

### GENERAL DESCRIPTION

The BM0120 is one channel audio amplifier module, using unique close loop and feed forward compensation techniques (CLFFC—IP belong BM) to achieve better THD+N from 20Hz to 20KHz. The module can deliver output power up to 35W (RMS) @4ohm load. The module has mute function with logic high or low control.

The voltage gain can be adjusted in the module via fix feedback resistor, the input signal is flexible. No other external components from input to output, and connect to speaker directly. Friendly analog input interface. **Very high efficiency**, do not need Heat-sink under 20W(RMS)

The BM0120 integrated mute circuit inside, it very suits for application in LCD TV, PDP TV, Projection TV and Car audio.

### APPLICATIONS

- Car audio -----2/4 channels
- PDP -----2.1 channel
- Projection TV -----2.1 channel
- LCD TV-----2 channel
- DVD player

### Features

Wide VDD input range of +9V ~ +26V

Reduce system cost with no heat sink and save power

Class D+ and CLFFC IP inside

Excellent bass frequency without big bypass DC capacitor inside

Internal thermal protection

Connect to any passive 4 or 8 ohm speaker

No mute on/off noise

THD+N : <0.2%@1W / 1KHz

SNR : 80db

Cross noise with other channels : 80db

Output power (RMS) is depend on the VDD and load (THD<10%)

30W @ 4ohm /+24V  
20W @ 4ohm /+18V  
13W @ 4ohm /+12V  
15W @ 8ohm /+24V

Very slim size : 46mm\*31mm

Pin1 = Audio input

Pin2 = A-GND

Pin3 = GND

Pin4 = +5V

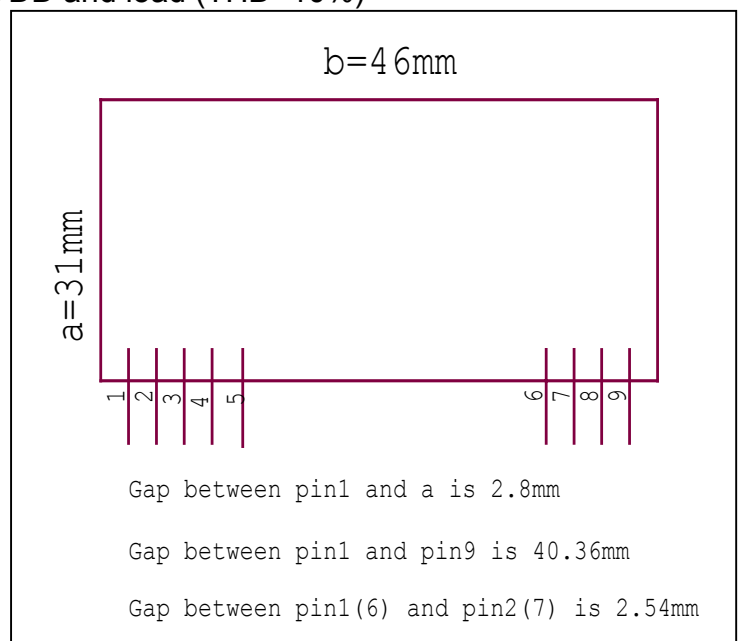
Pin5 = Mute control

Pin6 = VDD (+9V ~ +25V)

