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PR-No. 16 – 07. December 2023

NL8802: Low Noise, High Voltage, Dual, High-Quality Sound Audio Operational Amplifier

Nisshinbo Micro Devices Inc. has launched the NL8802, a high-quality sound dual operational amplifier, on November 28, 2023.

Nisshinbo Micro Devices Inc. has released a variety of audio operational amplifiers, such as the MUSES series, based on our technology for high-quality sound cultivated over many years. The NL8802 is the entry-level model of the MUSES series and is a high-quality sound audio operational amplifier with a good balance of sound quality, performance and cost. Its high operating voltage of ±22 V makes it ideal for HiFi and professional audio equipment requiring a wide dynamic range.

In addition to a general surface mount package, we will also offer a small and high heat dissipation package (under development) suitable for portable audio equipment and products requiring high density mounting.

Product Name	NL8802AN*
Sample Unit Price (reference price when purchasing 1000 units, tax Included **)	JPY 130
Sample Order Start Date	November 28, 2023
Monthly Production	500,000 pieces

* AN stands for EMP-8-AN package.

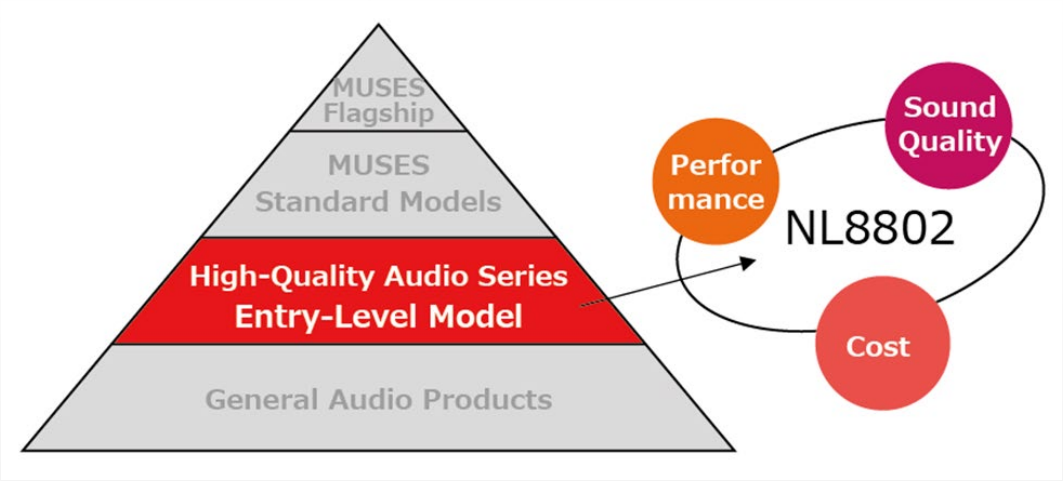
** The price is based on the consumption tax rate as of September 2023.

Features

1. Entry-Level Model of High-Quality Sound Audio Operational Amplifier with Excellent Balance of Sound Quality, Performance, and Cost.



By applying the high-quality sound technology developed for the MUSES series to a more productive technology, we optimized the balance between sound quality, performance and cost.



2. High Operating Voltage of ±22 V and Excellent Audio Characteristics

Its high operating voltage of ±22 V makes it ideal for hi-fi and professional audio equipment requiring a wide dynamic range. It is also suitable for a wide range of applications thanks to its excellent audio characteristics such as distortion, bandwidth and slew rate.

3. Small and High Heat Dissipation Package

We will also offer DFN3030-8-GQ package, a small and high heat dissipation package (under development), suitable for portable audio equipment and products requiring high density mounting.

Product Name	Operating Voltage Range V^+/V^-	Distortion THD	Gain GBW	Slew Rate SR	Noise e_n	Sound Quality
NL8802	±3.0 V to ±22 V	0.00005%	45 MHz	11 V/µs	5.5 nV/√Hz	High
NJM5532	±3.0 V to ±22 V	0.0003%	10 MHz	8 V/µs	5.0 nV/√Hz	Standard
NJM5532C	±3.0 V to ±22 V	0.0003%	10 MHz	9 V/µs	5.0 nV/√Hz	Standard

Improved characteristics and sound quality among our high-voltage audio products

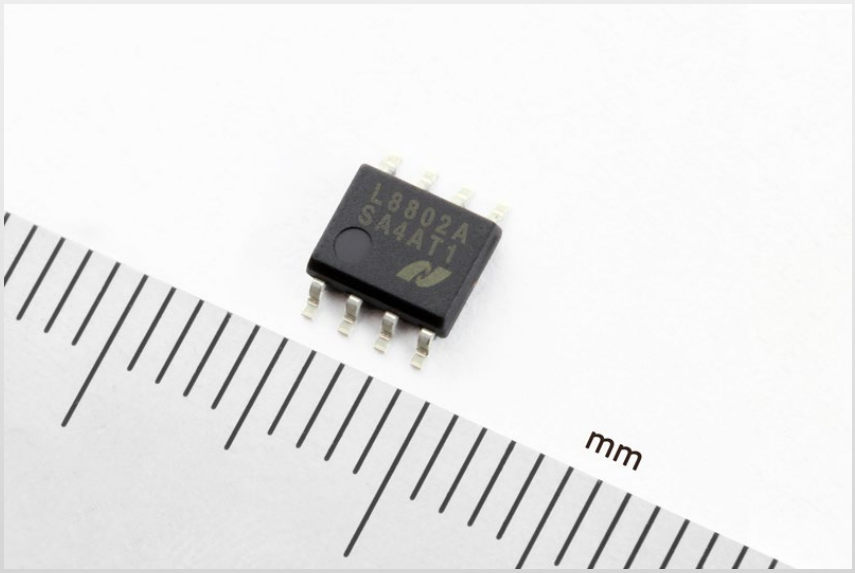
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Main Specifications (Please refer to the datasheet for details.)

