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endrich NEWS

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Wish
you
a
Merry
Christmas

&

HAPPY NEW YEAR

Vielen Dank für Ihr Vertrauen und wir freuen uns auf
eine weiterhin gute Zusammenarbeit!

Wenn Sie die endrich news nicht mehr per Post wünschen, schreiben Sie bitte eine E-Mail an newsletter@endrich.com

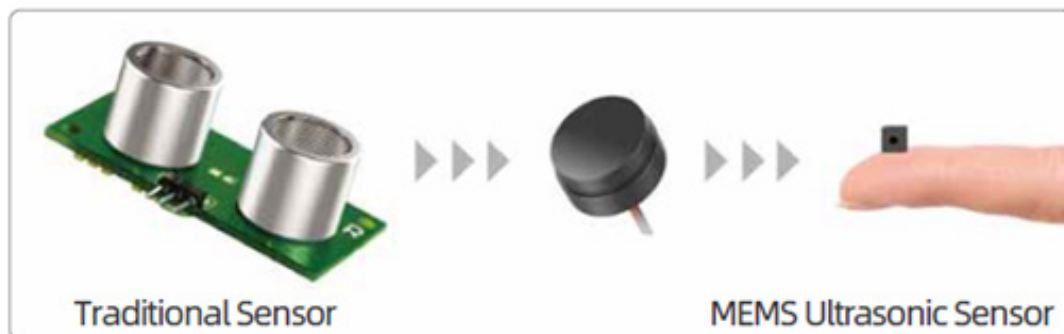
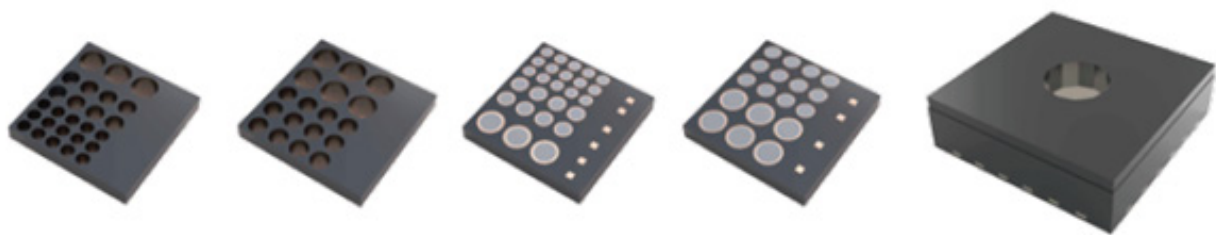
MEMS ULTRASONIC SENSORS FOR MINIATURISED HIGH-FREQUENCY MOTION APPLICATIONS

Piezoelectric micromachined ultrasonic transducers (PMUTs) are MEMS-based piezoelectric ultrasonic transducers for acoustic imaging of the environment. Unlike solid piezoelectric transducers, which use the thickness motion of a plate made of a piezoelectric ceramic, PMUTs are based on the bending motion of a thin membrane coupled with a thin piezoelectric film.

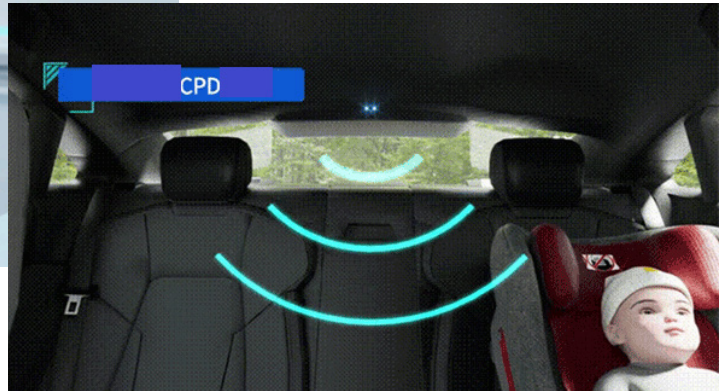
Compared to solid piezoelectric ultrasonic transducers, PMUTs can offer several advantages, such as increased bandwidth, better support of flexible geometries, natural acoustic impedance matching to different media such as water, reduced voltage requirements also compared to CMUT, mixing of different resonant frequencies and integration potential with supporting electronic circuits, especially for miniaturised high-frequency applications.



