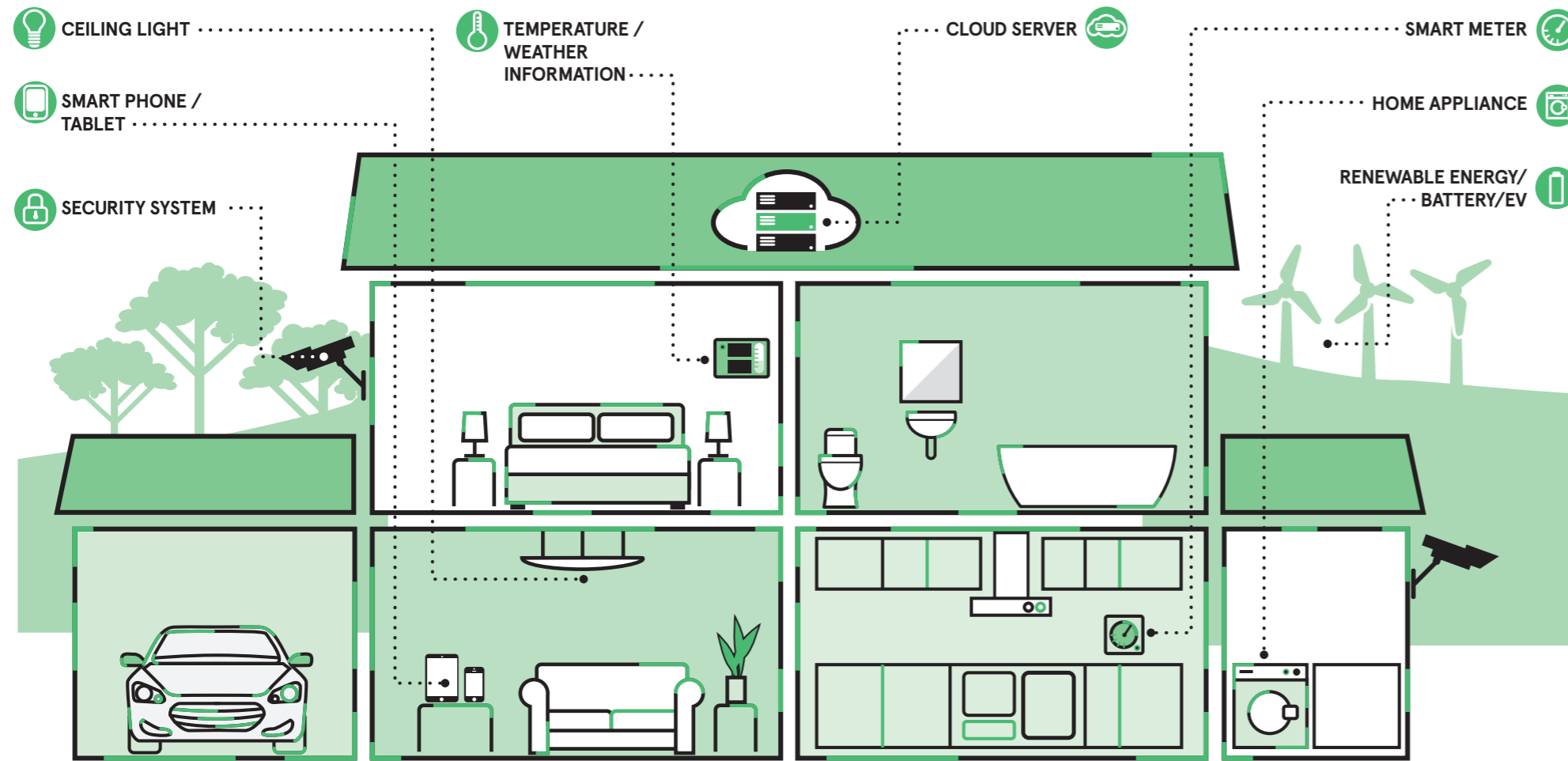


Murata IoT solutions
for smart buildings

Smart home control



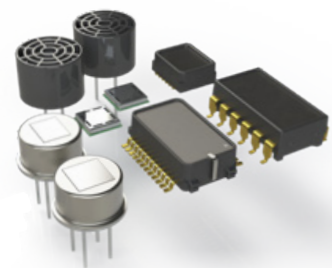
A smarter way of life with Murata's wireless sensor network

Connected technology is changing the way we live. IoT solutions enable us to connect and automate building, technology, and energy systems, transforming the way our facilities are managed. Streamlining building automation processes, from heating and ventilation to air-conditioning and security, can reduce operating costs, improve occupancy services, and minimise the building's impact on the environment.

Smart buildings rely on Energy Management Systems (EMS) to perform detailed control of lighting and air conditioning. This is achieved whilst monitoring power consumption and environmental conditions - such as temperature, humidity and light levels - using sensors located throughout the building. Murata's sensor network system enables easy EMS construction and can equally be used to achieve automated control and expand usage in smart agriculture for efficient and automated cultivation.

Whether at home or at work, Murata's innovation in wireless communication and sensor technology is contributing to a smarter, more productive and efficient way of life.

