Ordering number : ENA5718

SANYO Semiconductors
DATA SHEET

Monolithic Linear IC

LA4227 — Audio Output for Radio Cassette Recorders 3W × 2ch Power Amplifier

Overview

LA4227 is a 3W 2-channel power amplifier.
This IC requires few external components and is ideal for power amplifier used for radio cassette players/recorders.

Functions

- 3W × 2 channel (V_{CC} = 9V, R_L = 3Ω)
- Standby switch on chip
- Thermal shutdown protector on chip

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max	Rg = 0 (No signal)	20	V
Allowable power dissipation	Pd max	Arbitrarily large heat sink	4.0	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

Operating Conditions at Ta=25°C

Parameter	Symbol	Conditions	Ratings	unit
Recommended supply voltage	V_{CC}		9	V
Operating voltage range	V_{CC} op	Not exceeding the maximum ratings	4.2 to 18	V
Operating load resistance range	R_L op		3 to 8	Ω
		Bridge	8	Ω

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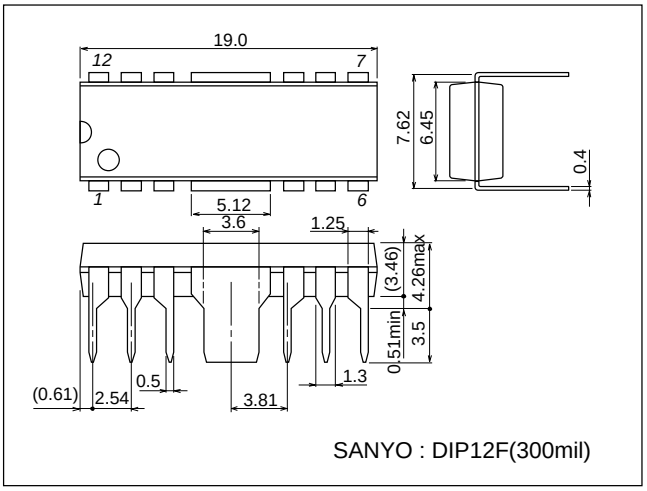
Electrical Characteristics at Ta = 25°C, V_{CC} = 9V, R_L = 4Ω, f = 1kHz, Rg = 600Ω, R_{NF} = 43Ω

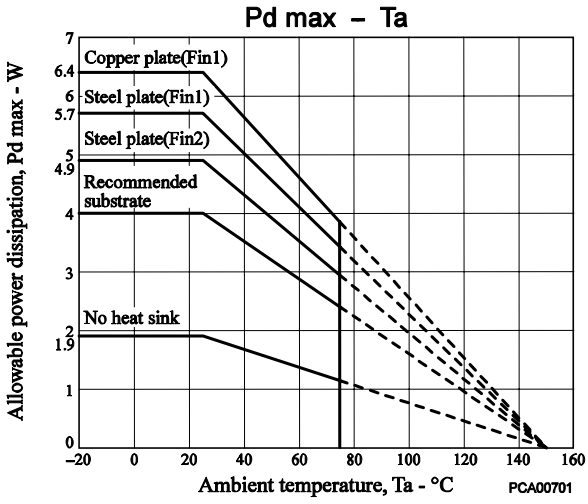
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CCO}	Rg = 0	10	20	40	mA
Voltage gain	VG	V_O = 0dBm	43.0	45.0	47.0	dB
Voltage gain difference	ΔVG				2.0	dB
Total harmonic distortion	THD	P_O = 0.25W (V_O = 1V)		0.2	1.0	%
Output power	P_O1	THD = 10%	2.0	2.5		W
	P_O2	R_L = 3Ω, THD = 10%		3.0		W
	P_O3	Bridge, R_L = 8Ω, THD = 10%		(4.7)		W
Output noise voltage	V_{NO1}	Rg = 0, DIN AUDIO		0.3	1.0	mV
	V_{NO2}	Rg = 10kΩ, DIN AUDIO		0.4	2.0	mV
Channel separation	Chsep	V_O = 0dBm, Rg = 10kΩ	45	55		dB
Ripple rejection	SVRR	Vr= 150mV, Rg = 0, f_r = 100Hz, DIN AUDIO	40	52		dB
Standby current	Ist				10	μA
Input resistance	R_i		21	30		kΩ

