



SANYO Semiconductors
DATA SHEET

LA4225 — **Monolithic Linear IC**
Audio Output for TV application
5W Monaural Power Amplifier

Overview

LA4225 is a 5W monaural power amplifier intended for television audio output. This IC requires only two external components (capacitors) to construct amplifiers and is ideal for realizing substantial cost reduction of electronic devices.

Functions

- 5W monaural power amplifier ($V_{CC} = 18V, R_L = 8\Omega$)
- Full complement of protection circuits
 Thermal shutdown protector on chip
 Short between an output and DC protection circuit
- On-chip pop noise reduction circuit

Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\ max}$	$R_g = 0$	24	V
Maximum output current	$I_{O\ peak}$		3.3	A
Allowable power dissipation	$P_d\ max$	Arbitrarily large heat sink	7.5	W
Operating temperature	T_{opr}		-25 to +75	$^\circ C$
Storage temperature	T_{stg}		-40 to +150	$^\circ C$

Operating Conditions at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	unit
Recommended supply voltage	V_{CC}		13.2	V
Recommended load resistance	R_L		4	Ω
Allowable operating voltage range	$V_{CC\ op}$	Not exceeding the package P_d .	5 to 22	V
Recommended load resistance range	$R_L\ op$		4 to 8	Ω

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

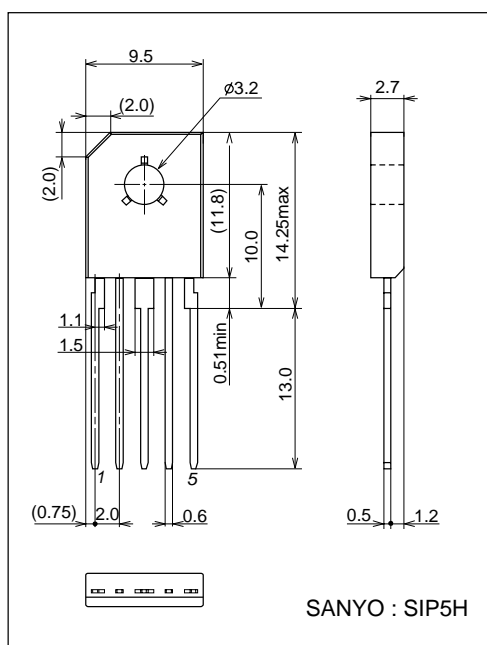
Electrical Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = 13.2\text{V}$, $R_L = 4\Omega$, $f = 1\text{kHz}$, $R_g = 600\Omega$, Designated substrate and circuit

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CCO}	$R_g = 0$		65	130	mA
Voltage gain	VG	$V_O = 0\text{dBm}$	43	45	47	dB
Output power	P_{O1}	$V_{CC} = 13.2\text{V}$, $R_L = 4\Omega$, THD = 10%	4	5		W
	P_{O2}	$V_{CC} = 18\text{V}$, $R_L = 8\Omega$, THD = 10%		5		W
Total harmonic distortion	THD	$P_O = 1\text{W}$		0.1	1.0	%
Output noise voltage	V_{NO}	$R_g = 0$, DIN AUDIO		0.15	0.5	mV
Ripple rejection	SVRR1	$R_g = 0$, $f_R = 100\text{Hz}$, $V_f = 0\text{dBm}$, DIN AUDIO	30	40		dB
	SVRR2	$R_g = 0$, $f_R = 1\text{kHz}$, $V_f = 0\text{dBm}$, DIN AUDIO		47		dB
Input resistance	R_i			50		$k\Omega$

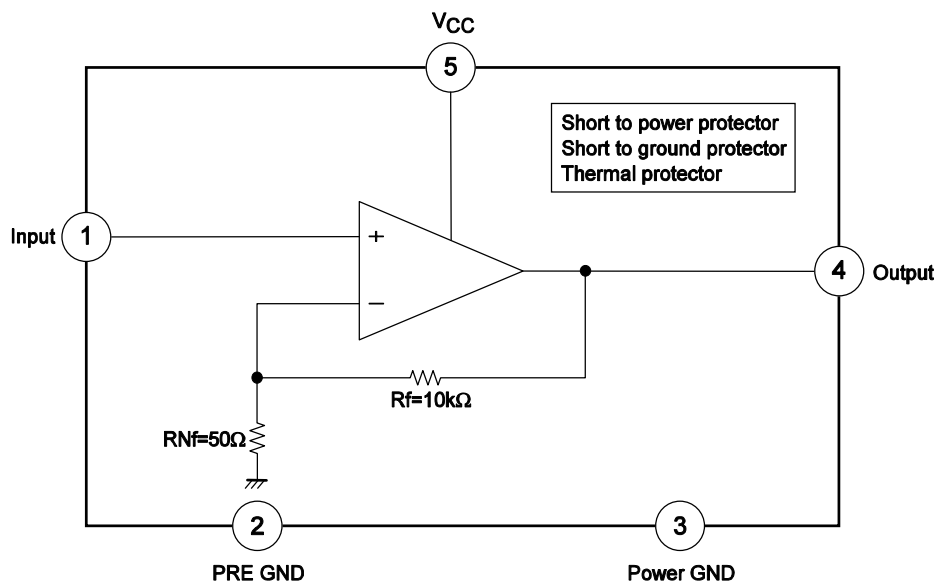
Package Dimensions

unit : mm

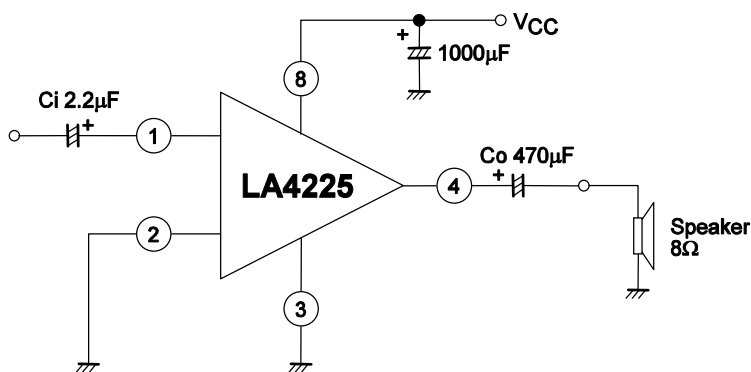
3031C



Block Diagram



Application Circuit Example



- Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all SANYO products (including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, of otherwise, without the prior written permission of SANYO Electric Co., Ltd.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of April, 2006. Specifications and information herein are subject to change without notice.

This datasheet has been downloaded from:

www.EEworld.com.cn

Free Download

Daily Updated Database

100% Free Datasheet Search Site

100% Free IC Replacement Search Site

Convenient Electronic Dictionary

Fast Search System

www.EEworld.com.cn