PMUTs enable medical, endoscopic in vivo imaging devices and ultrasonic radar for autonomous mobility and industrial machinery. An array arrangement of PMUT sensors and actuators enables imaging of the environment.



NEWS

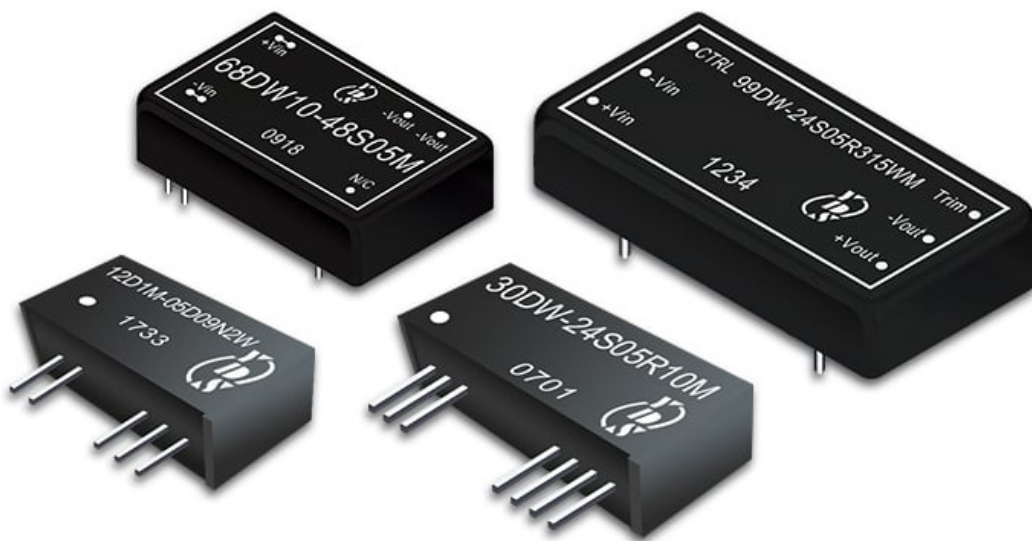


	40KHz (detection range 0.2~3m) Robust Penetration: Ideal for Short-Range Sensing	65KHz (detection range 0.1~1.2m) Industrial Ranging & Environmental Sensing: The Sweet Spot	450KHz (detection range 0.02~0.06m) Precision Imaging & NDT: The "Eagle Eye"
Physical Characteristics:	Lower attenuation in common media (e.g., air)	Optimal balance: Penetration and precision	Ultra-short wavelength Acoustic beam focusing
Typical Applications:	- Child presence detection (CPD) - Service robot navigation - Smart toilet auto-sensing - Flow meters - Presence sensing	- Unmanned forklifts (depth detection) - Anti-collision for aerial work platforms - Unmanned cleaning vehicles - Access gates - Agricultural spray boom	- Industrial non-destructive testing (NDT) - Packaging defects - Composite delamination - Biomedical microscopy - Defect analysis
Core Advantages:	- Short-range ranging / obstacle avoidance - Gas/low-density media detection - Cost & robustness	- Strong anti-interference - Stable mid-range detection - Environmental resilience	- Sub-millimeter resolution - Micron-level thickness measurement / characterization - Surface /near-surface defect detection

DC-DC CONVERTERS FOR MEDICAL APPLICATIONS

Yuan Dean (YDS) offers 1 to 10 W DC/DC converters that meet medical certification requirements and provide high insulation resistance voltage. Because YDS understands the requirements for medical applications, its products meet the requirements for reinforced insulation isolation from 3000 VAC to 5000 VAC.

Their medical DC/DC converters meet the ANSI/AAMI ES60601-1 and IEC/EN 60601-1, 3rd edition medical safety standards required for medical auxiliary equipment, computed tomography, ultrasound systems, and other accessory equipment.