Products featured



Sensors

Murata offers an extensive range of sensors for IoT applications such as;

- AMR
- PIR
- MEMS
- Ultrasonic



Wireless communications

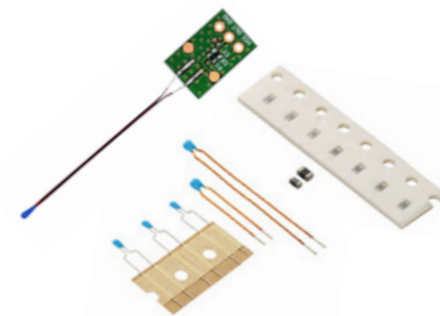
Murata provides RF components and modules for wireless communication applications, offering you an extensive range of products such as WiFi, Bluetooth, LPWA, RFID, and many more.



Energy and power devices

Murata provides energy device solutions for IoT applications as follows;

- Micro batteries
- DC-DC converters



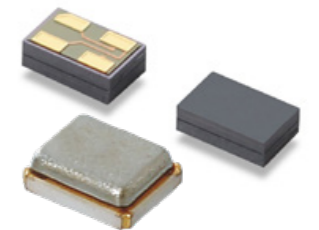
Thermistors

A thermistor functions as a heating element and thermo-sensitive device, and plays an active role in various applications, such as temperature sensors, circuit protection and temperature compensation.



Sound components

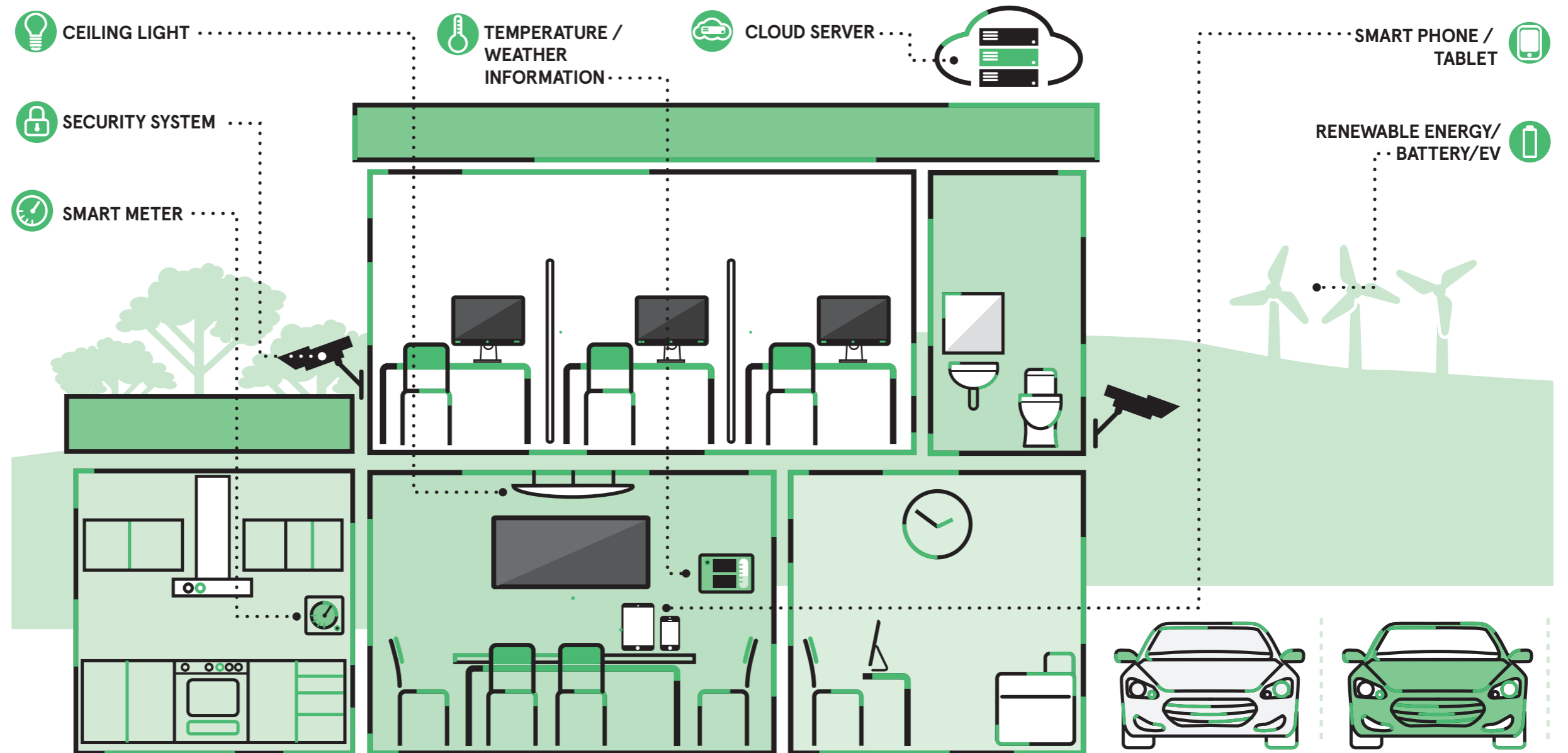
Murata's sound components (buzzers) utilise the natural frequency of piezoelectric ceramics and have been adopted to various applications.



