

**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

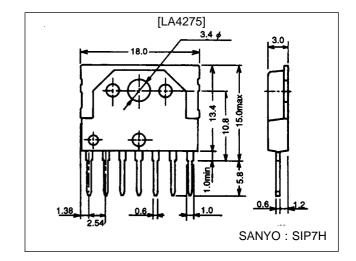
$$\begin{split} &P_O=6.0~W~at~V_{CC}=25~V,~R_L=8~\Omega,\\ &f=1~kHz,~THD=1.0\%\\ &THD=0.1\%~at~V_{CC}=25~V,~R_L=8~\Omega,\\ &f=1~kHz,~P_O=2~W \end{split}$$

- 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 <sub>CC</sub> max	Quiescent	35	V
Maximum output current	I <sub>O</sub> 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

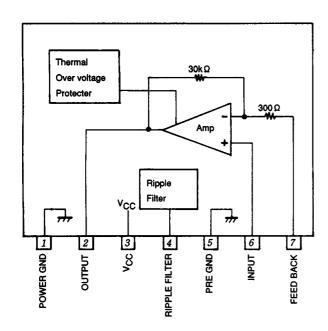
### Operating Conditions at $Ta = 25^{\circ}C$

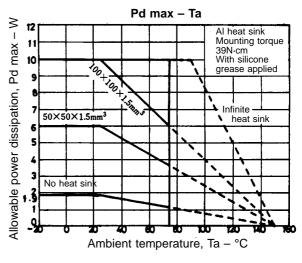
Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V <sub>CC</sub>		25	V
Operating voltage range	V <sub>CC</sub> op		10 to 32	V
Recommended load resistance	$R_{L}$		8 to 16	Ω

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

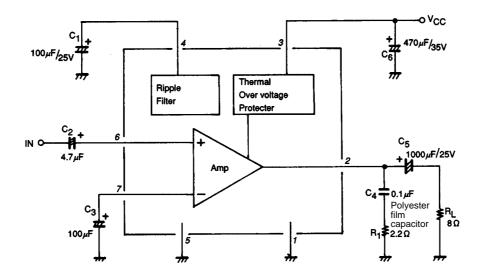
Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	Icco	Quiescent		30	60	mA
Voltage gain	VG		38	40	42	dB
Output power	Po	THD = 1%	5.0	6.0		W
Total harmonic distortion	THD	P <sub>O</sub> = 2 W		0.1	0.8	%
Output noise voltage	V <sub>NO</sub>	$Rg = 10 \text{ k}\Omega$ , BW = 20 Hz to 20 kHz		0.25	1.0	mV
Ripple rejection	SVRR	Rg = $10 \text{ k}\Omega$ , $f_R = 100 \text{ Hz}$ , $V_R = 0 \text{ dBm}$	45	55		dB

### **Equivalent Circuit Block Diagram and Pin Assignment**





# **Sample Application Circuit (Test Circuit)**



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