Pin7 =GND

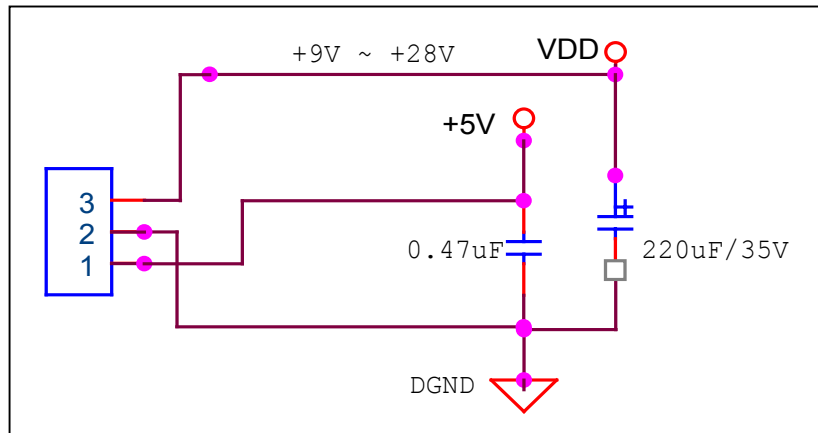
Pin8 = Out -

Pin9 = Out+

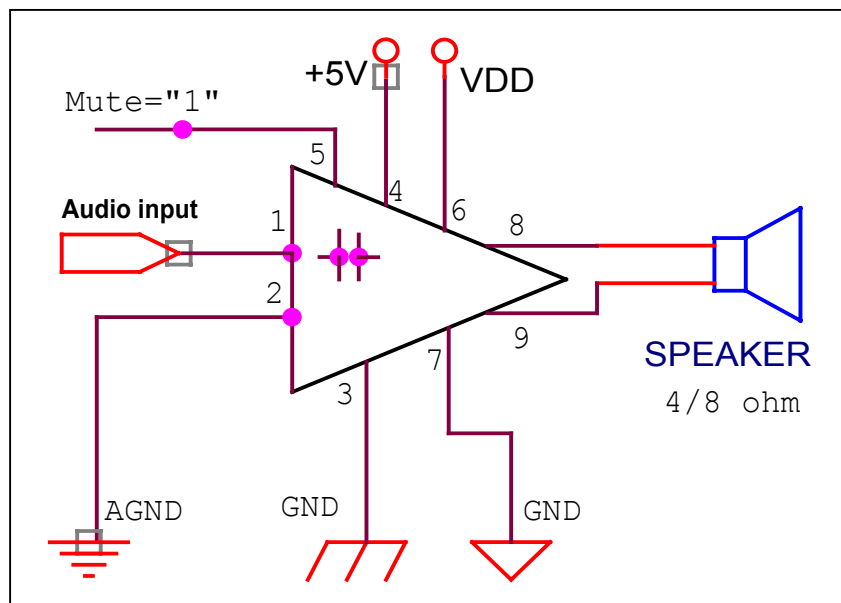


External application circuit:

Power supply (+5V and VDD)



**Note1: keep +5V power up same as VDD or +5V earlier.**



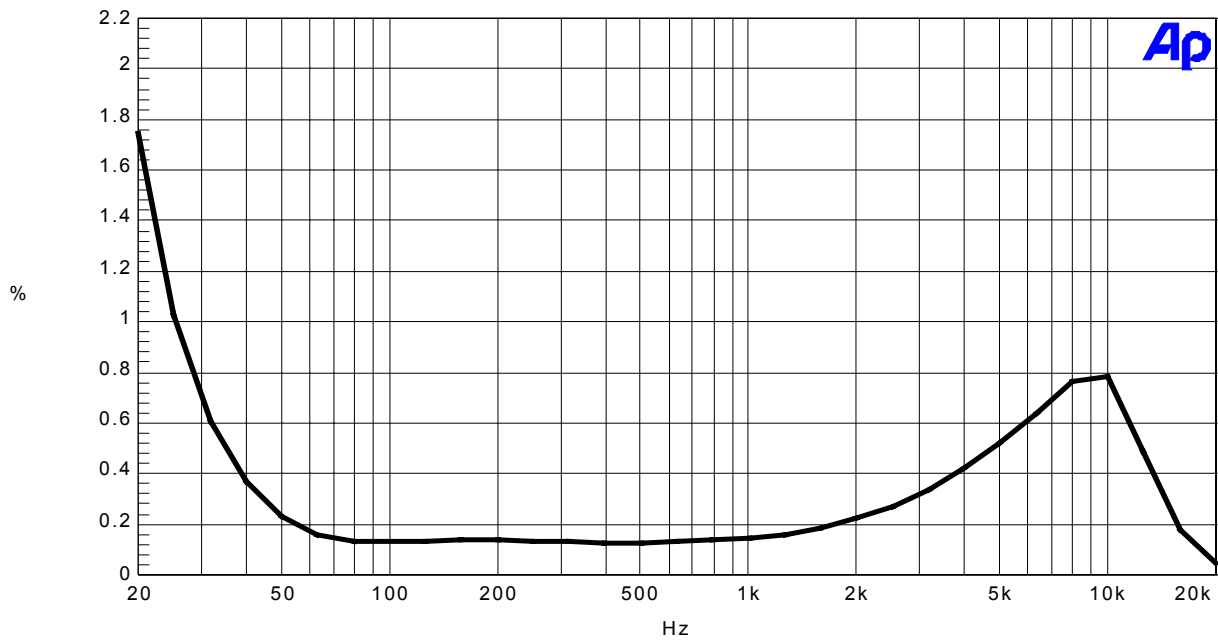
**Note2: Mute = 1 , un-Mute = 0 or open**  
**Audio input capacitor has been filled in this module, external couple capacitor is not necessary.**

