



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
  - $P_O = 6.0 \text{ W}$  at  $V_{CC} = 25 \text{ V}$ ,  $R_L = 8 \Omega$ ,
  - $f = 1 \text{ kHz}$ , THD = 1.0%
  - THD = 0.1% at  $V_{CC} = 25 \text{ V}$ ,  $R_L = 8 \Omega$ ,
  - $f = 1 \text{ kHz}$ ,  $P_O = 2 \text{ W}$
- 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)

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$	Quiescent	35	V
Maximum output current	$I_O \text{ peak}$		3.5	A
Allowable power dissipation	$P_d \text{ max}$	With heat sink	10	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	$V_{CC}$		25	V
Operating voltage range	$V_{CC \text{ op}}$		10 to 32	V
Recommended load resistance	$R_L$		8 to 16	$\Omega$

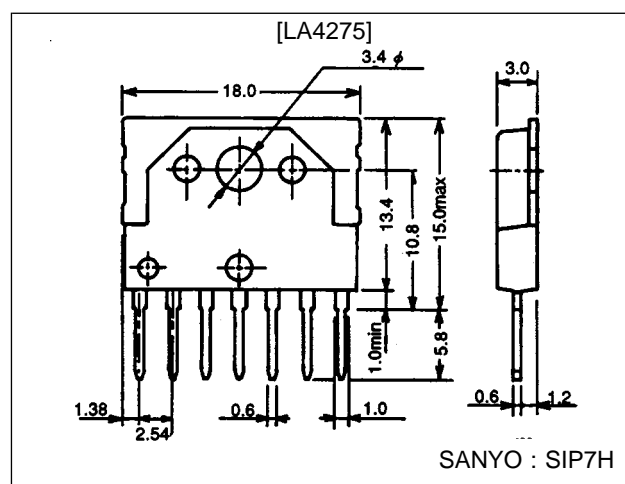
#### Operating Characteristics at $T_a = 25^\circ\text{C}$ , $V_{CC} = 25 \text{ V}$ , $R_L = 8 \Omega$ , $f = 1 \text{ kHz}$ , $R_g = 600 \Omega$ , See specified Test Circuit.

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

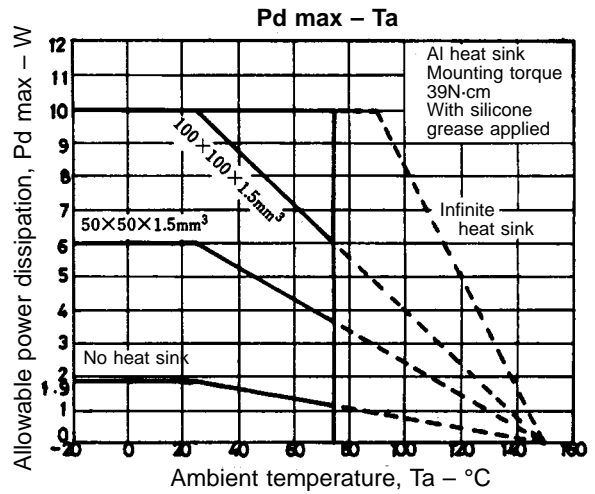
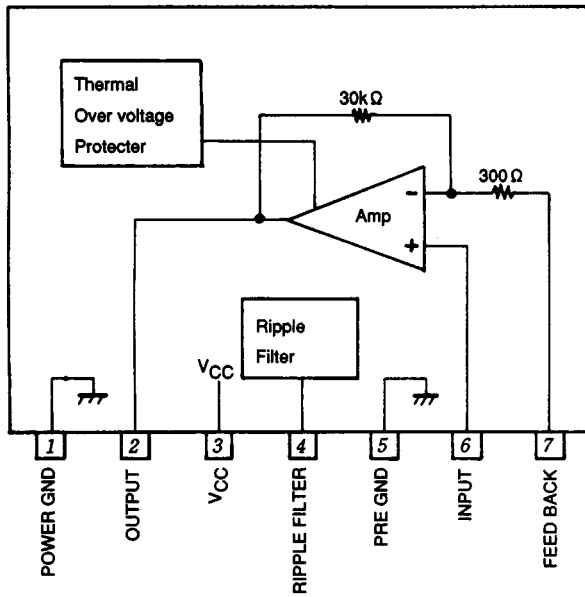
### Package Dimensions

unit : mm

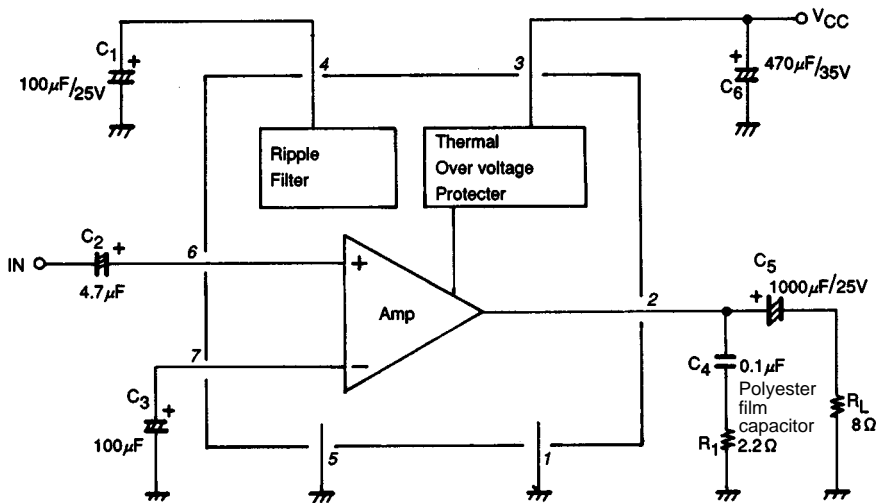
#### 3075-SIP7H



Equivalent Circuit Block Diagram and Pin Assignment



Sample Application Circuit (Test Circuit)



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of October, 1996. Specifications and information herein are subject to change without notice.