

SANYO

No.1612B

LA6805MLow-Voltage Power Amp
for Speech Synthesis Output**Use**

- . The LA6805M is a speaker driver IC designed to operate from low voltage. It is especially suited for use in peripherals of musical instruments, electronic translators, speech synthesizing systems.

Features

- . On-chip current-voltage converting OP amp (also used as filter amp)
- . Capable of delivering high output at low voltage because of low output saturation voltage
- . Low quiescent current: 1mA or less (typ.)
- . Since the ENA pin is provided, no power is dissipated at the unused mode.
- . Minimum number of external parts required.

Absolute Maximum Ratings at Ta=25°C

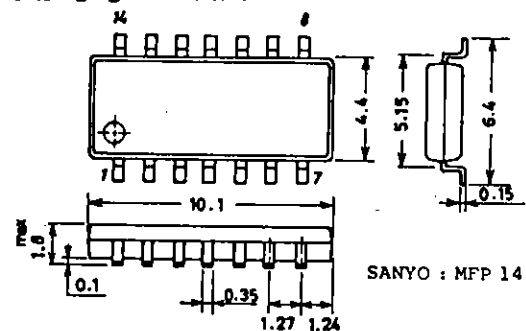
				unit
Maximum Supply Voltage	V_{CCmax}	$+V_S - (-V_S)$	7	V
Allowable Power Dissipation	P_{dmax}		330	mW
Operating Temperature	T_{opr}		-10 to +75	°C
Storage Temperature	T_{stg}		-40 to +125	°C

Operating Conditions at Ta=25°C

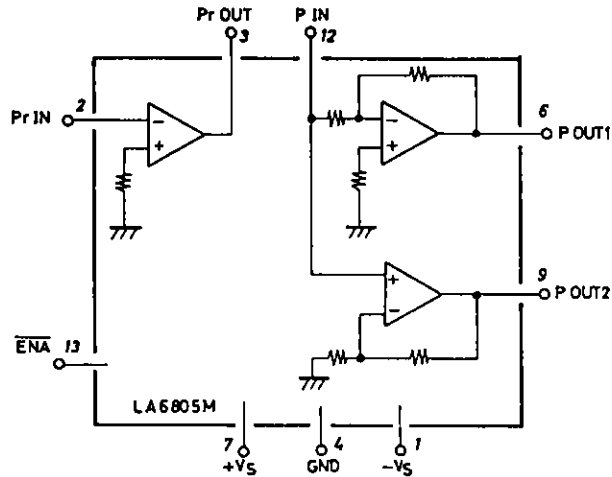
				unit
Supply Voltage Range	$V_{CC\ op}$	$ V_S \cong -V_S $	± 1.2 to ± 3.3	V
Recommended Load Resistance	R_L		32 to 64	ohm

Operating Characteristics at Ta=25°C, +V_S=1.5V, -V_S=-1.5V, R_L=64ohm

			min	typ	max	unit
Supply Current 1	I_{cco}			2	3.5	mA
Output Saturation Voltage	V_{sat1}	$I_O=+35mA$	$V_S-0.5$			V
	V_{sat2}	$I_O=-35mA$			$-V_S+0.5$	V
Input Amp Bias Current	I_B				0.5	μA
Output Offset Voltage	$V_O\ offset$		-150		+150	mV
Output Amp Gain 1	VG1	Inverting	12	14	16	dB
Output Amp Gain 2	VG2	Noninverting	12	14	16	dB
Output Amp Gain Difference	$V_{(G1-G2)}$					
Output Voltage	$V_{O(1-2)}$	$+V_S=1.5V, -V_S=-1.5V$		± 0.5		dB
		THD=10%, f=1kHz	1.5			V
Input Amp Open Loop Gain	VG3	f=1kHz		60		dB

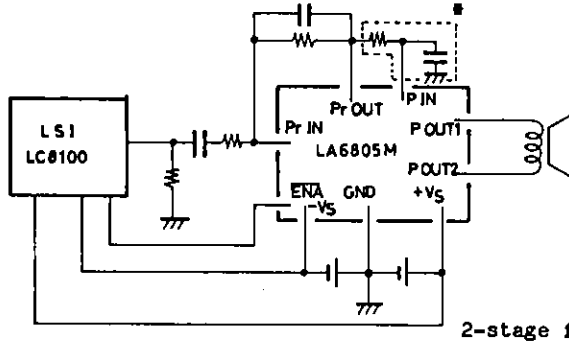
Package Dimensions 3034A-M14IC
(unit: mm)

Equivalent Circuit Block Diagram



Sample Application Circuits

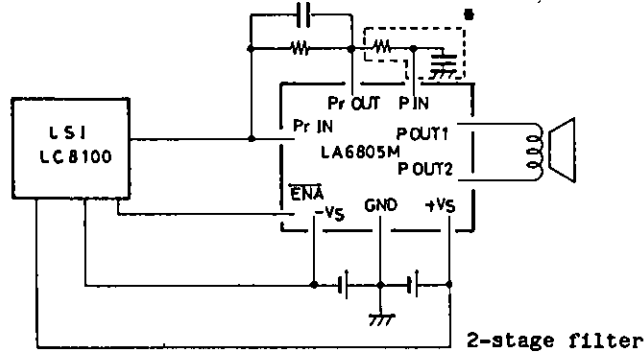
- (1) Application where the LA6805M is used in conjunction with the voltage output type (unipolar) speech synthesis LSI.