Timing devices

Timing devices are passive components which create clock signal by the piezoelectric effect. They are used for various applications including smart buildings

Smart buildings control



ASK AN EXPERT

Our Europe-wide team of product specialists works closely with Murata to offer you the highest levels of smart engineering support for your design.

To arrange a visit or to discuss your design requirement, contact this team in your local language at avnet-abacus.eu/ask-an-expert or visit Murata smart building website at avnet-abacus.eu/murata-smart-home-solutions

Content

Sensors	6-7	Thermistor	11-12
Wireless communications	8-9	Sound components	13
Micro battery	9	Timing devices	13-14
DC-DC converters	10		

AMR series magnetic sensors

Design flexibility, narrower sensitivity range and higher reliability

The AMR series consists of sensors that include an IC to detect changes in the magnetic resistance of a magneto resistive element that is affected by an external magnetic field. This is achieved from a thin film ferromagnetic NiFe alloy that is deposited over the IC circuit. Murata offers more than 5 models that support a broad range of applications.

FEATURES

- Standard performance, compact package
- High voltage operation (3.5V to 30V)
- High speed detection (typ. 1KHz, 2kHz and 5kHz)
- Built-in voltage regulator
- Built-in temp. compensation circuit
- High accuracy, high-speed detection (Typ. 1kHz)

APPLICATIONS

- Standard open-close, position detection
- Low-speed rotation detection
- Flow metering for industrial equipment
- Position, proximity detection
- High-speed rotation detection for industrial equipment



[VIEW PRODUCT DETAILS](#) →

MEMS sensors series high accuracy

3D MEMS technology enables higher performance at lower cost

The MEMS sensors 3-axis offering best-in-class characteristics for inclination measurements and accelerometer with digital SPI interface. Industry proven technology with significantly improved performance.

FEATURES

- Size 7.6mm x 8.6mm x 3.3mm (w x l x h)
- The ultra-low noise density even down to just 0.001°/√Hz for high measurement resolution
- SPI digital interface
- Unique mechanical over damping
- Proven capacitive 3D-MEMS technology
- 3-axis high performance accelerometer with ±1.5g to ±6g user selectable measurement range
- Extensive self-diagnostics features
- Ground breaking bias stability, low noise level and good vibration robustness
- SPI digital interface
- Unique mechanical over damping
- -40°C to +125°C operating range
- 3.0V to 3.6V supply voltage with 1mA to 1.2mA current consumption

APPLICATIONS

- Leveling
- Tilt sensing and compensation
- Machine control
- Structural health monitoring
- Robotics
- Positioning and guidance systems
- Professional leveling
- Angle measurement and control
- Inertial Measurement Units (IMUs) for heavy machine and automotive (ADAS)
- Motion analysis and control
- Navigation system
- Heartbeat detection and advanced anti-theft



[VIEW PRODUCT DETAILS](#) →

Pyroelectric infrared sensors

Extra high sensitivity, lead-type pyroelectric infrared sensor

The pyroelectric infrared sensors lead-type is characterised by a low-cost, high-sensitivity, high-RFI (Radio Frequency Immunity) and high-WLI (White Light Immunity) characteristic lead-type infrared sensor. The IRA-S series has an improved RFI characteristic for the security market to comply with EN regulation for detection levels, such as peripheral circuitry. Its high sensitivity and high reliability make a great contribution to ergonomics and energy conservation for a wide range of appliances.

FEATURES

- Good RFI
- Good WLI
- Easy human movement detection
- Wide detection area using lens

APPLICATIONS

- Security systems



[VIEW PRODUCT DETAILS](#) →

Ultrasonic sensors

Low-cost solution for distance detection

The ultrasonic sensors are small and lightweight, ideally suited for short-distance range detection and home security. Both lead type and SMD type available.

FEATURES

- Using method: transmitter/receiver
- Driving frequency: 40kHz
- Diameter: 9.9mm ±0.3mm
- Capacitance: 2550pF ±20%
- Directivity: 80°
- Sound pressure level: 120dB typ. (0db=0.02mPa)
- Sensitivity: -63dB typ. (0db=10V/Pa)
- Max. input voltage: 20Vp-p (continuous signal)
- Small and light
- High sensitivity/high S.P.L.
- Frequency 40kHz
- Indoor use
- SMD package available for reflow soldering

APPLICATIONS

- Robotics (consumer use)
- Room layout scanning



[VIEW PRODUCT DETAILS](#) →

Type 1DX series WiFi smart module

The type 1DX is a small and high performance module based on Cypress CYW4343W combo chipset which supports WiFi 802.11b/g/n + Bluetooth 4.2 BR/EDR/LE up to 65Mbps PHY data rate on WiFi and 3Mbps PHY data rate on Bluetooth. The WLAN section supports SDIO v2.0 interface and the Bluetooth section supports high-speed 4-wire UART interface and PCM for audio data.