Approvals	High Isolation	2xMOPP ¹	-40 to +105°C ²	5 Years	5000m
IEC/EN/UL 60601-1 3.1 Ed. IEC/EN/UL 62368-1	5000VAC 6000VDC	8mm Creepage distance 5mm Clearance distance	Operating temperature	Warranty	Operating Altitude

Note:

1. 2xMOPP applies to models 68DC-RXXM and 68DW10-M;
models 12D1C-NM (1W) and 12D1C-N2M (2W) are designed with 1xMOPP and 2xMOOP.
2. Derating applies for temperatures above 70°C (model dependent).
Please refer to the datasheet for the derating curve and detailed performance.

NEWS

Series	Output Power (W)	Input Range	Input Voltage (VDC)	Output Voltage (VDC)	Efficiency (%)	Leakage Current max. (μA)	Package
12D1C-NM	1	±10%	3.3-24	3.3-24, ±3.3 - ±24	83	2	SIP-7
12D1C-N2M	2	±10%	5-24	5-24, ±5 - ±24	84	2	SIP-7
68DC-RX3M	3	4:1	9-36, 18-75	3.3-24, ±5 - ±15	85	4	DIL 24
68DC-RX4M	4	4:1	9-36, 18-75	3.3-24, ±5 - ±15	85	4	DIL 24
68DC-RX5M	5	4:1	9-36, 18-75	3.3-24, ±5 - ±15	85	4	DIL 24
68DC-RX6M	6	4:1	9-36, 18-75	3.3-24, ±5 - ±15	85	4	DIL 24
68DW10-M	10	4:1	9-36, 18-75	3.3-24, ±5 - ±15	85	10	DIL 24

FEATURES

- Meet IEC/EN 60601-1, 3rd edition medical safety standards
- 2xMOPP applies to models 68DC-RXXM and 68DW10-M; models 12D1C-NM (1W) and 12D1C-N2M (2W) are designed with 1xMOPP and 2xMOOP
- Operating temperatures:-40°C up to +85/+105°C

APPLICATIONS

- Medical Equipment for medical assistance devices, computed tomography, ultrasound sytems, and other ancillary equipment

GD32F503 SERIES ARM® CORTEX®-M33 32-BIT MCU

EXCEPTIONAL PERFORMANCE, DIVERSE INTERFACES, AND ENHANCED SECURITY



The GD32F503 Serie is a high-performance 32-bit microcontroller from the GD32 MCU family, built on the Arm® Cortex®-M33 core. The Cortex®-M33 is a low-latency, low-cost 32-bit processor designed for high performance and low power consumption. Based on the Armv8 architecture, it supports a flexible instruction set for data processing, I/O control, bit manipulation, and DSP operations, making it suitable for advanced embedded applications.

FEATURES

- **Core:** Arm® Cortex®-M33, 32-bit, up to 252 MHz, with Flash security protection
- **Memory:** Up to 1024 KB Flash and 128 KB SRAM
- **Analog:** 3× 12-bit ADCs, 2× 12-bit DACs
- **Timers:** Multiple 16-bit and 32-bit timers (general, PWM, advanced, basic)
- **Communication Interfaces:** Up to 3× SPI, 2× I2S, 2× I2C, 3× USART, 2× UART, 2× CAN, USBFS
- **Additional Peripherals:** EXMC, comparator, cryptographic (CAU, HAU), CRC, TRNG, trigger controller
- **Power & Operating Range:** 2.6 V–3.6 V, –40 °C to +105 °C
- **Package:** LQFP100, LQFP64, QFN64, BGA64, LQFP48, QFN48, QFN32
- **Power Modes:** Three power-saving modes for optimized low-power operation

APPLICATIONS

- Digital Power Supplies
- Industrial Automation
- BMS
- Humanoid Robots

GS YUASA LAUNCHES NEXT-GENERATION SWL+ BATTERY SERIES

Industry-leading valve regulated lead acid (VRLA) battery solutions delivers more power, extended life, and superior reliability for critical uninterruptible power supply (UPS) and energy storage applications.

