



# LA4277

## 5 W 2-Channel Power Amplifier

### Overview

The LA4277 is a 5 W 2-channel power amplifier intended for televisions.

This IC has a series of pin compatible monaural and 2-channel power amplifiers, thus allows the end product to use a common circuit board.

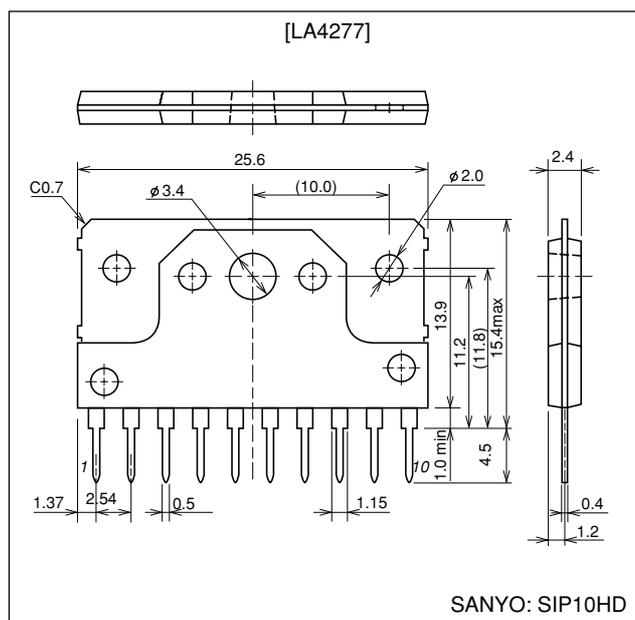
### Features

- Television audio output.
- Pin compatible with the LA4266 (3 W)/LA4267 (5 W)/4268 (10 W) and the LA4276 (3 W × 2)/4278(10 W × 2).
- Package: SIP-10HD (2.54 mm pitch, straight pins).
- Thermal protection circuit and overvoltage protection circuit on chip.
- Output power: 5 W × 2 ( $V_{CC} = 20\text{ V}/R_L = 8\ \Omega$ ).

### Package Dimensions

unit: mm

#### 3248-SIP10HD



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC}$	$R_g = 0$	25	V
Allowable power dissipation	$P_d\text{ max}$	Infinite heat sink	15.0	W
Thermal resistance	$\theta_{j-c}$		3.0	$^\circ\text{C}/\text{W}$
Operating temperature	$T_{opr}$		-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC}$		20	V
Load resistance	$R_L$		8	$\Omega$
Operating supply voltage range	$V_{CC\text{ op}}$	Range does not exceed $P_d$	10 to 24	V

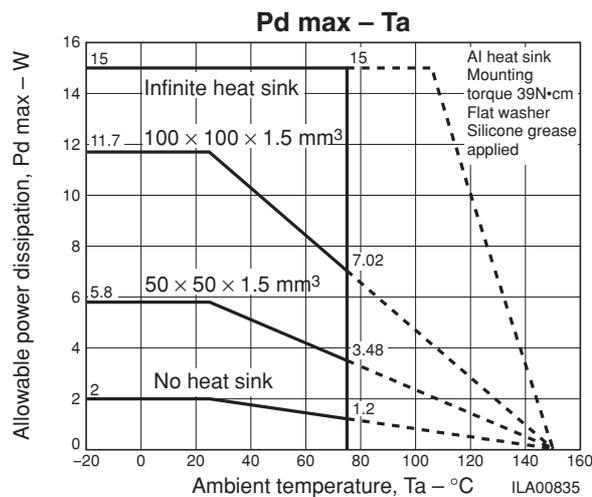
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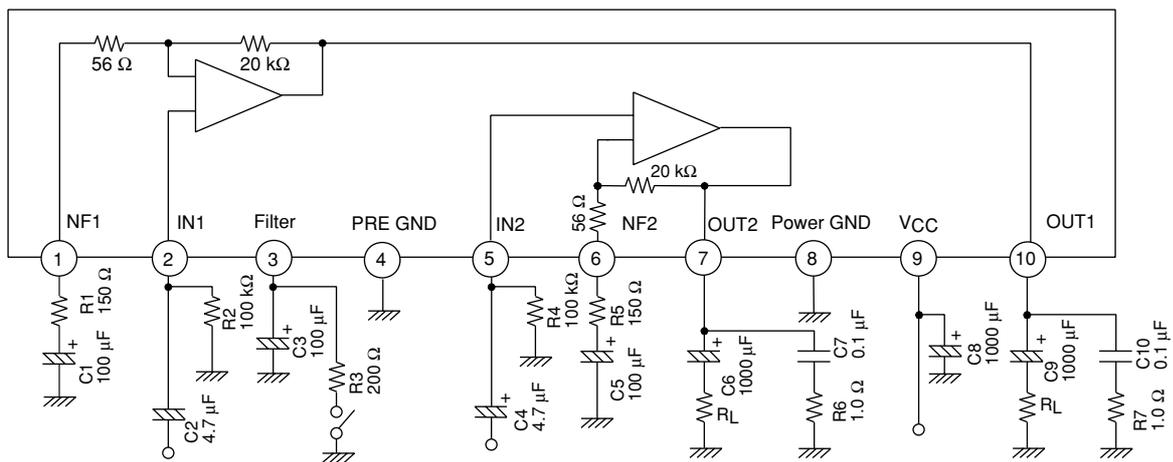
## LA4277

**Operating Characteristics** at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = 20\text{ V}$ ,  $R_L = 8\ \Omega$ ,  $f = 1\text{ kHz}$ ,  $R_{NF} = 150\ \Omega$ ,  $R_g = 600\ \Omega$ , with specified board, in specified circuit

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	$I_{CCO}$	$R_g = 0$		50	70	mA
Voltage gain	VG	$V_O = 0\text{ dBm}$	38	40	42	dB
Total harmonic distortion	THD	$P_O = 0.5\text{ W}$		0.1	0.8	%
Output noise voltage	$V_{NO}$	$R_g = 10\text{ k}\Omega$ , BPF = 20 Hz to 20 kHz		0.25	1.0	mV
Output power	$P_O$	THD = 10 %	4.0	5.0		W
Ripple rejection	SVRR	$R_g = 0$ , $f_r = 100\text{ Hz}$ , $V_r = 0.5\text{ Vrms}$	35	45		dB
Crosstalk	CT	$R_g = 10\text{ k}\Omega$ , $V_O = 0\text{ dBm}$	40	45		dB



### Pin Assignment and Equivalent Circuit Diagram



\* For Muting, add a resistor between pin 3 and GND. 750  $\Omega$  for the LA4266/67/68, 200  $\Omega$  for the LA4276/77.