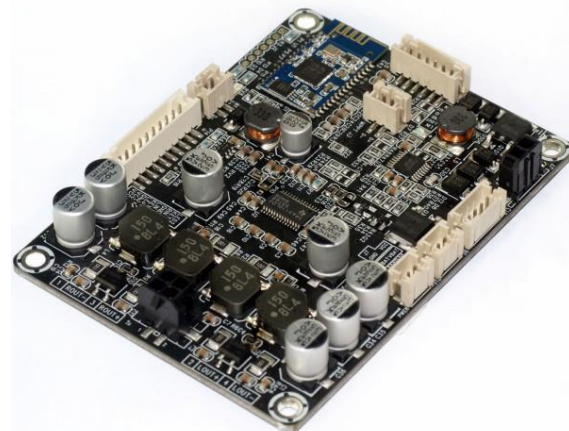


JAB Series

2 x 15 Watt Class D Audio Amplifier Board - JAB1 (AA-JA32151)



Key Features

- 3.6 x 2.7 Inches PCB Size
- Bluetooth V2.1 + EDR, A2DP
- Power Management
- Lithium Battery Board Supported
- Higher Output Power with Power Adapter
- PBTL Configurable
- LED Indicators Ports (Power, Battery Charging & Bluetooth)
- 3.5mm AUX IN Port
- Volume Control Port (Potentiometer)
- Power Switch Port

Electrical Specifications

Specifications typical @ +20°C, powered by 19V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply Range	-	12	19	24	VDC
Idle Power/Current	SD short to GND, BT Disconnected	-	9	15	mA
	BT Connected	-	10	15	mA
Standby Power/Current	SD short to GND, only when low power module available	-	3	5	mA
Battery Undervoltage Protection*	-	-	10.4	10.5	V
Constant Charging Voltage	-	-	12.3	12.7	V
Charge Current	-	-	0.5	1	A

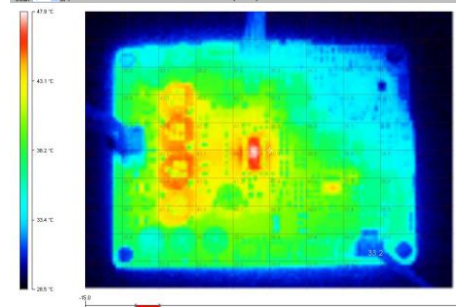
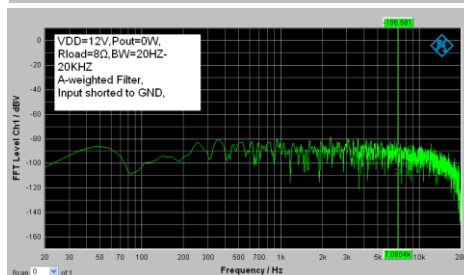
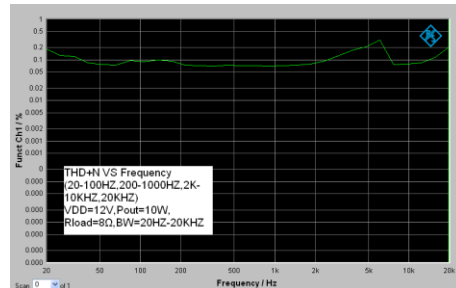
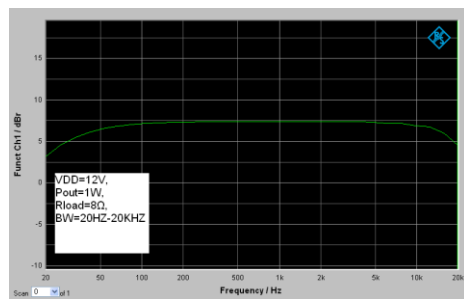
*Battery Undervoltage Protection point is preset to 10.4V in order to protect Lithium-Ion battery, LiFePo4 battery is strictly prohibited and not supported by default. For any change to this battery protection setting, an MOQ of 500pcs will be applied.

Audio Performance

Specifications typical @ +20°C, powered by 19V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Gain	-	34	36	38	dB
Output Power	19V @ 8Ω	-	2 x 15	-	W
THD	19V @ 8Ω, 10W, 1KHz	-	0.07	-	%
Output Noise Level	A-weighting, Input Connected to GND	-	412	-	μV
SNR	19V, 10W @ 8Ω, THD+N=1%	-	82	-	dB

Typical Performance Graphs



All Audio Amplifier boards are complied with ROHS and they are pre-tested with our power supply solution to comply with FCC and CE. We could provide FCC, CE and RoHs certifications for customers' convenience. The test reports will be provided upon requests by e-mails only for customers who apply for bulky purchase of MOV USD\$10,000 or MOQ 500pcs.