FEATURES

- Product type: module
- Frequency: 2.4GHz
- Frequency: 2400MHz to 2483.5MHz
- Chipset: Cypress Semiconductor CYW4343W
- Processor: no
- Modulation: DSSS/CCK/OFDM
- Antenna: external
- Sleep clock: no
- Operating temp.: -30°C to +70°C
- Mounting type: SMT
- Dimension: 6.95mm x 5.15mm x 1.1mm
- Supply voltage: 3.2VDC to 4.2VDC

APPLICATIONS

- Home display unit
- Thermostat
- Smartlight
- HVAC monitoring
- White goods



[VIEW PRODUCT DETAILS](#) →

MBN52832 series Bluetooth energy module

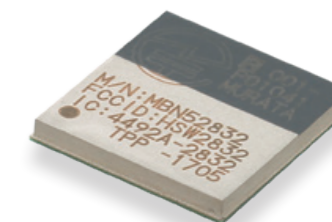
The MBN52832 is a Bluetooth low energy module. It enables ultra-low power connectivity for data communication. The product integrates Nordic Bluetooth low energy IC, RF front end, and crystal. This is an ideal solution for Internet of Things (IoT) applications.

FEATURES

- Product type: MCU module
- Frequency: 2.4GHz
- Chipset: Nordic Semiconductor nRF52832
- Processor: ARM Cortex-M4
- Antenna: on-board
- Sleep clock: no
- Operating temp.: -40°C to +85°C
- Mounting type: SMT
- Dimension: 7.4mm x 7.0mm x 0.9mm
- Supply voltage: 1.7VDC to 3.6VDC

APPLICATIONS

- Mesh lighting
- Commissioning
- Smart lighting
- White goods
- Multimedia control
- Room occupancy



[VIEW PRODUCT DETAILS](#) →

Type 1MW series WiFi smart module

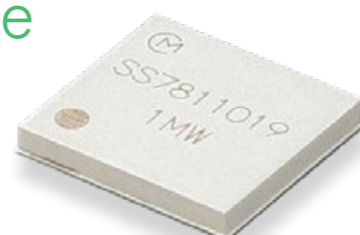
The type 1MW is a small and very high performance module based on Cypress CYW43455 combo chipset which supports WiFi 802.11a/b/g/n/ac + Bluetooth 5.0 BR/EDR/LE up to 395MHz supported with 11ac 5GHz and 3Mbps PHY data rate on Bluetooth. The WLAN section supports SDIO v3.0 DDR50 interface and the Bluetooth section supports high-speed 4-wire UART interface and PCM for audio data.

FEATURES

- Product type: module
- Frequency: 2.4GHz and 5GHz
- Frequency: 2400MHz to 2483MHz and 5180MHz to 5825MHz
- Chipset: Cypress Semiconductor CYW43455
- Processor: no
- Modulation: DSSS/CCK/OFDM
- Antenna: external
- Sleep clock: no
- Operating temp.: -20°C to +75°C
- Mounting type: SMT
- Dimension: 7.9mm x 7.3mm x 1.1mm
- Supply voltage: 3.2VDC to 4.2VDC

APPLICATIONS

- Multimedia
- Wireless speaker
- Security and access control
- Wireless CCTV
- Gateway
- EV charging station



[VIEW PRODUCT DETAILS](#) →

Micro battery solution

Coin cell

Murata offers a wide range of micro batteries with high performance and reliability, taking advantage of the state-of-the-art design and production technologies. Coin manganese dioxide lithium batteries are small-sized primary batteries for various applications such as smart entry systems or TPMS (Tire Pressure Monitoring System) for automobile, IoT devices and backup power source for memory.

FEATURES

- Lightweight, high voltage and high energy density
- Excellent discharge characteristics
- Outstanding temperature characteristics
- Excellent leakage resistance
- Excellent long-term reliability
- UL approved parts

APPLICATIONS

- Factory automation
- Smart meters
- Tracking devices
- Sensors



[VIEW PRODUCT DETAILS](#) →

DC-DC converters

NXE1 series

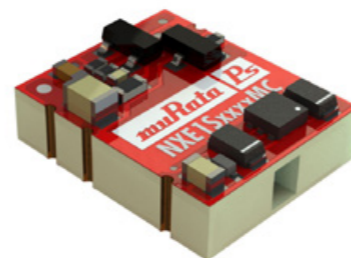
The NXE1 series is a range of low cost, lower profile, fully automated manufacture surface mount DC-DC converters. The NXE1 series automated manufacturing process with substrate embedded transformer offers increased product reliability and repeatability of performance in a halogen free, iLGA inspectable package. The NXE1 series, industry standard footprint is compatible with existing designs. The NXE1 series has a MSL rating 2, and is compatible with a peak reflow solder temperature of 260°C as per J-STD-020.

FEATURES

- Patents protected
- Lower profile
- UL60950 recognised for reinforced insulation to a working voltage of 125Vrms
- ANSI/AAMI ES60601-1, 1 MOOP to a working voltage of 250Vrms recognised
- 3kVDC isolation "hi pot test"
- Substrate embedded transformer
- Industry standard footprint
- Halogen free
- 1W output power

APPLICATIONS

- Isolated power for data communication
- Industrial control and automation
- Medical
- Instrumentation



[VIEW PRODUCT DETAILS](#)

NXE2 series

The NXE2 series is a range of low cost, lower profile, fully automated manufactured surface mount DC-DC converters. The NXE2 series automated manufacturing process with substrate-embedded transformer, offers increased product reliability and repeatability of performance in a halogen free iLGA inspectable package. The NXE2 series, industry standard footprint is compatible with existing designs. The NXE2 series has a MSL rating 2, and is compatible with a peak reflow solder temperature of 260°C as per J-STD-020.

