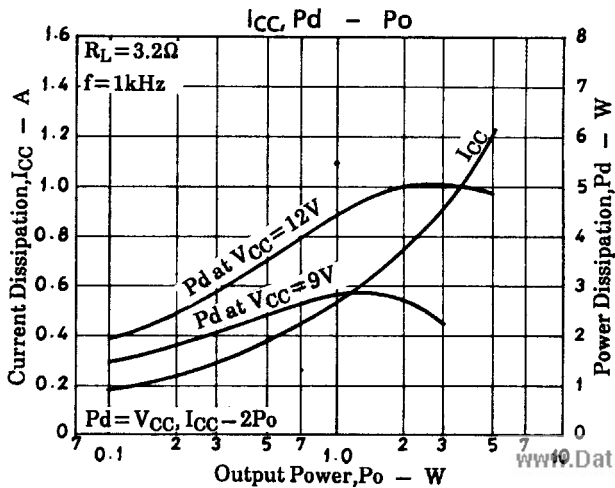
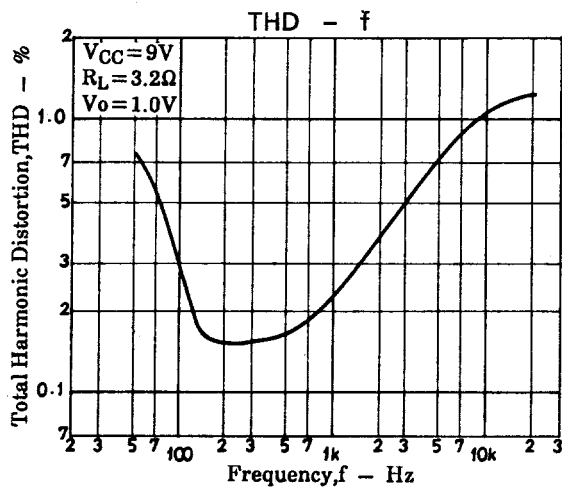
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output noise voltage	V_{NO1}	$R_g=0$, BPF=20Hz to 20kHz		0.4	1.0	mV
	V_{NO2}	$R_g=10k\Omega$, BPF.=20Hz to 20kHz		0.6	2.0	mV
Ripple rejection	R_r	$R_g=0$, $f_r=100Hz$, $V_{CCr}=150mV$	40	50		dB
Channel separation	CH Sep	$R_g=10k\Omega$, $V_o=0dBm$	45	55		dB