# BM0120 20W AUDIO CLASS D+

Championmicro

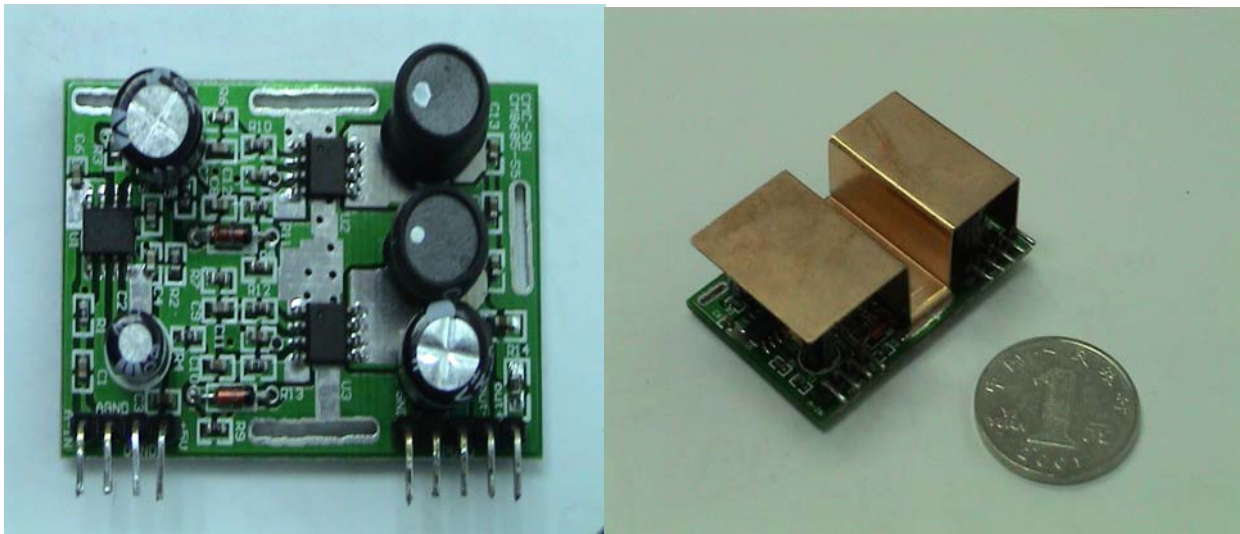
A-A THD+N vs FREQUENCY

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CM8685 Jack  
Output 1W. 12V. 8 Ohm. L 15u. C 0.22u  
8958 Cap 1u just beside Pin 1,3. Add SK12. 8685 1u right beside IC. 12V EC change 1000u beside 8958.

jack6.at2c



when application in over 25W , a small heat-sink is expected