Ready for:



Contact Info

• Email: info@wondom.com



Notes:

1. 18650 Li-ion types batteries are not included in package due to strict air safety control. Please note that JAB1 has a plug-in detection circuit, the Bluetooth can only be searched when the provided jumper or a 3.5mm input cable (no signal input through this cable) is plugged in. 1 jumper is added on the JAB1. Please do not remove them if you do not need 3.5mm AUX input in the application. 3.5mm AUX IN and Bluetooth input cannot be used at the same time.
 2. The on/off switch on interface extension board cannot work with JAB1. So the two LED lights don't work. The switch cable (connected with 2PIN PH terminal on JAB1) can work properly.
 4. Sure Electronics could modify the JAB series cutoff frequency by first order crossover filter according to customers' requirements. 500 pieces MOQ will be applied. Please feel free to contact with store@sure-electronics.com for more detailed information.
- All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and Audio Precision AUX0025 filter. For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail customers)

LED lights for JAB1

	LED status			Function
	D4 (Bluetooth)	D7 (MPPT)		
On Board	• ○	/		Powered
	•	/		Bluetooth connected
	• ○	/		3.5mm AUX connected
	/	• ○ / •		MPPT charging
	/	○		MPPT charging finished
Ports Extended	J3 (Bluetooth)	J5 (MPPT)	J12 (Power)	
	/	• ○ / •	/	MPPT charging
	/	○	/	MPPT charging finished
	• ○	/	/	Bluetooth working properly
	•	/	/	Bluetooth connected
	• ○	/	/	3.5mm AUX connected
	/	/	•	Power on
/	/	○	Power off	

Diagram 1

Notes:

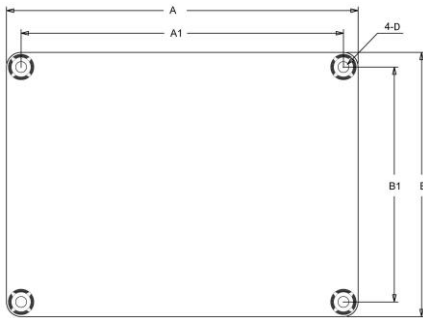
- The LED lights for extended ports have three colors, which are red, green and blue. The LED color for each port is at random.
- The indication of D3 and D4 can be changed. MOQ is 1000pcs.
- stands for blinking, • stands for ON, and ○ stands for OFF. When 3.5mm is connected, LED indicator (D4 and J3) will blink slowly every two seconds.

Notes:

- The output power is rated at the condition THD+N 10%, 1kHz sine wave.
- This amplifier board employs power supply reverse polarity protection. Stresses beyond the power supply range maximum ratings may cause permanent damage.
- None typical load may cause rated power reduction.
- Dimensions mean length and width of PCB only, excluding excessive part out of the PCB outline.
- All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and AP AUX0025 filter. Linear Power Supply units were used for testing.
- Sure Electronics promises all standard products life cycle more than 5 years. Sure Electronics reserves the right to update the version without notice. All the products sent to retail customers are the latest version. We will provide back-to-order service (100 Pieces MOQ needed) for our distributors in 5 years.
- If you need to know more details about how to connect the cables, please refer to the JAB Connectors for further information.

If you have any power supply requirements, please feel free to contact us.

Mechanical Dimensions

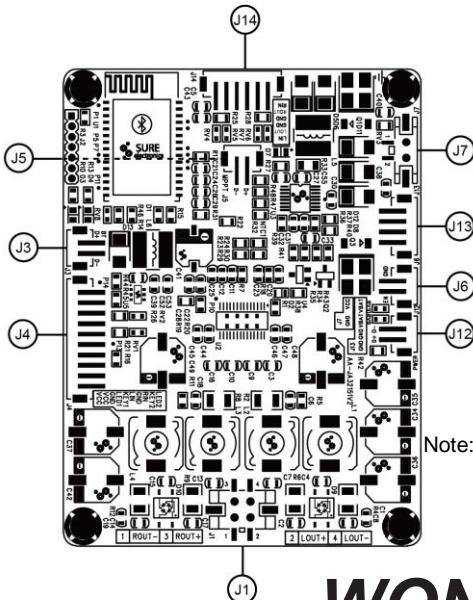


Dimensions	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	D (inch/mm)
	3.60/91.44	3.30/83.8	2.70/68.6	2.40/61.0	0.14/3.6

Notes:

- All dimensions are typical in inches/mm
- Tolerance x.xx = ±0.02(±0.50)
- Height: (Tolerance x.xx = ±0.2inch/ 5mm)
- AA-JA32151:0.48inch/12.2mm
- AA-JA32472:0.48inch/12.2mm
- AA-JA32171:0.79inch/20.1mm
- The height of the boards is measured from the bottom of the boards to the top of the components.

Connections



Speaker Output Connector:

J1 MOLEX-4PIN-3MM

Pin	Definition
1	ROUT-
2	LOUT+
3	ROUT+
4	LOUT-

LED Indicator Connectors:

J3, J5, J12 PH-2PIN-2MM

Pin	Definition
1	LED-
2	LED+

Extension Connector:

J4 PH-10PIN-2MM

Pin	Definition
1	VCC
2	VCC
3	GND
4	LED1
5	KEY1
6	LIN
7	GND
8	RIN
9	KEY2
10	LED2

Switch Control Connector:

J6 PH-2PIN-2MM

Pin	Definition
1	GND
2	EN

Volume Control Connector:

J14 PH-6PIN-2MM

Pin	Definition
1	RIN
2	ROUT
3	GND
4	GND
5	LOUT
6	LIN

Battery Charging Connector:

J13 PH-4PIN-2MM

Pin	Definition
1	VBAT
2	VBAT
3	GND
4	GND

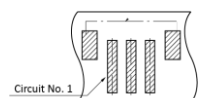
Power Connector:

J7 MOLEX-2PIN-3MM

Pin	Definition
1	VCC
2	GND

Note: With regard to J3, J5 and J12, please refer to Diagram 1 for detailed information.

Top View of PH Connector



WONDOM Audio Technology

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