- High-Quality Sound
- Wide Operating Voltage Range: ±3.0 V to ±22.0 V
- Low Distortion: 0.00005% typ. at f = 1 kHz
- Low Noise: 5.5 nV/√Hz typ. at f = 1 kHz
- Wide Gain Bandwidth Product: 45 MHz typ.
- High Slew Rate: 11 V/μs typ.
- Quiescent Current: 8.0 mA typ. (Dual)
- Bipolar Input
- Bipolar Technology
- Package: EMP-8-AN, DFN3030-8-GQ (DFN8-W1) *Under Development

Applications

- Home Audio
- Professional Audio
- Car Audio
- Portable Audio



MACNICA ATD EUROPE
MACNICA ATD Europe GmbH,
85055 Ingolstadt

www.macnica.eu

MACNICA ATD EUROPE
MACNICA ATD Europe GmbH,
81379 Munich

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Availability and Pricing

Information availability and pricing please visit email: sales.europe@macnica.com.

Contact:

Press
Macnica ATD Europe GmbH
Josef Sigl
Tel. +49-89-899143-11
Email: sales.europe@macnica.com

Sales
Macnica ATD Europe GmbH

Tel. +49-84188198-121
Email: sales.europe@macnica.com

About Nisshinbo Micro Devices Inc.

Nisshinbo Micro Devices Inc. is the result of the integration of former New Japan Radio Co., Ltd. and former RICOH Electronic Devices Co., Ltd. Both companies, having contributed to expanding the Nisshinbo Group's microdevices business so far, will further grow as an "Analog Solution Provider" for growing markets by strengthening our structure and achieving synergies through business integration.

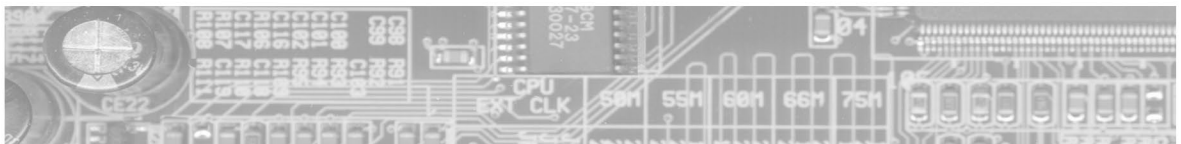
Nisshinbo Micro Devices will provide analog solutions through electronic devices and microwave products based on the strength of analog technology in accordance with the Nisshinbo Group's corporate philosophy of "Change and Challenge! For the creation of the future of Earth and People". We will contribute to developing connected society, and aim to be a company with value and presence that is expected by customers around the world.

For more information, go to https://www.nisshinbo-microdevices.co.jp/en/.

About Macnica ATD Europe GmbH, (former Macnica GmbH)

Macnica's ATD Europe GmbH, (former Macnica GmbH), was originally established in the UK in 2006, and moved to Germany in July 2008, to increase efficacy of its service for European customers.

By it's acquisition of the Munich based company Scantec Mikroelektronik in 2014 Macnica Europe formed a powerful semiconductor distribution with headquarter in Ingolstadt and offices in Munich, Regensburg, Milton Keynes (UK) and Warsaw offering an attractive and competitive portfolio of highly sophisticated devices.



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Macnica provides end to end support from design-in to production through its global service network to its customers, regardless of the final destination of the product shipment to customers' manufacturing locations.

About Macnica ATD Europe S.A.S.
Founded in 1990 as ATD Electronique, Macnica ATD Europe headquarter offers innovative components dedicated to imaging applications for the European market. Its product portfolio includes: image sensors (CCD, CMOS, InGaAs, Thermal etc.), optics, interface circuits, FPGA & IPs, imaging processors, cables and OLED microdisplays.

It also covers development tools and design services enabling fast and efficient realization of new high-performance camera systems for markets such as machine vision, medical, life sciences, surveillance, automotive and others. After the acquisition of the company by Macnica Inc. as of October 1, 2020 the company operates under the name Macnica ATD Europe.

About Macnica, Inc.
Macnica was established in 1972 as a semiconductor distribution company headquartered in Yokohama, Japan, and has over 85 sales offices worldwide in eastern Asia, Europe and the USA. Total number of employees is over 3,900 and its consolidated revenue for fiscal 2021 was approximately US$ 7.6 B.

Macnica is famous for having an excellent engineering team of more than 900 application support engineers, IC designers and software developers with strong focus on providing technical support for its customers including custom design services. Macnica is continuing to extend its presence globally by having successful partners in strategic areas in the electronics market.

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85055 Ingolstadt

www.macnica.eu

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MACNICA ATD Europe GmbH,
81379 Munich