

**2.4W Audio Amplifier Stereo**

**General Description:** CM8602B is an audio amplifier of class AB, when connected to a 5V supply, THD+N less than 10%, will deliver 2.4W to a 4Ω load or 1.5W to a 8Ω load. The CM8602B is unity-gain stable and can be configured by external gain-setting resistors, It features a low-power consumption shutdown mode with very low shutdown current, and thermal shutdown protection. It also utilizes circuitry to reduce “clicks and pops” during device turn-on and turn-off. It can also be applied in headphone function mode.

**Features:**

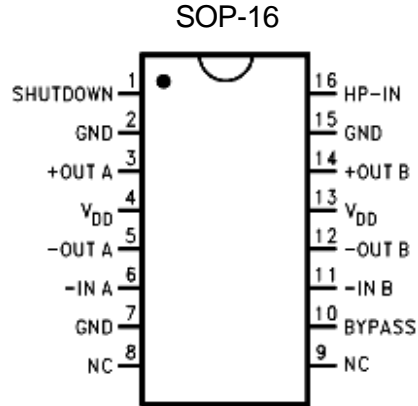
1. Power output at 5V supply, 4Ω load, THD+N<10%, is 2.4W.
2. Power output at 5V supply, 8Ω load, THD+N<10%, is 1.5W.
3. Operating supply voltage: VDD =2.2V~5.5V.
4. Typical shutdown current: 0.2uA.
5. Improved pop & click circuitry eliminates noise during turn-on and turn-off transitions
6. SOP-16 packages.

**Electrical Characteristics:**

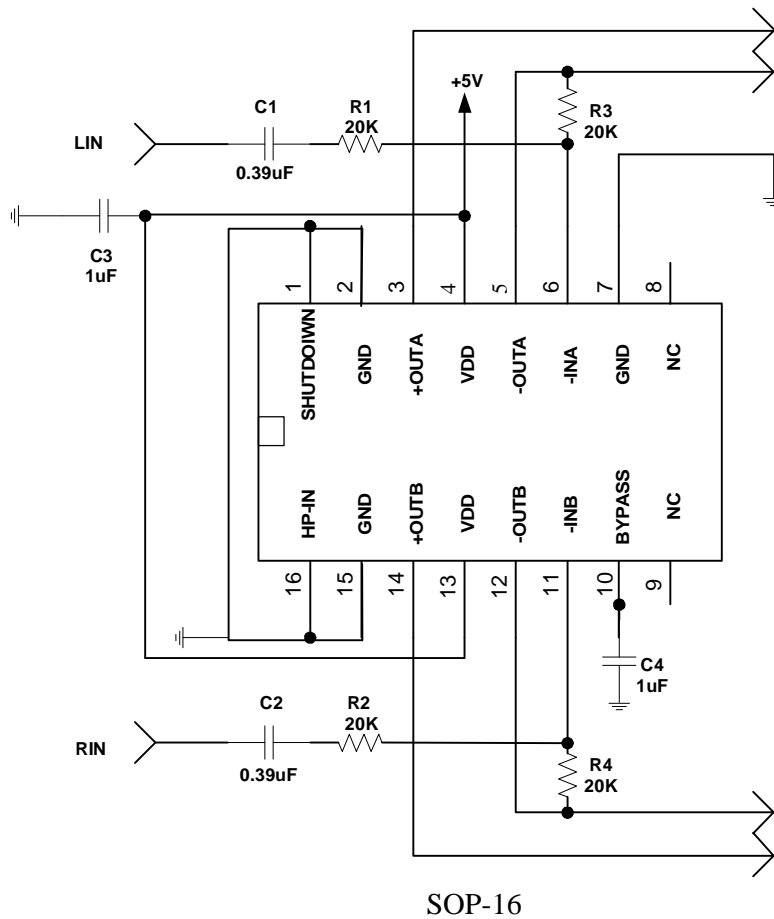
Symbol	Parameter	Conditions	Typical	Limit	Units
I <sub>DD</sub>	Quiescent power supply current	V <sub>IN</sub> =0V, I <sub>O</sub> =0A, No Load	6.5	14	mA
I <sub>SD</sub>	Shutdown current	V <sub>SD</sub> = V <sub>DD</sub>	0.2	4.0	μA
V <sub>SDIH</sub>	Shutdown voltage input high	V <sub>DD</sub> =5V	1.5		V
V <sub>SDIL</sub>	Shutdown voltage input low	V <sub>DD</sub> =5V	1.3		V
V <sub>OS</sub>	Output offset voltage	V <sub>IN</sub> =0V, No Load	9	50	mV
P <sub>O</sub>	Output power (8 Ω load)	THD+N=10%(max); f=1kHz	1.5	1.8	W
	Output power (4 Ω load)		2.4	2.7	
T <sub>WU</sub>	Wake-up time		100		ms
THD+N	Total harmonic distortion + noise	P <sub>O</sub> =0.5Wrms;f=1kHz	0.3	0.6	%

