

DIP00

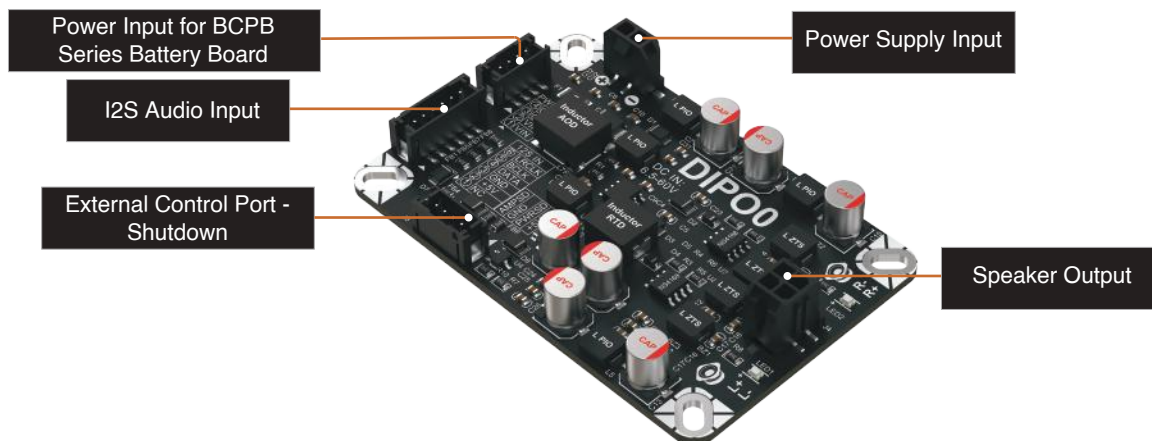
The DIPO0 is a 2W stereo Class D audio amplifier featuring a digital I2S input, specifically designed for low-power and noise-sensitive applications. It delivers high-fidelity audio with minimal distortion by eliminating analog signal paths and removing the need for input capacitors or external filters. An integrated anti-distortion function safeguards the speaker against voltage drops and overload conditions. The device supports stereo output through the use of two chips, offers comprehensive protection features, and is easy to integrate into various system designs.

Features:

- High Performance DAC.
- I2S Input Supported.
- Reverse polarity protection.
- Certified with FCC and CE.
- Long Term Manufacturing Plan (10 Years).
- Anti-Distortion Output.

