

**SANYO**

## 6.0 W AF Power Amplifier for Home Stereo, TV Use

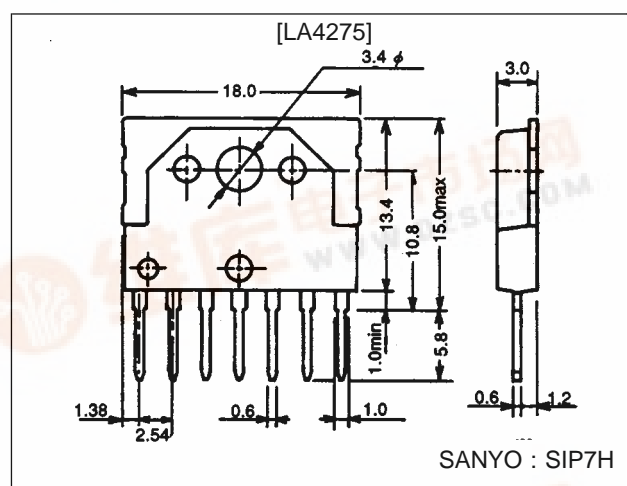
### Features

- 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)

### Package Dimensions

unit : mm

#### 3075-SIP7H



### 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	$^\circ\text{C}$

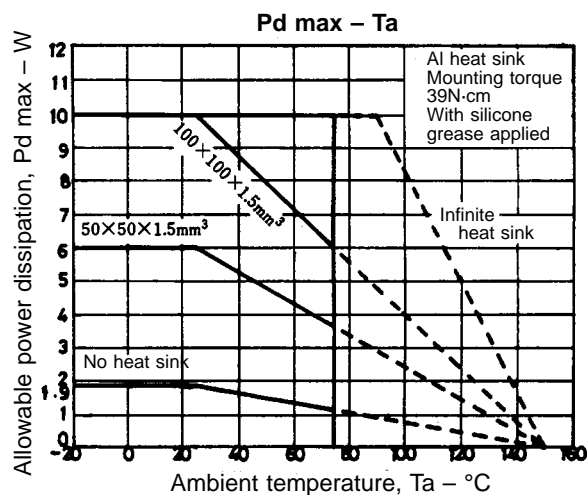
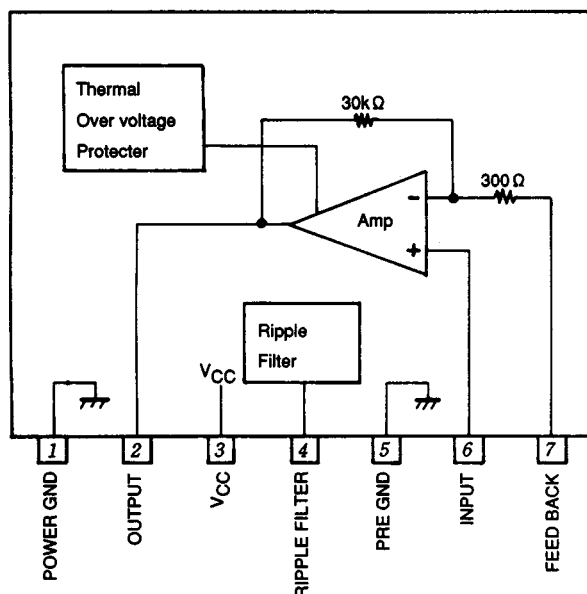
#### Operating Conditions at $T_a = 25^\circ\text{C}$

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	$\Omega$

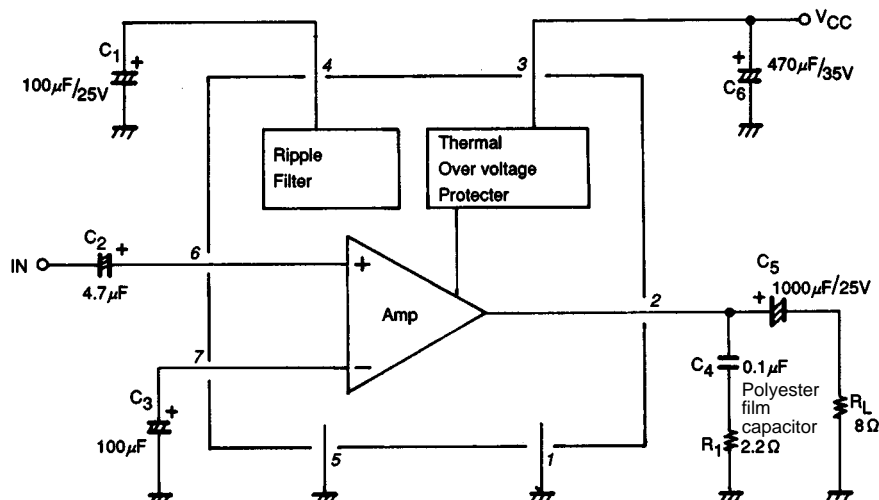
#### Operating Characteristics at $T_a = 25^\circ\text{C}$ , $V_{CC} = 25\text{ V}$ , $R_L = 8\ \Omega$ , $f = 1\text{ kHz}$ , $R_g = 600\ \Omega$ , See specified Test Circuit.

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

## Equivalent Circuit Block Diagram and Pin Assignment



## Sample Application Circuit (Test Circuit)



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