



LA4270

6W Dual-Channel AF Power Amplifier

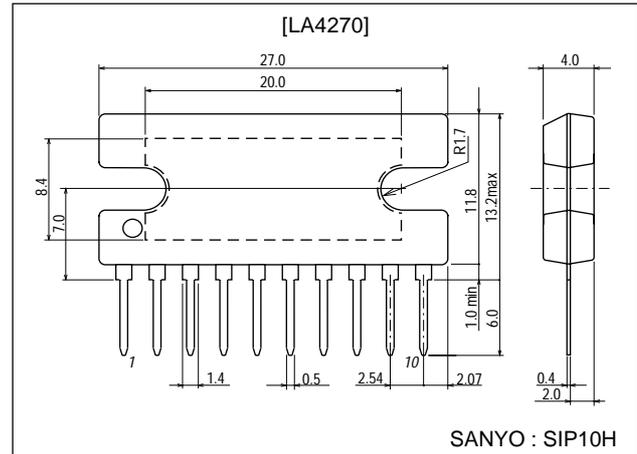
Features

- High-output dual-channel AF Power IC.
($P_O=6.0W \times 2$, $V_{CC}=25V$, $R_L=8\Omega$, $f=1kHz$, $THD=1.0\%$)
- Low distortion ($THD=0.1\%$, $V_{CC}=25V$, $R_L=8\Omega$, $f=1kHz$, $P_O=2W$).
- Minimum number of external parts required (no bootstrap capacitor required).
- Low pop noise at the time of power switch ON/OFF.
- High ripple rejection (58dB typ).
- Wide supply voltage range (10V to 32V).
- On-chip protector against abnormality (thermal shutdown, overvoltage).

Package Dimensions

unit:mm

3024A-SIP10H



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		35	V
Maximum output current	$I_O \text{ peak}$		3.5	V
Allowable power dissipation	$P_d \text{ max}$	With heat sink. See P_d - T_a graph.	20	W
Operating temperature	T_{opr}		-20 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}		25	V
Operating voltage range	$V_{CC \text{ op}}$		10 to 32	V
Recommended load resistance	R_L		8	Ω

Operating Characteristics at $T_a = 25^\circ C$, $V_{CC}=25V$, $R_L=8\Omega$, $f=1kHz$, $R_g=600\Omega$, See specified test circuit

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CCO}		25	45	90	mA
Voltage gain	V_G		38	40	42	dB
Output power	P_O	$THD=1\%$	5.0	6.0		W
Total harmonic distortion	THD	$P_O=2W$		0.1	0.8	%
Output noise voltage	V_{NO}	$R_g=10k\Omega$, $BW=20Hz$ to $20kHz$		0.25	1.0	mV
Ripple rejection	$SVRR$	$R_g=10k\Omega$, $f_R=100Hz$, $V_R=0dBm$	45	58		dB

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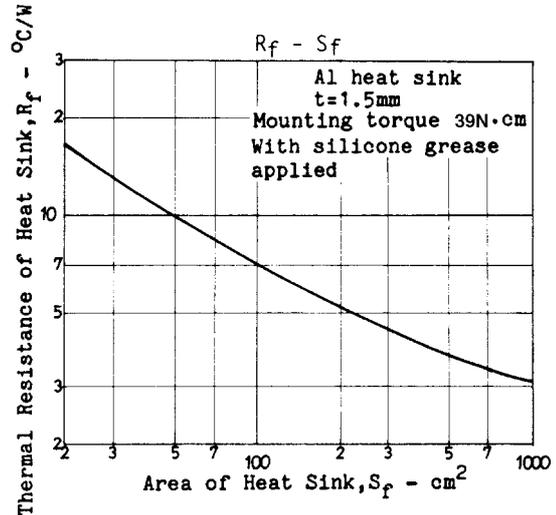
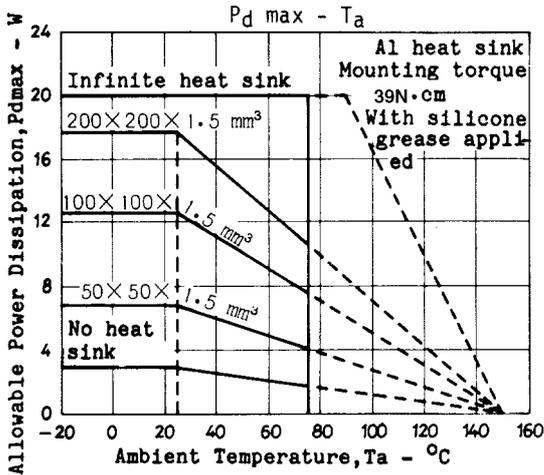
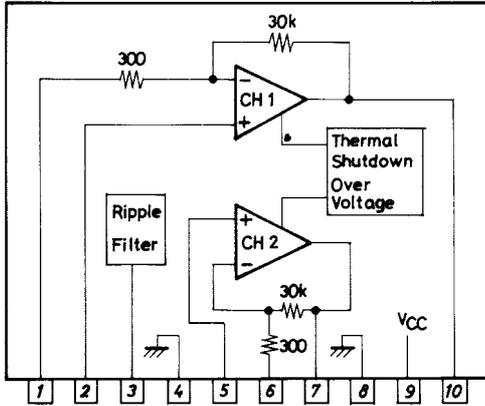
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Crosstalk	CT	Rg=10kΩ	45	60		dB
Channel balance	ΔVG				1.5	dB

Equivalent Circuit Block Diagram and Pin Assignment

Unit (resistance: Ω)



Sample Printed Circuit Pattern