Standby current	I_{sd}				10	μA



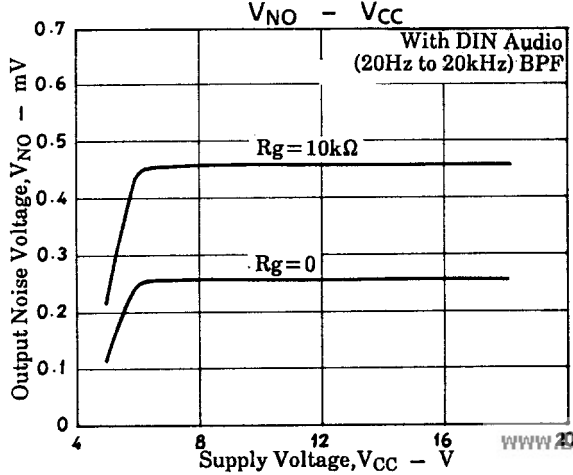
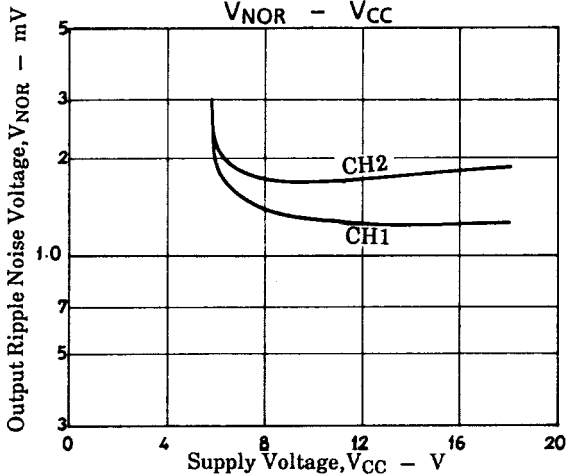
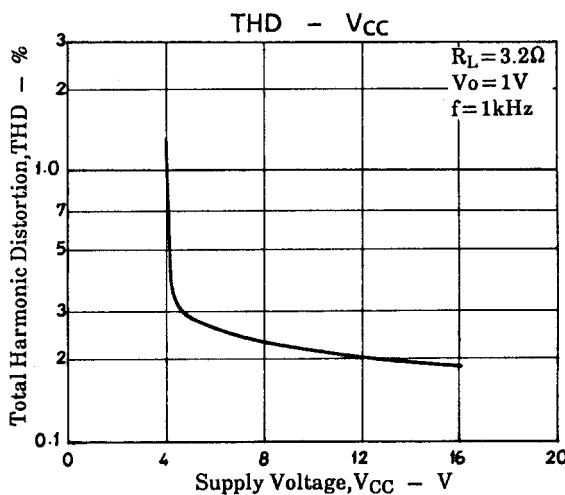
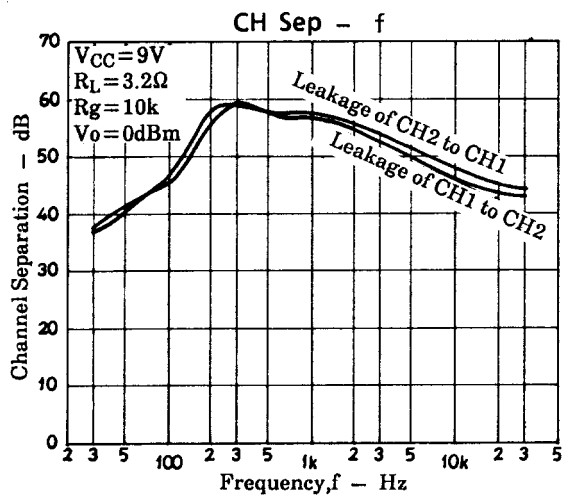
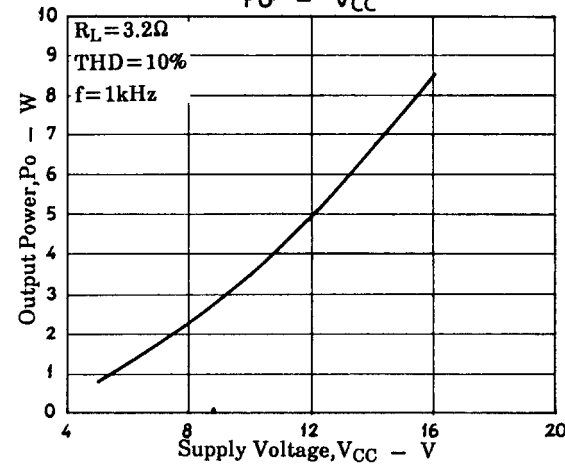
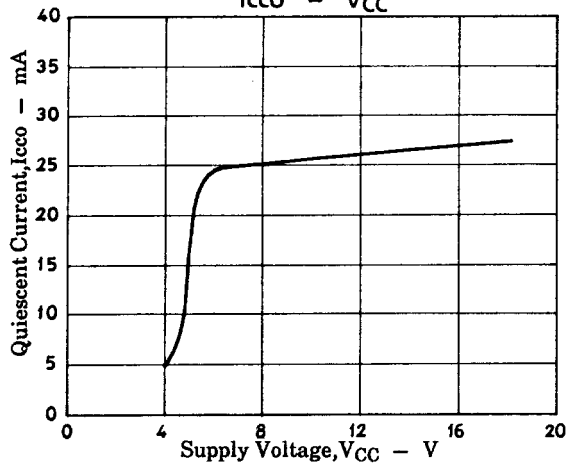
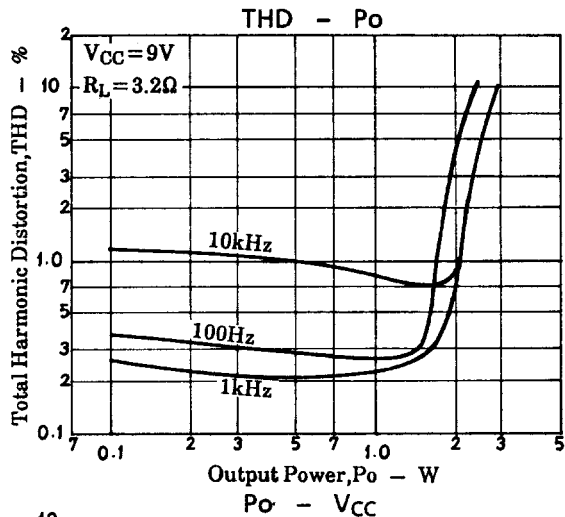
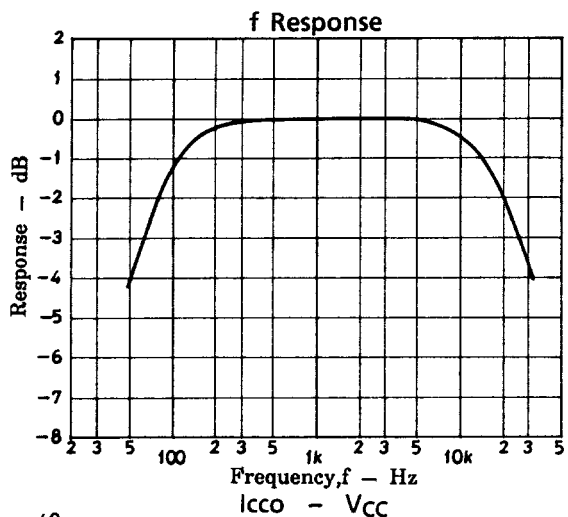
Test Circuit and External Constants