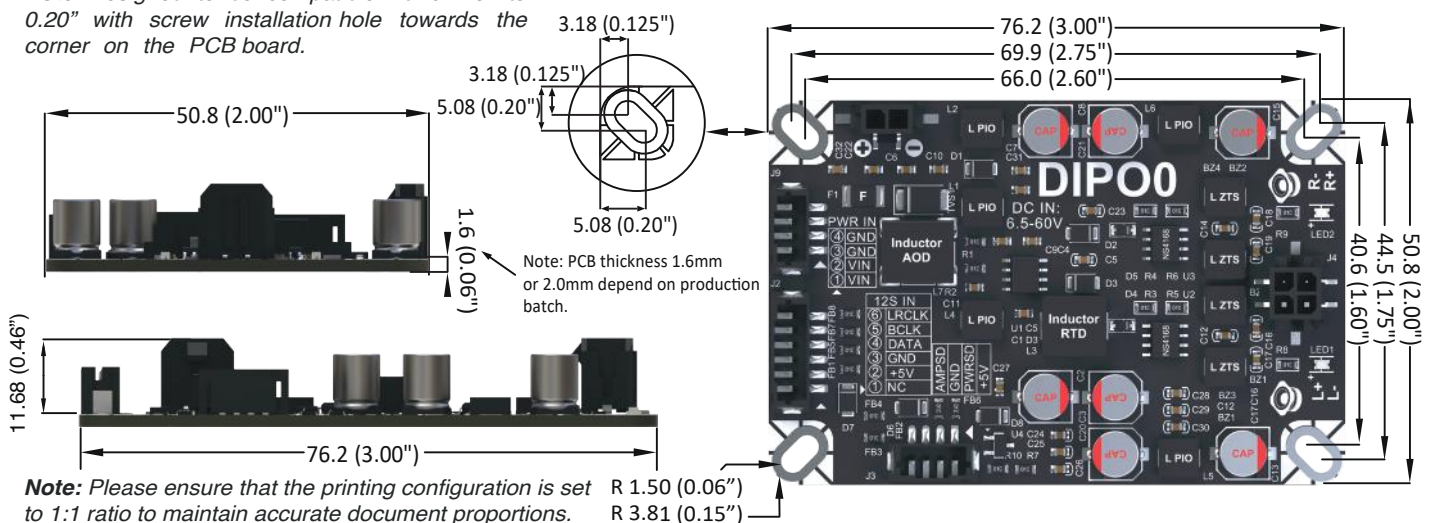


Specification(s) :		Output Connector(s) :	Micro-Fit 2x2 CKT
Supply Voltage :	DC 6.5V - 60V	Product Size :	7.62 (W) x 50.8 (D) x 11.68 (H) mm 3.00 (W) x 2.00 (D) x 0.46 (H) Inch
Input Signal :	I2S		
Output Power :	2 x 2W	Net Weight	25.5 g ± 2 g / 0.90 oz ± 0.07 oz

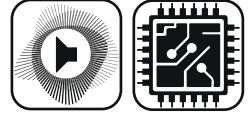


Mechanical Drawing (Nominal Dimension, mm(inch))

Note: Designed to be compatible with 0.125" to 0.20" with screw installation hole towards the corner on the PCB board.



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Precautions

Safety Precautions



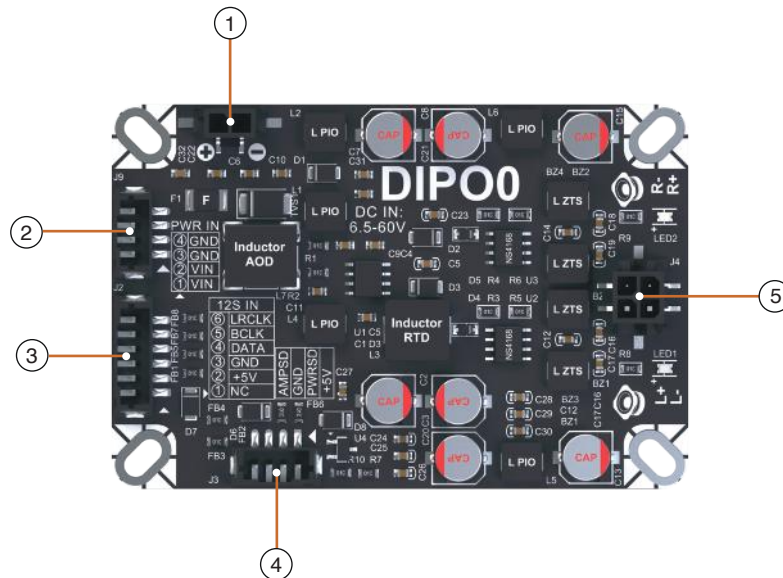
CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When using the DIPO0 audio amplifier board, prioritize safety for the board, connected devices, and user well-being. Verify power supply voltage and current meet specifications to prevent damage or hazards. Disconnect power before handling cables to avoid electric shock. When connecting external audio sources, ensure they're powered off to prevent surges or interference. Verify compatibility with board's input specs to avoid overload or distortion. Handle the board carefully to avoid damage from moisture or dust. Follow assembly instructions closely, checking connections to prevent issues, ensuring safe operation, and maximizing performance and lifespan.

