Monolithic Linear IC

LA4275



6.0 W AF Power Amplifier for Home Stereo, TV Use

Features

- Small-sized package of 7-pin SIP
- High power and low distortion
 - $P_{\rm O}$ = 6.0 W at V_{\rm CC} = 25 V, $R_{\rm L}$ = 8 $\Omega,$
 - f = 1 kHz, THD = 1.0%
 - THD = 0.1% at V_{CC} = 25 V, R_L = 8 Ω ,
 - $f = 1 \text{ kHz}, P_0 = 2 \text{ W}$
- Minimum number of external parts required (no bootstrap capacitor required)
- Low pop noise at the time of power switch ON/OFF
- Excellent ripple rejection (55 dB typ.)
- Wide operating voltage range (10 V to 32 V)
- Protector against abnormalities built in (thermal shutdown, overvoltage)

Package Dimensions

unit : mm

3075-SIP7H



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max	Quiescent	35	V
Maximum output current	I _O peak		3.5	A
Allowable power dissipation	Pd max	With heat sink	10	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-40 to +150	°C

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V _{CC}		25	V
Operating voltage range	V _{CC} op		10 to 32	V
Recommended load resistance	RL		8 to 16	Ω

Operating Characteristics at Ta = 25°C, V_{CC} = 25 V, R_L = 8 Ω , f = 1 kHz, Rg = 600 Ω , See specified Test Circuit.

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	I _{CCO}	Quiescent		30	60	mA
Voltage gain	VG		38	40	42	dB
Output power	PO	THD = 1%	5.0	6.0		W
Total harmonic distortion	THD	$P_0 = 2 W$		0.1	0.8	%
Output noise voltage	V _{NO}	$Rg = 10 k\Omega$, BW = 20 Hz to 20 kHz		0.25	1.0	mV
Ripple rejection	SVRR	Rg = 10 k Ω , f _R = 100 Hz, V _R = 0 dBm	45	55		dB

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Equivalent Circuit Block Diagram and Pin Assignment

Sample Application Circuit (Test Circuit)



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