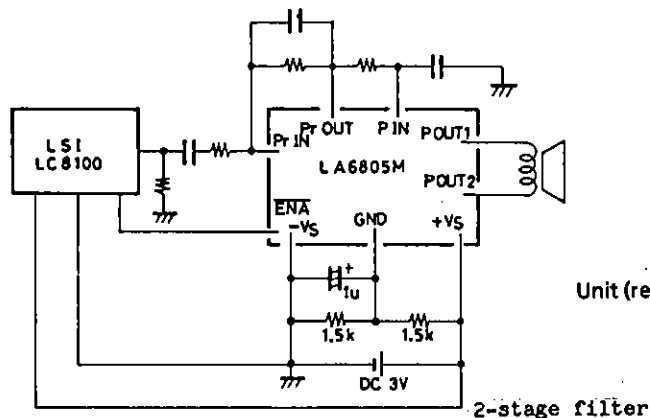
*: When no 2-stage filter is required, short P OUT and P IN.

ENA : Active-low
($V_S - V_{ENA} \geq 2V$)

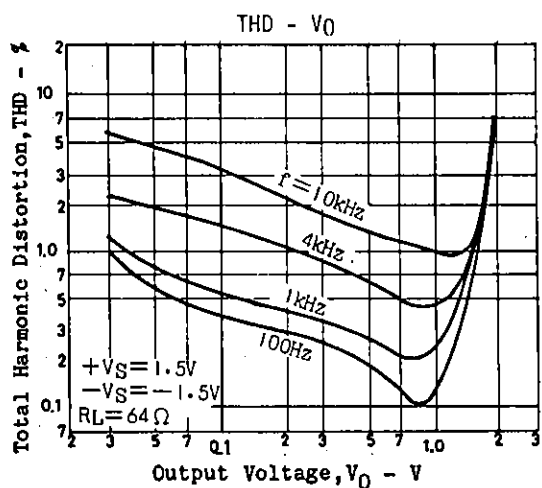
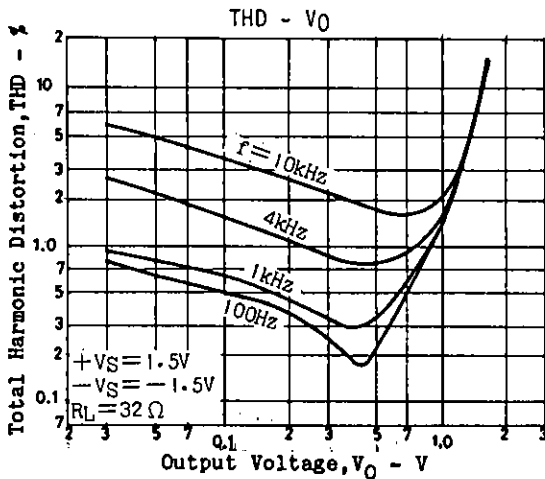
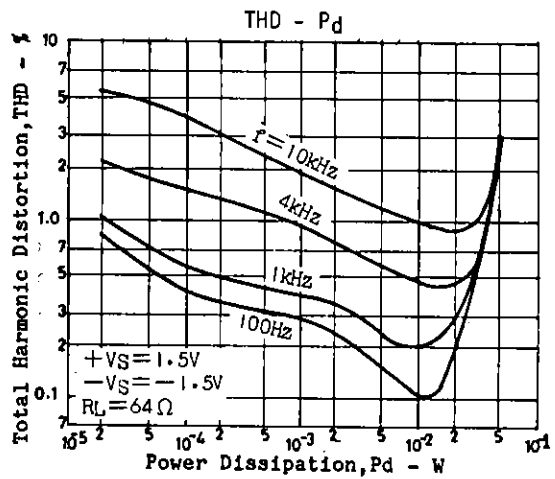
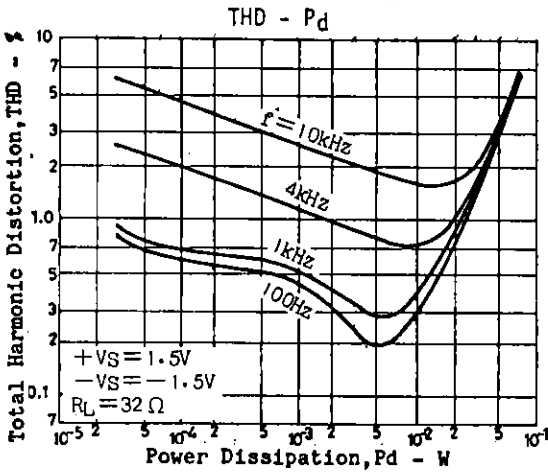
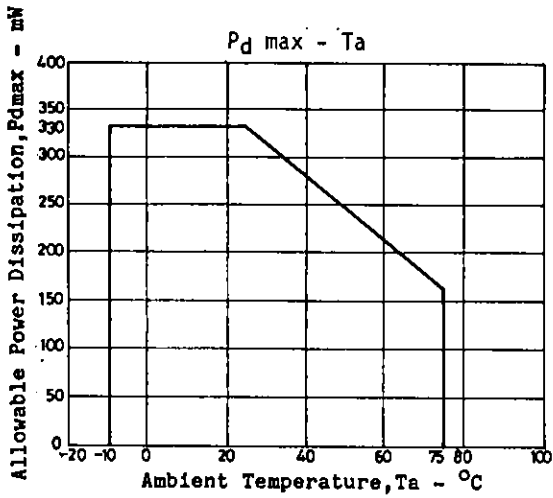
- (2) Application where the LA6805M is used in conjunction with the current output type (bipolar) speech synthesis LSI.



- (3) Application where the LA6805M is operated from a single supply



Unit (resistance: Ω , capacitance: F)



■ 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.