Connector(s) & Switch(s) Layout

2X2W Digital I2S Signal Input Audio Amplifier Board - DIPO0



Connector(s):

1. Power Supply Input (Micro-Fit 1x2 CKT):

- DC supply voltage range (6V - 60V).
- Reduce the risk of power interruptions.

2. Battery Supply Input (BCPB Series)(JST PH 4-circuits):

- Battery support voltage range (6V - 24V).
- Compatible with the BCPB series.

3. I2S Audio Input (JST PH 6-circuits):

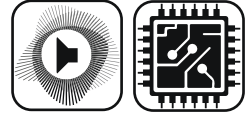
- Used for digital Inter-Integrated Circuit Sound (I2S) input.
- High-quality digital audio data.

4. External Control Port - Shutdown (JST PH 4-circuits):

- Emulates user control and triggers a board shutdown.
- Ensure secure and reliable connections for high-power audio output.

5. Speaker Output (Micro-Fit 2x2 CKT):

- Used for speaker connections output.
- Ensure secure and reliable connections for high-power audio output.

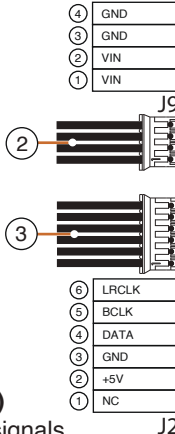


Port(s) Layout

Connecting the DIPO0 Module

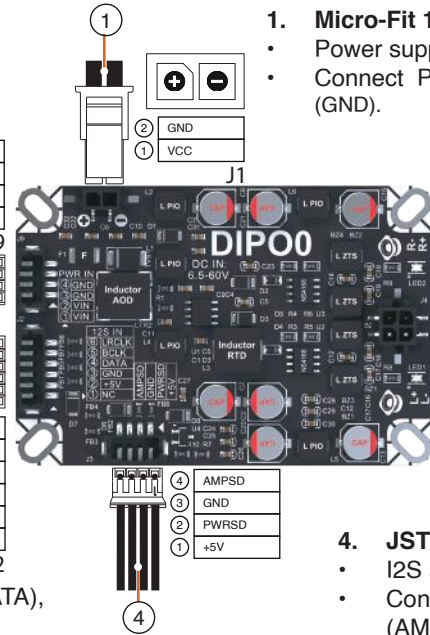
2. JST PH 4-Circuits (J9)

- Battery supply voltage range from 6V to 24V.
- Connect Pin-1 and Pin-2 to VCC and Pin-3 and Pin-4 to Ground (GND).
- Support external connection from BCPB series.



3. JST PH 6-Circuits (J2)

- I2S digital audio input signals.
- Connect Pin-1 to (NC), Pin-4 to (DATA), Pin-5 to (BCLK) and Pin-6 to (LRCLK).
- Connect Pin-2 to +5V.
- Connect Pin-3 to Ground (GND).

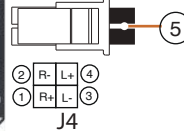


1. Micro-Fit 1x2 CKT (J1)

- Power supply voltage range from 6V to 60V.
- Connect Pin-1 to VCC and Pin-2 to Ground (GND).

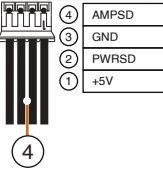
5. Micro-Fit 2x2 CKT (J4)

- Speaker Output.
- Connect Pin-1 to (R+) and Pin-2 to (R-)
- Connect Pin-3 to (L-) and Pin-4 to (L+)



4. JST PH 4-Circuits (J3)

- I2S analog audio output signals.
- Connect Pin-2 to (PWRSD), Pin-4 to (AMPSD).
- Connect Pin-1 to +5V.
- Connect Pin-3 to Ground (GND).