PSRR	Power supply rejection ratio	$V_{\text{ripple}}=200\text{mV}$	-63 (217Hz) -77 (1kHz)	-55	dB
$X_{\text{TALK}}$	Channel separation	$f=1\text{kHz}, C_B=1.0\mu\text{F}$	-65	-55	dB

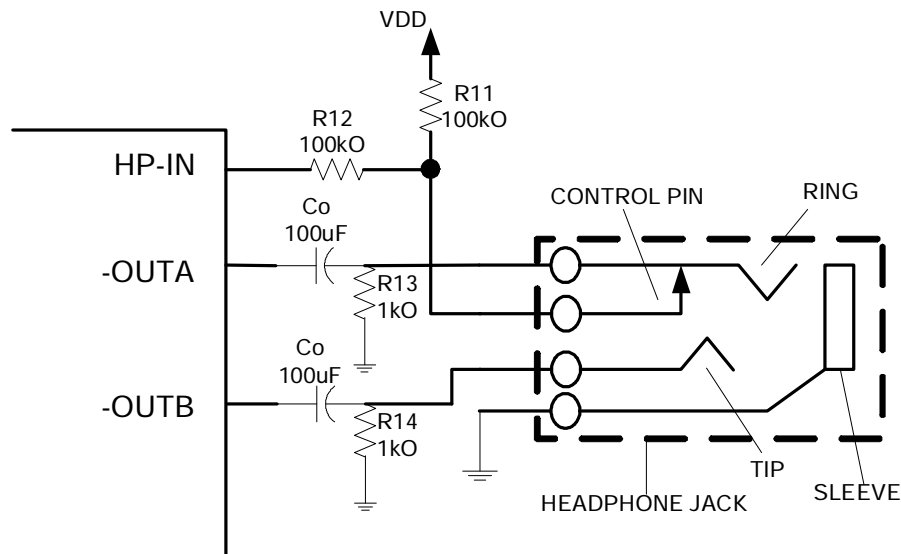
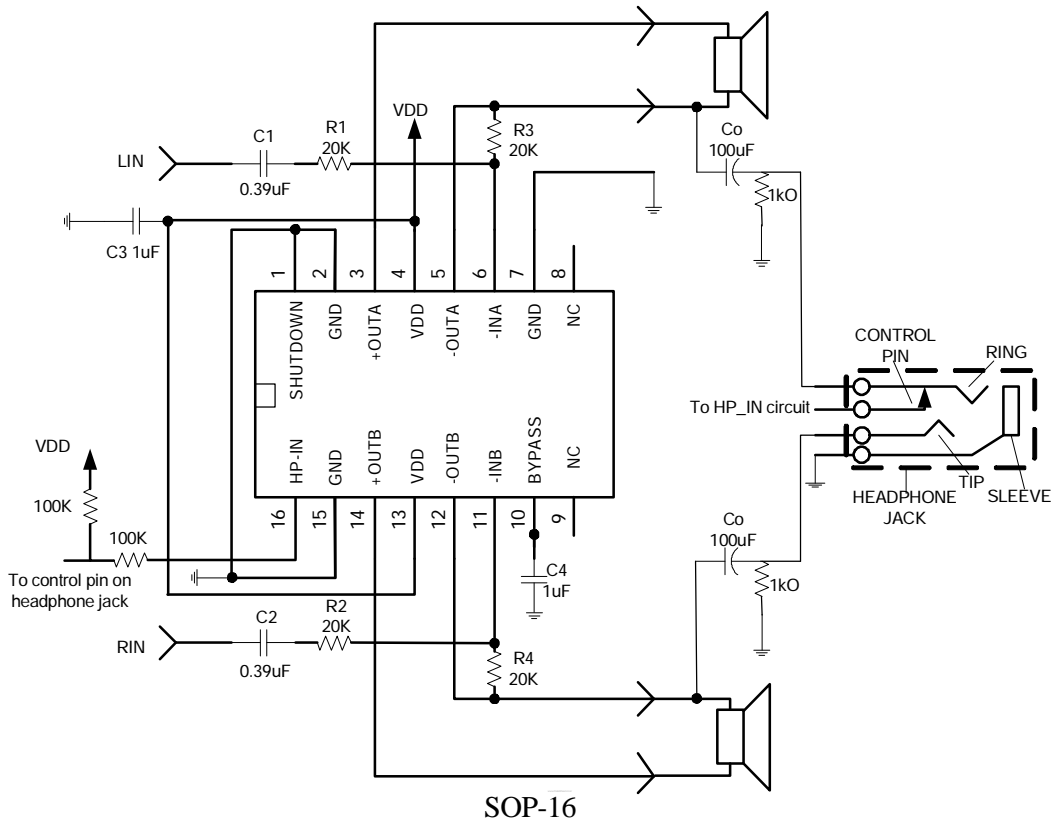
**Packaging information:**