Building on the success and proven dependability of the renowned SWL range, the SWL+ series sets a new benchmark in VRLA battery technology for high-rate discharge and standby power applications.



Aimed at the most demanding UPS and energy storage environments, the SWL+ series addresses growing market needs for longer-lasting, higher-performance energy solutions. From large-scale data centres and manufacturing facilities to towering city skyscrapers and landmark infrastructure, the new SWL+ provides the enhanced reliability these mission-critical operations demand.

At the heart of the SWL+ series is hybrid pure lead technology—an advanced combination of primary pure lead and specialised recycled alloy. By incorporating a sustainable element alongside pure lead, this pioneering approach achieves increased corrosion resistance and extended battery life. The carefully balanced alloy composition further enables higher energy density—vital for high-rate discharge scenarios where every second counts.

This unique blend sets the SWL+ range apart from competitors, delivering improved longevity and dependable power. In tandem with this, the SWL+ series incorporates GS Yuasa's exclusive HT Element X Alloy™, which dramatically reduces positive grid corrosion and water loss in high-temperature conditions.

FEATURES

- Longevity (EUROBAT class: Very Long Life) 12+ years
- Power output from 800W to 4300W (10 min)
- Housing material: ABS (UL94:HB) and UL94:VO
- Max. discharge current of 500 - 1200A / sec.
- Self-discharge per month: approx. 3% (@+20°C)
- Nominal voltage: 12V (some models in 6V)
- Short-circuit current in accordance with EN IEC 60896-21 (A)
- Very high reliability
- Standard dimensions
- Leak-proof VRLA battery

APPLICATIONS

- Emergency power systems - UPS
- Emergency lighting
- Data centres and larger infrastructures
- Siren systems
- Radio transmission systems
- For distribution in the Swiss market

ENDRICH UND SENSITEC: GEMEINSAM AUF ERFOLGSKURS

Gemeinsam auf Erfolgskurs Aus einem ersten Messekontakt wurde eine Erfolgsgeschichte. Unter dem Motto „Starke Partner. Starke Zukunft.“ blicken Endrich und Sensitec auf eine Zeit voller Energie, Engagement und gemeinsamer Meilensteine zurück – und mit ebenso viel Tatkraft in die Zukunft.

Bereits im ersten Jahr zeigte sich, wie gut beide Partner zusammenpassen: Schulungen zu Stromsensoren, ein Fachbeitrag in den Endrich News, Touren durch Österreich und Ungarn sowie ein echter Blickfang auf der Electronica – ein E-Scooter, ausgestattet mit modernster Sensitec-Sensorik. Schritt für Schritt wuchs das Vertrauen – und damit auch die Zusammenarbeit.

Ein starkes Fundament für die Zukunft

2025 markiert den Übergang in eine neue Phase der Partnerschaft. Mit der Schulung zu Positionssensoren, der Endrich-Vertriebstagung mit rund 25 Teilnehmern in der Sensitec-Waferproduktion in Mainz sowie einer Tour durch die Schweiz wurden die Weichen für die Zukunft gestellt. Im April stand ein besonderer Moment an: der erste Serienauftrag – ein Meilenstein, der das gemeinsame Wachstum weiter beflügelt.

Im Mai 2025 präsentierten sich Endrich und Sensitec gemeinsam auf der PCIM in Nürnberg – ein weiteres Schaufenster für innovative Sensorlösungen und gelebte Partnerschaft. Nur einen Monat später gab es gleich Grund zur Freude: Den Serienstart des FREEpitch Sensors AA747AHA-AH zur Motorkommutierung.

Die Erfolgsgeschichte geht weiter: Weitere Serienprojekte warten im Bereich Strom- und Positionssensorik auf die Serienfreigabe. Auch international wächst die Partnerschaft – gemeinsame Kundenaktionen in der Schweiz, Frankreich und Italien sind bereits geplant.



Glenn von Manteuffel (Sensitec) mit Michael Plaumann (FAE Sensoren-Endrich) auf der PCIM 2025

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