Electrical and Dynamic Performance Parameters

Electrical and dynamic performance specifications are typical at +25°C, powered by 24V DC, unless subject to change without notice. Combination with any add-on module(s) are not tested

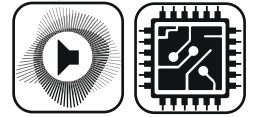
Parameter	Conditions	Min.	Typ.	Max.	Unit
Power Supply	Power Supply	6.5	-	60	VDC
	J3 port, DC Supply Voltage	5.0	-	5.5	VDC
Idle Current	Power supply= 24V, without input signal	0.009	0.012	0.014	A
Idle Power	Power supply= 24V, without input signal	0.216	0.288	0.336	W
Operating temperature	-	-40	-	85	%
Storage temperature	-	-10	-	55	Ω

ASCM-D2A-PCM5122 Audio Performance Parameters


Parameter	Conditions	Min.	Typ.	Max.	Unit
Gain	1kHz, 4Ω, Test signal=10dBFS	-	17.0	-	dB(Vrms/FS)
Noise Level	1kHz, 4Ω, Test signal= -100dBFS, A-weighted	-	220	-	uVrms
Total Harmonic Distortion (THD)	1kHz, 4Ω, Power out= 2x1W, A-weighted	-	0.05	-	%
Signal-to-Noise Ratio (SNR)	1kHz, 4Ω, Test signal= 0dBFS, A-weighted	-	85	-	dB
Frequency Response	Test signal= -10dBFS, 20Hz-20kHz, 4Ω	-	±1	-	dB(Vrms/FS)
Resolution	Sampling frequency, supporting 32kHz, 44.1kHz, 48kHz, 96kHz (No tested above 24 bit)	16	24	32	Bits



Note: DIPO0 do provide reverse polarity protection, BUT extreme caution must be exercised to ensure correct polarity during connection. Permanent damage caused by reverse polarity will not be covered under warranty.



DIPO Module Series



DIPO0

Transceiver IC: NS4168

Input: I2S


Output: -

Control: Shutdown

Output Power: 2 x 2W

Size :
 7.62 (W) x 50.8 (D) x 11.68 (H) mm
 3.00 (W) x 2.00 (D) x 0.46 (H) inch

Power Voltage: 6V-60V



DIPO1

Transceiver IC: TAS5756

Input: I2S


Output: Pre-amp

Control: Volume

Output Power: 2 x 30W

Size :
 91.44 (W) x 68.58 (D) x 18.29 (H) mm
 3.60 (W) x 2.70 (D) x 0.72 (H) inch

Power Voltage: 10V-24V



DIPO2

Transceiver IC: TAS5768

Input: I2S


Output: Pre-amp

Control: Volume

Output Power: 2 x 50W

Size :
 91.44 (W) x 68.58 (D) mm
 3.60 (W) x 2.70 (D) inch

Power Voltage: 10V-24V



DIPO3

Transceiver IC: TAS3251

Input: I2S


Output: Pre-amp

Control: i)Shutdown
 ii)Mute

Output Power: 2 x 175W / 1 x 350W

Size :
 121.92 (W) x 91.44 (D) x 25.00 (H) mm
 4.80 (W) x 3.60 (D) x 0.98 (H) inch

Power Voltage: 12V-38V

 Note: Kindly be aware that this display features only selected product series and does not include our entire collection. For more information or any inquiry, please contact us through email info@sure-electronic.com

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Wondom products come with a one-year warranty starting from the date of purchase. Customers are responsible for the cost of returning the goods to the seller, and by making a purchase, you agree to this condition. Due to the nature of DIY products, visible damage or use on screw holes or tinning of solder pads directly invalidates the warranty. Damage caused by the use of incorrect power sources, such as exceeding the specified voltage range or reverse polarity, is not covered under warranty. All Wondom products undergo thorough testing before shipment. We do not accept bulk returns after a bulk purchase. If you are unsure of the quantity you need, please purchase the appropriate quantity as needed. The rated operating temperature range is -20°C to 65°C.

Origin and Design Location

All WONDOM products are designed, manufactured, and assembled in Malaysia. They may be shipped from either Malaysia or China. The country of origin for these product is Malaysia.