FEATURES

- Patents protected
- Lower profile
- UL60950 recognised for reinforced insulation to a working voltage of 125Vrms
- ANSI/AAMI ES60601-1, 1 MOOP to a working voltage of 250Vrms recognised
- 3kVDC isolation "hi pot test"
- Substrate embedded transformer
- Automated manufacture
- Industry standard footprint
- Halogen free
- 2W output power

APPLICATIONS

- Isolated power for data communication
- Industrial control and automation
- Medical
- Instrumentation



[VIEW PRODUCT DETAILS](#)

NXJ1 series

The 1W NXJ series is a range of low cost, lower profile, fully automated manufactured surface mount DC-DC converters. The NXJ1 series automated manufacturing process with substrate embedded transformer, offers increased product reliability and repeatability of performance in a halogen free iLGA inspectable package. The NXJ1 series, industry standard footprint is compatible with existing designs. The NXJ1 series has a MSL rating 2, and is compatible with a peak reflow solder temperature of 260°C as per J-STD-020.

FEATURES

- Patents protected
- Lower profile
- UL60950 recognised for reinforced insulation to a working voltage of 200Vrms
- ANSI/AAMI ES60601-1, 1MOPP a working voltage of 250Vrms recognised
- 4.2kVDC isolation "hi pot test"
- Substrate embedded transformer
- Automated manufacture
- Industry standard footprint
- Halogen free

APPLICATIONS

- Medical
- Telecom and wireless
- Isolated power for data communication
- Industrial control and automation
- Instrumentation



[VIEW PRODUCT DETAILS](#)

Thermistors

NCP series

The NCP series offers chip type temperature sensors ideal for temperature sensing and compensation. Available in sizes 0.6mm x 0.3mm to 1.6mm x 0.8mm, NCP sensors are widely used in many electronics which have heat spot problems.

FEATURES

- Sintered non-oxide ceramic made:
 - Manganese (Mn)
 - Nickel (Ni)
 - Cobalt (Co)
 - And other elements
- An electrode is formed in this ceramic
- The lead type and chip type are common appearance shapes

APPLICATIONS

- Battery management
- Power management
- RF in M2M cellular module for IoT.



[VIEW PRODUCT DETAILS](#)

Thermistors

MTHMR-N-0002A series NTC evaluation board

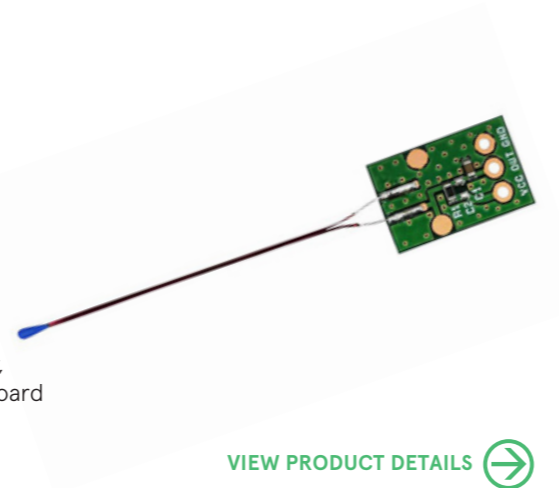
The MTHMR-N-0002A from Murata is a NTC thermistor evaluation board. The evaluation board can be utilised for testing temperature sensor (NTC thermistor, NXFT-series). It's a simple way to test temperature sensing by connecting this board with users microcomputer or single-board computer.

FEATURES

- Rated voltage: 5V
- Output signal: analog
- Dimension: 15mm x 10mm

APPLICATIONS

- Temperature control for:
 - Automotive
 - Sensing and instrumentation
 - Medical



[VIEW PRODUCT DETAILS](#)

NXF series NTC

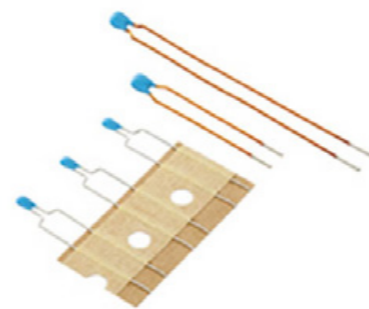
The NXF series of thermal string type NTC thermistors with flexible leads is a series of electronic components for detecting and measuring temperature. These sensors feature one of the industry's smallest sensor heads, realising compact size and fast thermal response. This type of thermistor has 25% faster thermal response (compared to the hot constant of the previous model), which has been realised by selecting an appropriate wire material and internal construction.

FEATURES

- This small and highly accurate NTC Thermistor provides extremely precise temperature sensing.
- The small sensing head and thin lead wire deliver temperature sensing in a narrow space.
- Flexibility and a wide variety of lengths (25mm to 150mm) enable the design of flexible temperature sensing architectures.

APPLICATIONS

- Temperature detection of a rechargeable battery pack, charge circuit, printer head, DC fan motor, home electronics



[VIEW PRODUCT DETAILS](#)

Sound components

PKLCS/PKMCS series SMD buzzer

The PKLCS/PKMCS series SMD type sounders for high-density mounting have been developed as products adopting Murata's proprietary acoustic designs, structure design technology, and high-performance ceramics.