**Typical application:**



Application information(Include headphone mode)

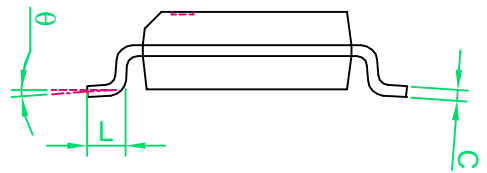
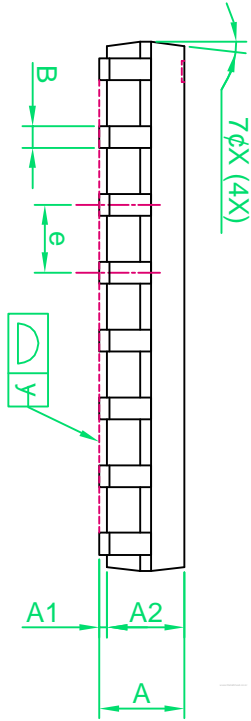
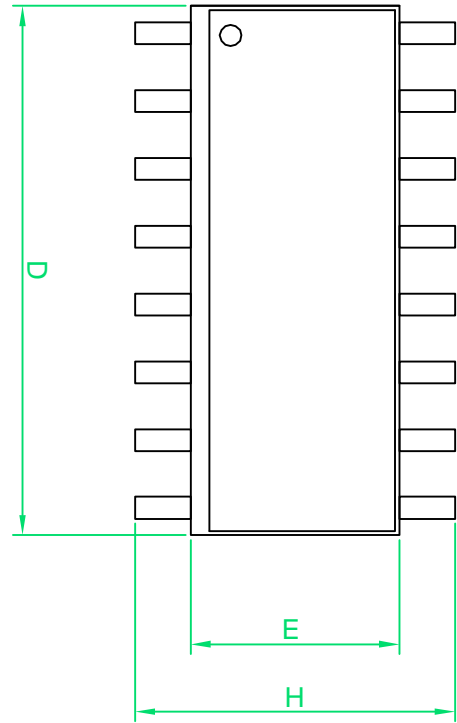


Application of headphone mode:

If with no headphones connected to the headphone jack, there is a low voltage applied to HP-IN pin, this voltage placing the amplifier in bridged mode operation to drive the speakers. If connecting headphones to the headphone jack, the voltage applied to HP-IN pin is pulled up to VDD by resistor R11, this enables the headphone function, and mutes the bridged speakers.

Package Information

SOP-16



- NOTE
1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS
  2. DIMENSION L IS MEASURED IN GAGE PLANE
  3. TOLERANCE 0.10 mm UNLESS OTHERWISE SPECIFIED
  4. CONTROLLING DIMENSION IS MILLIMETER. CONVERTED INCH DIMENSIONS ARE NOT NECESSARILY EXACT.
  5. FOLLOWED FROM JEDEC MS-012

SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.35	1.60	1.75	0.053	0.063	0.069
A1	0.10	---	0.25	0.004	---	0.010
A2	---	1.45	---	---	0.057	---
B	0.33	---	0.51	0.013	---	0.020
C	0.19	---	0.25	0.007	---	0.010
D	9.80	---	10.00	0.386	---	0.394
E	3.80	---	4.00	0.150	---	0.157
e	---	1.27	---	---	0.050	---
H	5.80	---	6.20	0.228	---	0.244
L	0.40	---	1.27	0.016	---	0.050
y	---	---	0.10	---	---	0.004
$\theta$	0°	---	8°	0°	---	8°