

Monolithic Linear IC

LA4275

SANYO

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

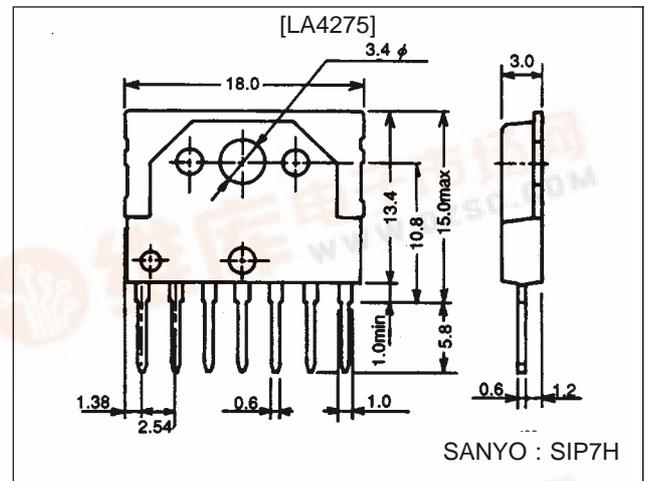
Features

- 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 $T_a = 25^\circ\text{C}$

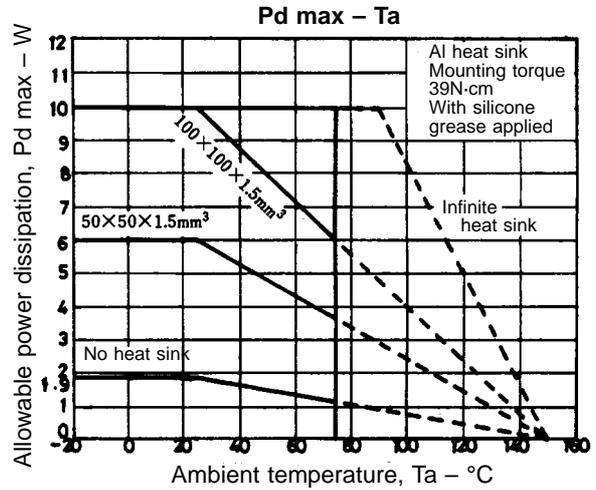
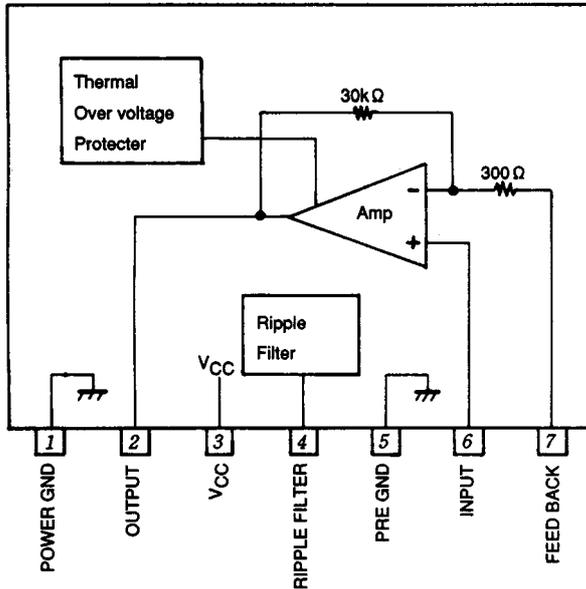
Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		25	V
Operating voltage range	$V_{CC\text{ op}}$		10 to 32	V
Recommended load resistance	R_L		8 to 16	Ω

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.

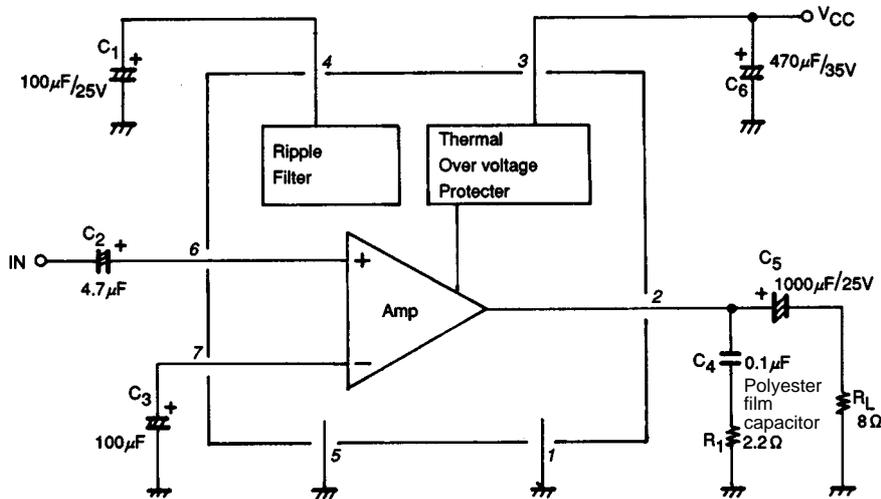
Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	I_{CCO}	Quiescent		30	60	mA
Voltage gain	VG		38	40	42	dB
Output power	P_O	THD = 1%	5.0	6.0		W
Total harmonic distortion	THD	$P_O = 2\text{ W}$		0.1	0.8	%
Output noise voltage	V_{NO}	$R_g = 10\text{ k}\Omega$, BW = 20 Hz to 20 kHz		0.25	1.0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

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Equivalent Circuit Block Diagram and Pin Assignment



Sample Application Circuit (Test Circuit)



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