FEATURES

- Small size and low profile design
- Low power consumption
- High sound pressure
- Easy assembly
- High reliability

APPLICATIONS

- Consumer white goods
- Mobile printer
- Handy payment terminal
- Smart tag
- DSC
- Wearable devices
- Healthcare; blood glucose meter,



[VIEW PRODUCT DETAILS](#)

Timing devices

XRCGB series crystal unit

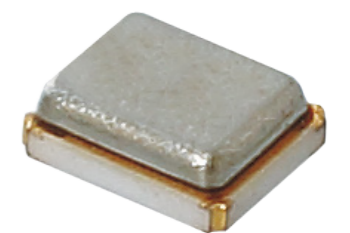
The XRCGB series crystal unit is compact high-quality, ESR and impact-resistant. They are ideal for consumer applications such as wireless communications (BLE/Zigbee/NFC), wired communications (Ethernet/USB), microcomputers, HDDs/SSDs, PCs, and healthcare equipment.

FEATURES

- High reliability
- Technical support
- Stable supply
- Compatible with other suppliers

APPLICATIONS

- Consumer: wireless application (BLE, NFC), wired application (Ethernet, USB2.0/3.0), processor (CPU, MPU, DSP), HDD, SSD, PC, medical/healthcare, etc.
- Industrial: PLC, LCD, processor, wireless application (Zigbee), etc.

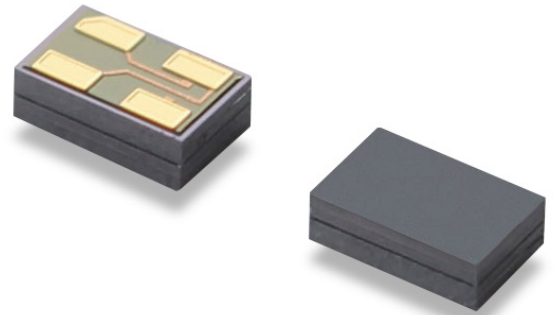


[VIEW PRODUCT DETAILS](#)

Timing devices

WMRAG series MEMS resonator

The WMRAG series MEMS resonators achieves excellent frequency accuracy and stable temperature characteristics without the use of active elements to correct the initial frequency and frequency shift by temperature. MEMS technology was used to realise the world's smallest size resonator with very low ESR characteristics that is currently unachievable by quartz crystal resonators. This helps customers reduce both power consumption and mounting space.



FEATURES

- World's smallest size 0.9mm x 0.6mm x 0.3mm
- Built-in capacitance
- Support high temperatures/high reliability
- Low ESR

APPLICATIONS

- Small and low-profile devices: medical patch devices, smart cards, wireless module, wearables, wireless earphone, etc.
- Industrial equipment: encoder, PLC (Programmable Logic Controller), FEMS (Factory Energy Management System), BEMS (Building Energy Management System), etc.

[VIEW PRODUCT DETAILS](#) 

Ask an Expert

Our Europe wide team of product specialists works closely with Murata to offer you the highest levels of engineering support for your design. To find out more or to discuss your security application requirements, contact this team in your local language at [avnet-abacus.eu/ask-an-expert](https://www.avnet-abacus.eu/ask-an-expert)

Offices

AUSTRIA

Schönbrunner Str. 297-307
A-1120 Vienna
Phone: +43 1 86642 0
Fax: +43 1 86642 250
wien@avnet-abacus.eu

BELARUS

c/o Avnet Abacus Russia
Office 24, Building 2
10 Korovinskoye Shosse,
127486 Moscow
Phone: +7 (495) 737 3688
Fax: +7 (495) 737 3686
belarus@avnet-abacus.eu

BELGIUM

De Kleetlaan 3
1831 Diegem
Phone: +32 2 227 2000
diegem@avnet-abacus.eu

BULGARIA

c/o Avnet Abacus Romania
4 Gara Herastrau,
Building B, 2nd Floor RO-020334
Bucharest
Phone: +4021 528 16 90
bulgaria@avnet-abacus.eu

CROATIA

c/o Avnet Abacus Slovenia
Dunajska Cesta 167
1000 Ljubljana
Phone: +386 (0)1 560 97 54
Fax: +386 (0)1 560 98 78
croatia@avnet-abacus.eu

CZECH REPUBLIC

Amazon Court Karolinska 661/4
CZ-18600 Prague Czech Republic
Phone: +420 234 091 011
Fax: +420 234 091 010
praha@avnet-abacus.eu

DENMARK

Knudlundvej 24 DK-8653 Them
Phone: +45 86 84 84 84
Fax: +45 86 84 82 44
them@avnet-abacus.eu

Lyskær 9, DK-2730 Herlev

Phone: +45 86 84 84 84
Fax: +45 43 29 37 00
herlev@avnet-abacus.eu

EGYPT

c/o Avnet Abacus Turkey
Tatlısu Mahallesi Pakdil
Sokak No: 7 Kat: 2 34774
Umraniye Istanbul Türkiye
Phone: +90 216 52 88 370
Fax: +90 216 52 88 377
egypt@avnet-abacus.eu