Unit (resistance: Ω , capacitance: F)



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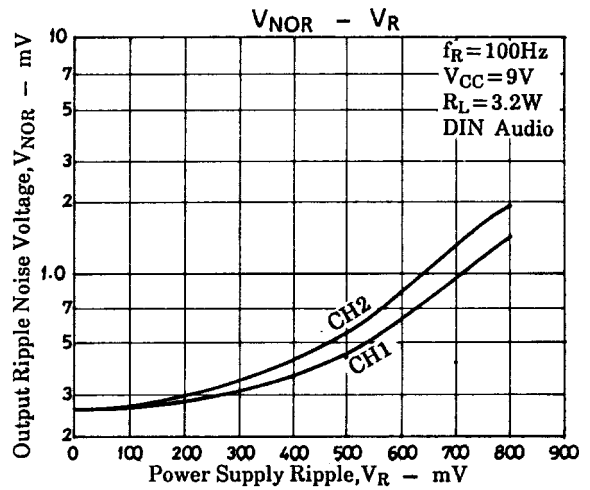
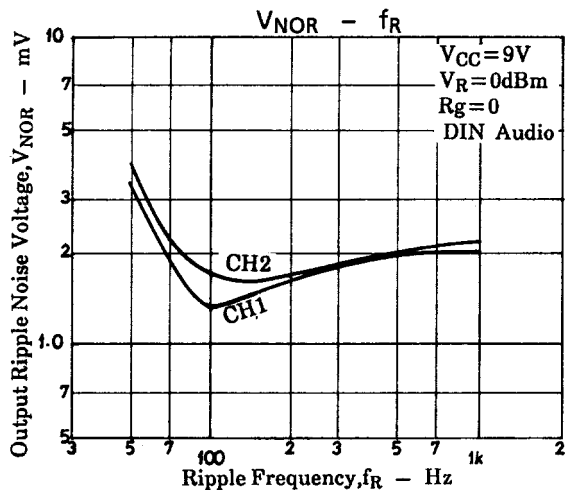
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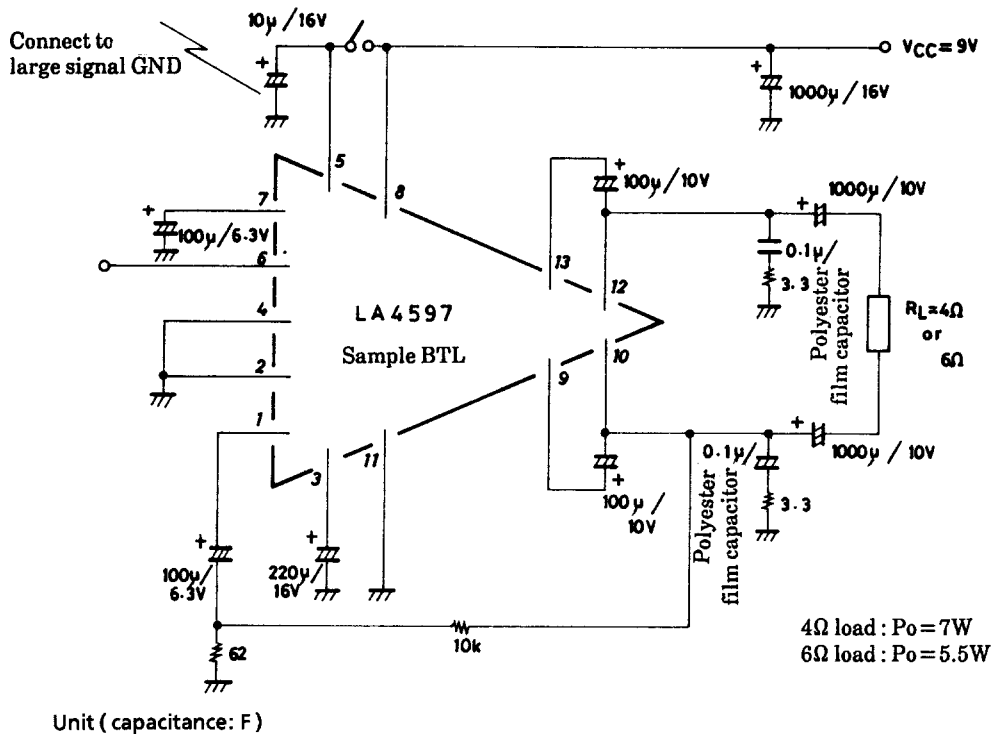
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Sample BTL



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