



Description

Introducing the MP- AIPO2X3, a stereo low-power audio amplifier board delivering 3W RMS output per channel into a 4 Ω load. Thanks to the meticulously selected components and dedicated PCB layout, the AIPO2X3 has successfully passed FCC SDoC and CE EMC certifications.

Designed for versatility, it features an integrated DC/DC buck circuit supporting an extensive power supply range from 9V to 60V. The MP-AIPO2X3 features plug-and-play terminals to facilitate system integration and customers' operations. The 3"x2" compact size and four mounting holes make it effortless to install the AIPO2X3 into most cabinets. Built to endure industrial-grade conditions, this amplifier operates smoothly across temperatures ranging from -35°C to 75°C, making it suitable for demanding environments. The AIPO2X3 combines wide voltage support, broad temperature range, and effortless integration, ideal for diverse commercial and industrial applications such as game machines, vending machines, electric bicycles, and audio DIY projects. Additionally, the MP-AIPO2X3 features comprehensive protection circuits for enhanced durability and reduced maintenance costs.

Electrical Specifications

Specifications typical @ +25°C, Powered by 24V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Unit
Number of Channels	-	-	2	-	-
Operating Voltage	DC Supply Voltage, $R_L=4\Omega$	9	24	60	-
Idle Power	$V_{CC}=24V; R_L=4\Omega$	-	0.48	-	W
Standby Power	$V_{CC}=24V; R_L=4\Omega$	-	0.144	-	W
Power Conversion Circuit Efficiency	$V_{CC}=24V; P_o=6W$	-	71.4	-	%
Overall Efficiency	$V_{CC}=24V; R_L=4\Omega; 2\times 3W$	-	68	-	%
Minimum Load Impedance	-	-	4	-	Ω

Audio Performance

Specifications typical @ +25°C, Powered by 24V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Unit
Gain	-	-	13	25	dB
Input Sensitivity (RMS)	$R_L=4\Omega$	-	800	-	mV
Input Impedance	Line in	-	10	-	k Ω
Output Power	$R_L=4\Omega$	-	2 \times 3	-	W
Bandwidth @ $\pm 3dB$	$R_L=4\Omega$	20	-	20k	Hz
THD + N	1W; $R_L=4\Omega$; 1kHz	-	0.05	-	%
Output Noise Level	A-weighting, Input Connected to GND	-	104	-	μV
SNR	2x3W; $R_L=4\Omega$, A-weighting	-	88.7	-	dB

Part Number Table

Description	Part Number
Audio Amplifier board, 2x3W, 9 to 60V	MP-AIPO2X3

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.