Package Dimensions

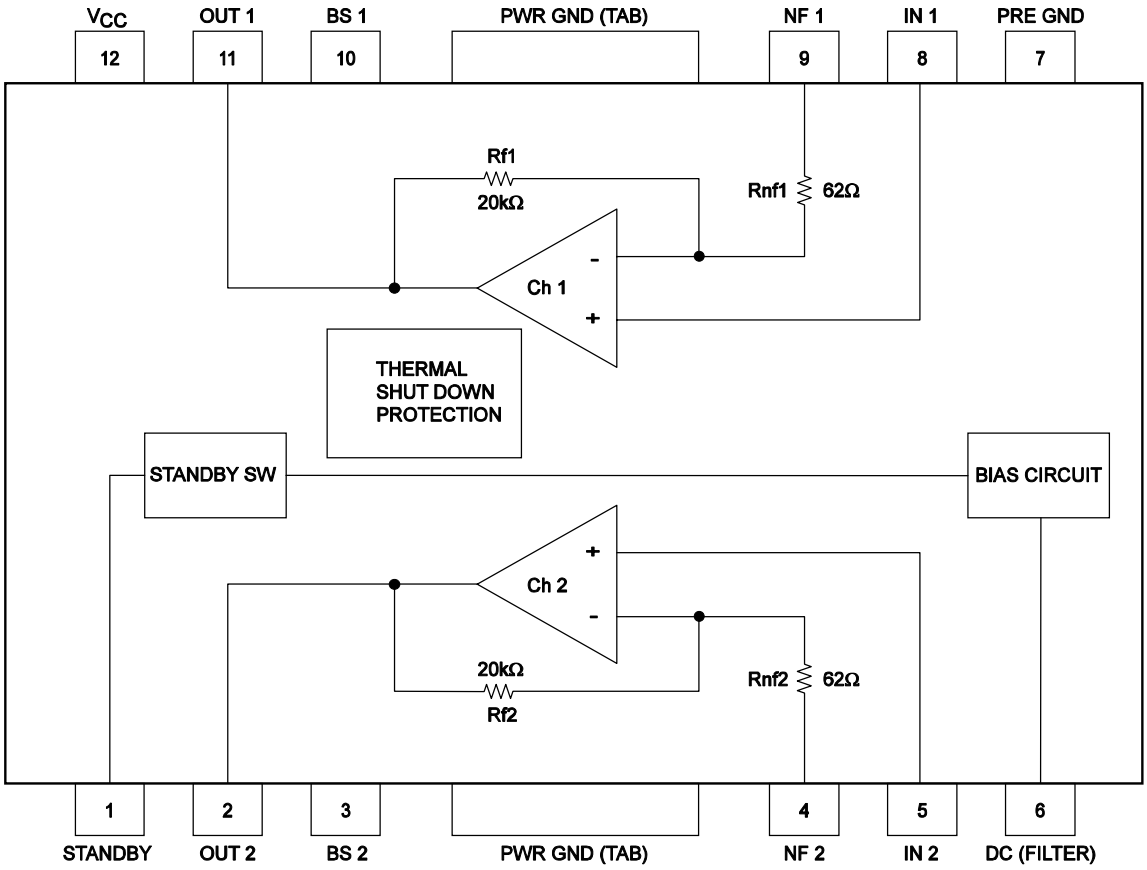
unit : mm

3022B

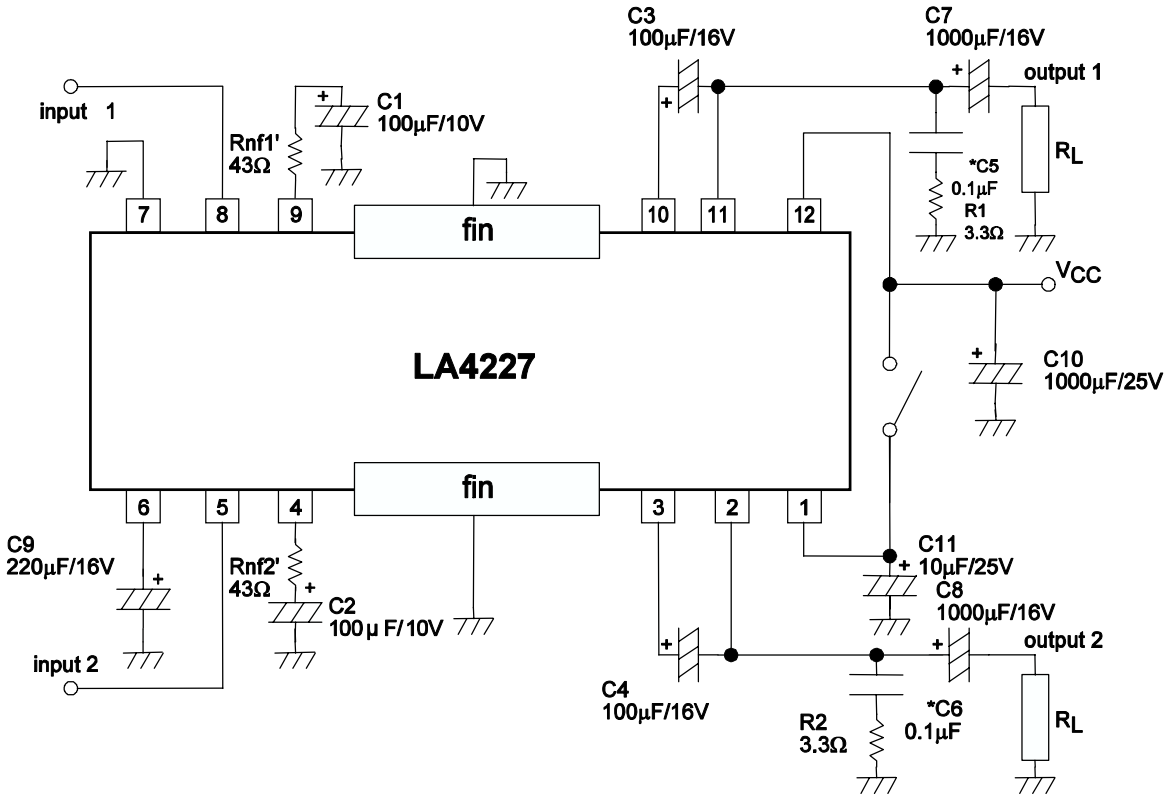




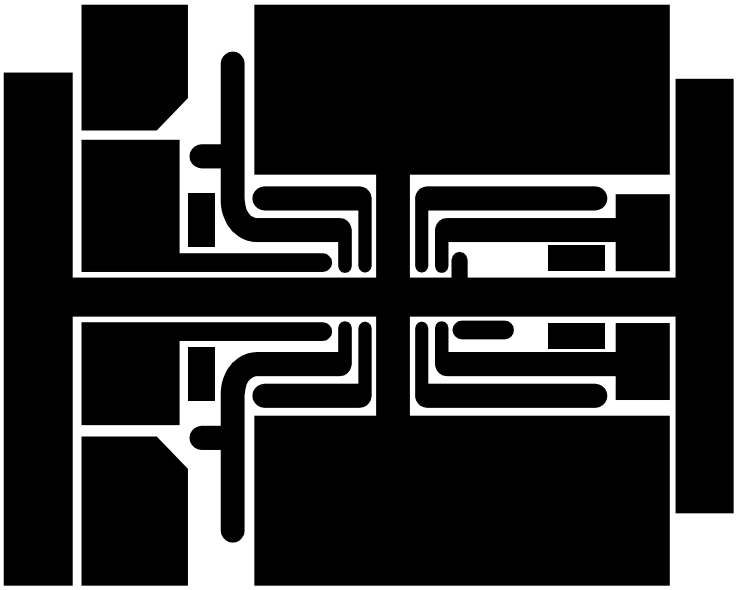
Block Diagram

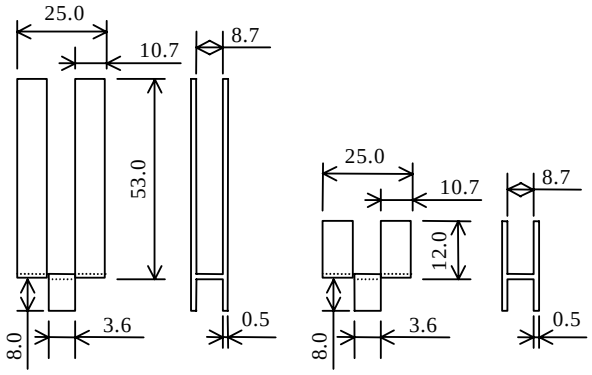


Application Circuit Example



Recommended board Cu-foiled pattern (Actual size)





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