ESTONIA

Suur-Jõe 63, Pärnu,
80042 Pärnu Maakond,
Estonia
Phone: +372 56637737
paernu@avnet-abacus.eu

FINLAND

Pihatörmä 1 B
FI-02240 Espoo
Phone: +358 (0) 207 499 220
Fax: +358 (0) 207 499 240
espoo@avnet-abacus.eu

FRANCE

Immeuble Carnot Plaza
14 Avenue Carnot
91349 Massy Cedex, Paris
Phone: +33 (0) 1 6447 2929
Fax: +33 (0) 1 6447 9150
paris@avnet-abacus.eu

8 chemin de la Terrasse
Bat D 1er étage
31500 Toulouse
Phone: +33 (0) 5 6247 4787
Fax: +33 (0) 5 6247 4761
toulouse@avnet-abacus.eu

35 avenue des Peupliers
Les Peupliers2
35510 Cesson
Phone: +33 (0) 2 9983 7720
Fax: +33 (0) 2 9983 4829
rennes@avnet-abacus.eu

Parc Club du Moulin à Vent
Bât 10, 33 rue du Dr. G Lévy
F-69693 Vénissieux Cedex, Lyon
Phone: +33 (0) 4 7877 1370
Fax: +33 (0) 4 7877 1391
lyon@avnet-abacus.eu

GERMANY

Englische Str. 27
D - 10587 Berlin
Phone: +49 (0) 30 790 997 0
Fax: +49 (0) 30 790997 51
berlin@avnet-abacus.eu

Industriestr. 26
D-76297 Stutensee
Phone: +49 (0)7249 910 149
Fax: +49 (0)7249 910 177
stutensee@avnet-abacus.eu

Wilhelmstr. 1,
D-59439 Holzwickede / Dortmund
Phone: +49 (0) 2301 2959 27
Fax: +49 (0) 2301 2959 29
dortmund@avnet-abacus.eu

Oehleckerring 9a - 13 22419
Hamburg
Phone: +49 (0) 40 608 23 59 0
Fax: +49 (0) 40 608 23 59 20
hamburg@avnet-abacus.eu

Gruber Str. 60c-60d
D-85586 Poing / Munich
Phone: +49 (0) 8121 777 03
Fax: +49 (0) 8121 777 531
muenchen@avnet-abacus.eu

Lina-Ammon-Str. 19 b
D-90471 Nürnberg
Phone: +49 (0) 911 244 250
Fax: +49 (0) 911 244 25 25
nuernberg@avnet-abacus.eu

Gutenbergr. 15
D-70771 Leinfelden- Echterdingen
/ Stuttgart
Phone: +49 (0) 711 78260 02
Fax: +49 (0) 711 78260 333
stuttgart@avnet-abacus.eu

Gaußstraße 10 D-31275 Lehrte
Phone: +49(0) 5132 5099 0
Fax: +49(0) 5132 5099 76
lehrte@avnet-abacus.eu

GREECE

c/o Abacus Avnet Serbia
Milentija Popovića 5B,
Floors 6-8 Belgrade RS11070
Phone: +381 11 4022302
Fax: +381 11 4049900
belgrade@avnet-abacus.eu

HUNGARY

c/o Avnet Abacus Czech Republic
GreenPoint Offices,
Blok F Turcianska 2 SK-82109,
Bratislava
Phone: +421 232 242 608
Fax: +421 2 32 1111 40
budapest@avnet-abacus.eu

IRELAND

c/o Avnet Abacus Bolton
Oceanic Building
Waters Meeting Road
Bolton BL1 8SW
Phone: +44 (0)204 547170
Fax: +44 (0)204 547171
bolton@avnet.eu

ISRAEL

Avnet Components Israel Ltd.
P.O. Box 48
Tel-Mond, 4065001
Phone: 972-9-7780280
Fax: 972-3-760-1115
avnet.israel@avnet.com

ITALY

Via Manzoni 44
I-20095 Cusano Milanino (Milano)
Phone: +39 02 660 921
Fax: +39 02 66092 332
milano@avnet-abacus.eu

Viale dell'industria 23
I-35129 Padova
Phone: +39 049 7800 381
Fax: +39 049 7730 36
padova@avnet-abacus.eu

Via di Settebagni, 390
I-00138 Roma
Phone: +396-41231951
roma@avnet-abacus.eu

Via Scaglia Est, 31/33
41126 Modena
Phone: +39 059 34891
Fax: +39 059 344993
modena@avnet-abacus.eu

Via Panciatchi 40/11
I-50127 Firenze
Phone: +39 055 436 1928
Fax: +39 055 428 8810
firenze@avnet-abacus.eu

LATVIA

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wrocław
Phone: +48 71 34 205 99
Fax: +48 71 34 229 10
latvia@avnet-abacus.eu

LITHUANIA

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wrocław
Phone: +48 71 34 205 99
Fax: +48 71 34 229 10
lithuania@avnet-abacus.eu

NETHERLANDS

Stadionstraat 2, 6th fl.
NL-4815 NG Breda
Phone: +31 (0) 76 57 22 300
Fax: +31 (0) 76 57 22 303
breda@avnet-abacus.eu

NORWAY

Olaf Helsetsvet 6,
0694 Oslo Norway
Phone: +47 (0) 94 89 53 73
oslo@avnet-abacus.eu

