



LA4525

Dual AF Power Amplifier for Radio Cassette Recorders

Overview

The LA4525 requires only a small number of external components to drive either two 4 Ω speakers or one 8 Ω speaker. The output power is typically 0.65 W when driving two 4 Ω speakers.

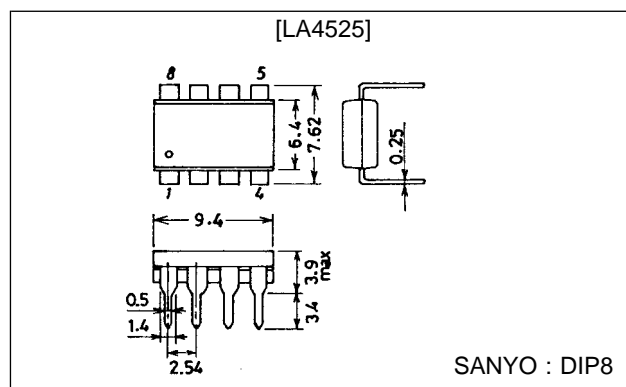
Features

- Two-channel (dual) or single-channel (BTL) operation
- Requires only a few external components.
- 0.65 W (typ) output power into two 4 Ω speakers
- Wide power supply range: 3 to 15 V
- 8-pin DIP (No heat sink needed)

Package Dimensions

unit : mm

3001B-DIP8



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max	$R_g = 0$	15	V
Allowable power dissipation	P_d max	Note	1.5	W
Operating temperature	T_{opr}		-25 to +75	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

Note: Mounted on a $50 \times 50 \times 1.6 \text{ mm}^3$ heat dissipating board

Recommended Operating Conditions at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V_{CC}		6	V
Load resistance range	R_L		4	Ω
Supply voltage range	V_{CC} op	Not in excess of package P_d	3 to 15	V

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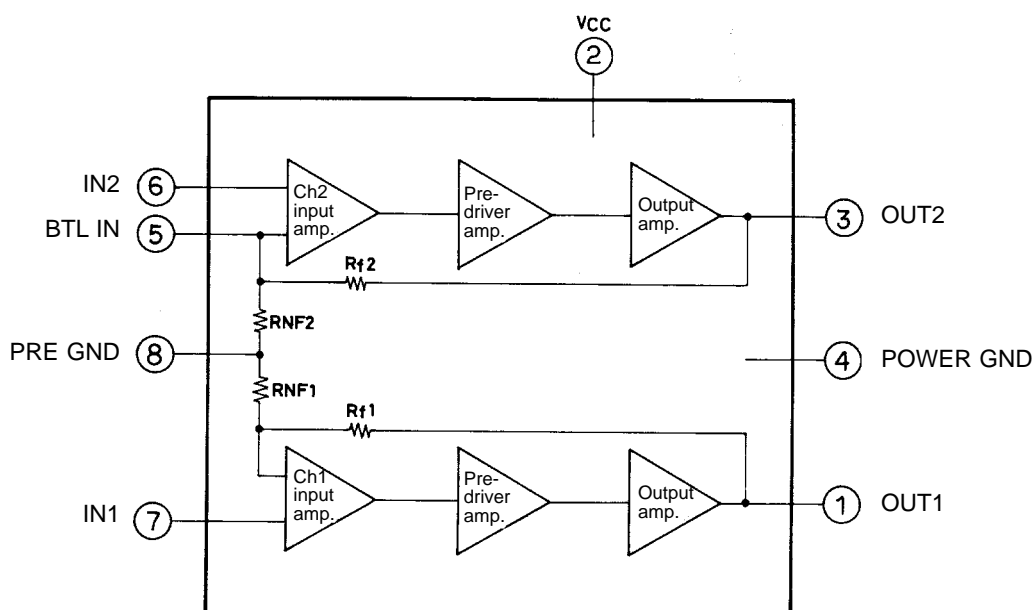
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32896HA(II)/D0192TS/4162TS No.4022-1/9

**Operating Characteristics at $V_{CC} = 6\text{ V}$, $T_a = 25^\circ\text{C}$, $R_L = 4\ \Omega$, $f = 1\text{ kHz}$, $R_g = 600\ \Omega$,
Dual operation unless otherwise noted**

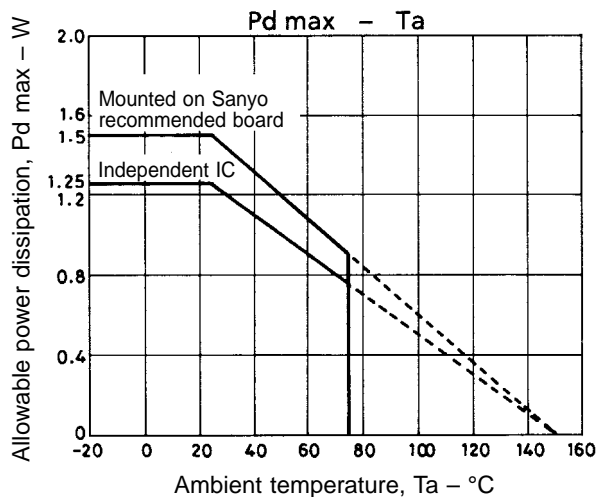
Parameter	Symbol	Condition	min	typ	max	Unit
Quiescent supply current	I_{CCO}	$R_g = 0\ \Omega$	10	15	30	mA
Output power	P_{O1}	THD = 10%	0.45	0.65		W
	P_{O2}	$V_{CC} = 9\text{ V}$, $R_L = 8\ \Omega$, THD = 10%		1.0		W
Voltage gain	VG	$V_O = 0\text{ dBm}$	38	40	42	dB
Total harmonic distortion	THD	$P_O = 0.1\text{ W}$		0.2	0.7	%
Output noise voltage	V_{NO}	$R_g = 0\ \Omega$, DIN AUDIO filter		100	400	μV
Supply voltage ripple rejection	SVRR	$R_g = 0\ \Omega$, $f_R = 100\text{ Hz}$, $V_R = 0\text{ dBm}$	35	43		dB
Channel separation	CH Sep	$V_O = 0\text{ dBm}$, $R_g = 0\ \Omega$	45	55		dB
Input resistance	R_i		70	100	130	$\text{k}\Omega$