POLAND

Plac Solny 16
PL-50-062 Wrocław
Phone: +48 71 34 205 99
Fax: +48 71 34 229 10
wroclaw@avnet-abacus.eu

PORTUGAL

Tower Plaza, Rot. Eng.
Edgar Cardoso,
23, Pl. 14, Saia E
PT-4400-676 Vila Nova de Gaia
Phone: +351 223 779502
Fax: +351 223 779503
portugal@avnet-abacus.eu

ROMANIA

4 Gara Herastrau, Building B,
2nd Floor
RO-020334 Bucharest
Phone: +4021 528 16 90
romania@avnet-abacus.eu

RUSSIA

49A Tatischeva Street,
Ekaterinburg
RUS-620028
Phone: +7 (912) 650 1944
Ekaterinburg@avnet-abacus.eu

Office 24, Building 2
10 Korovinskoye Shosse
127486 Moscow
Phone: +7 (495) 737 3688
Fax: +7 (495) 737 3686
Moscow@avnet-abacus.eu

SERBIA

Milentija Popovića 5B, Floors 6-8
Belgrade RS11070
Phone: +381 11 4022302
Fax: +381 11 4049900
belgrade@avnet-abacus.eu

SLOVAKIA

GreenPoint Offices, Blok F
Turcianska 2
SK-82109, Bratislava
Phone: +421 232 242 608
Fax: +421 2 32 1111 40
slovakia@avnet-abacus.eu

SLOVENIA

Dunajska Cesta 167
1000 Ljubljana
Phone: +386 (0)1 560 97 54
Fax: +386 (0)1 560 98 78
ljubljana@avnet-abacus.eu

SOUTH AFRICA

First Floor, Forrest House
Belmont Office Park
Belmont Road,
Rondebosch 7700, Cape Town
Phone: +27 (0) 21 689 4141
Fax: +27 (0) 21 686 4709
sales@avnet.co.za

11 Forest Square, Suite 4,
Bauhnia Building, Derby Place,
Westville, 3629, Durban
Phone: +27 (0) 31 266 8104
Fax: +27 (0) 31 266 1891
sales@avnet.co.za

Block 13, Pinewood Office Park
33 Riley Road Woodmead,
2191 Sandton, Johannesburg
Phone: +27 (0) 11 319 8600
Fax: +27 (0) 11 319 8650
sales@avnet.co.za

SPAIN

NyN Tower, C/ Tarragona,
149-157, Floor 19
ES-08014 Barcelona
Phone: +34 (0) 93 327 85 50
Fax: +34 (0) 93 425 05 44
barcelona@avnet-abacus.eu

Plaza Zabalgane 12 Bajo Izda,
Galdakao / Vizcaya
ES -48960 Bilbao
Phone: +34 (0) 94 457 0044
Fax: +34 (0) 94 456 8855
bilbao@avnet-abacus.eu

C/Chile, 10 2ª Pta. Oficina 229
ES -28290 Las Matas / Madrid
Phone: +34 (0) 913 72 7200
Fax: +34 (0) 916 36 9788
madrid@avnet-abacus.eu

SWEDEN

Löfströms Allé 5,
Sundbyberg, Box 1830,
SE-171 27 Solna
Phone: +46 (0) 858 746200
Fax: +46 (0)858 746 001
stockholm@avnet-abacus.eu

Smörhålevägen 3
SE-43442 Kungsbacka
Phone: +46 (0)8 58746 200
Fax: +46 (0)300 140 15
gothenburg@avnet-abacus.eu

SWITZERLAND

Bernstrasse 392
CH-8953 Dietikon
Phone: +41 (0) 43 322 49 90
Fax: +41 (0) 43 322 49 99
zurich@avnet-abacus.eu

TURKEY

Tatlısu Mahallesi Pakdil
Sokak No: 7 Kat: 2 34774
Umraniye Istanbul Türkiye
Phone: +90 216 52 88 370
Fax: +90 216 52 88 377
istanbul@avnet-abacus.eu

UK

First Floor, The Gatehouse
Gatehouse Road Aylesbury,
Bucks HP19 8DB
Phone: +44 (0) 1296 678920
Fax: +44 (0) 1296 678939
Aylesbury@avnet.eu

Building 5 Waltham Park
White Waltham, Maidenhead
Berkshire SL6 3TN
Phone: +44 (0)1628 512900
Fax: +44 (0)1628 512999
maidenhead@avnet.eu

Avnet House
Rutherford Close
Meadway, Stevenage
Hertfordshire SG1 2EF
Phone: +44 (0)1438 788 500
Fax: +44 (0)1438 788 250
stevenage@avnet.eu

Oceanic Building
Waters Meeting Road
Bolton BL1 8SW
Phone: +44 (0)1204 547170
Fax: +44 (0)1204 547171
bolton@avnet.eu

UKRAINE

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wrocław
Phone: +48 71 34 205 99
Fax: +48 71 34 229 10
ukraine@avnet-abacus.eu

All trademarks and logos are the property of their respective owners. This document provides a brief overview only, no binding offers are intended. No guarantee as to the accuracy or completeness of any information. All information is subject to change, modifications and amendments without notice. Printed on FSC certified paper.