Equivalent Block Diagram

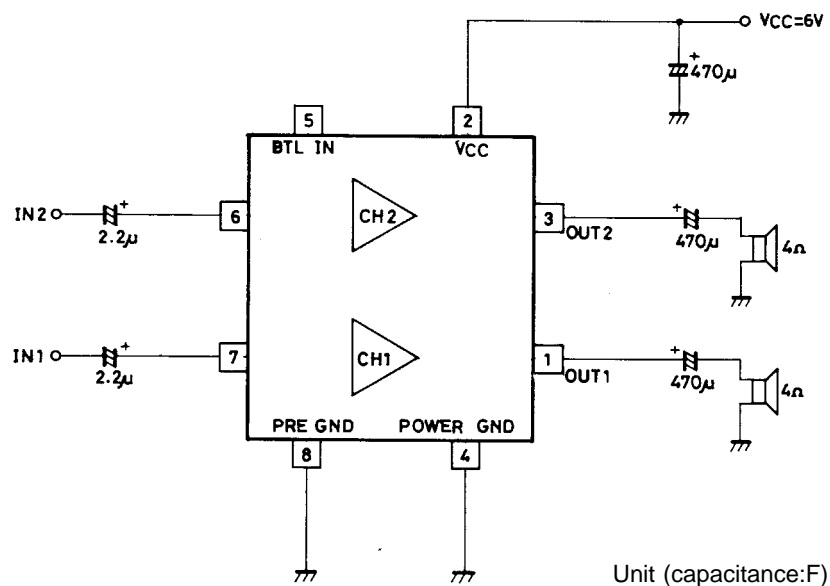


Pin Description

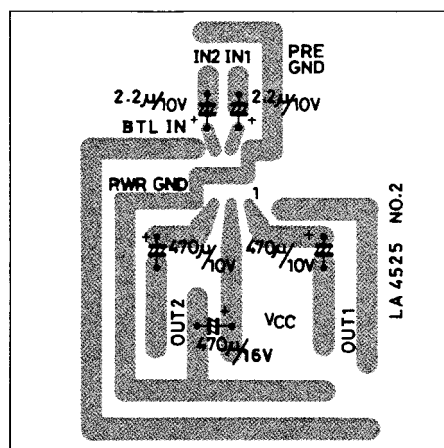
Number	Name	Description
1	OUT1	Channel 1 output
2	V_{CC}	Supply voltage
3	OUT2	Channel 2 output
4	POWER GND	Power amplifier ground
5	BTL IN	Bridge test load input
6	IN2	Channel 2 input
7	IN1	Channel 1 input
8	PRE GND	Preamplifier ground



Dual Operation

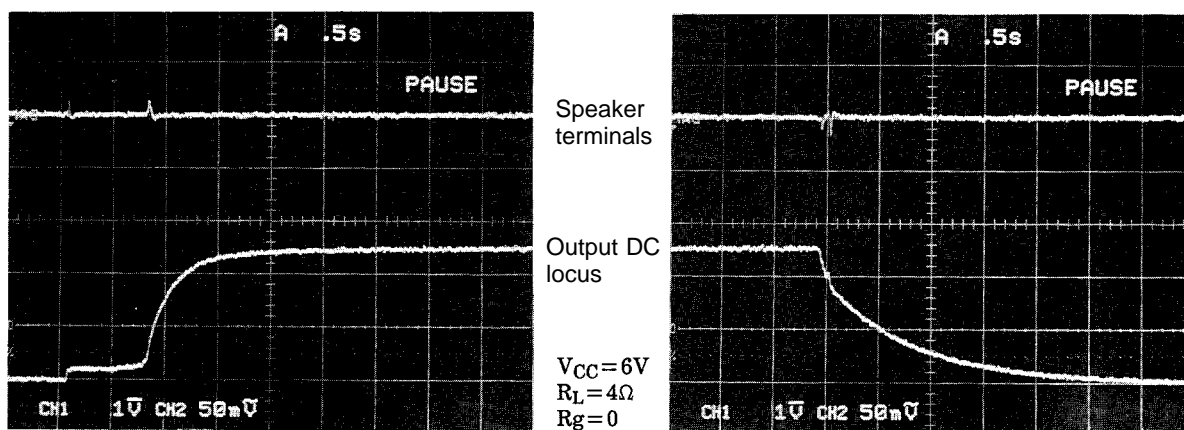


Sample Printed Circuit Pattern



Unit (capacitance:F)
65 × 65mm² (Cu-foiled area)

Rising and falling waveforms



BTL Operation

