endrichnews

OUR PRODUCT OF THE MONTH: NEW TYPES OF RECTANGULAR SPEAKERS FROM CHINASOUND AND VECO
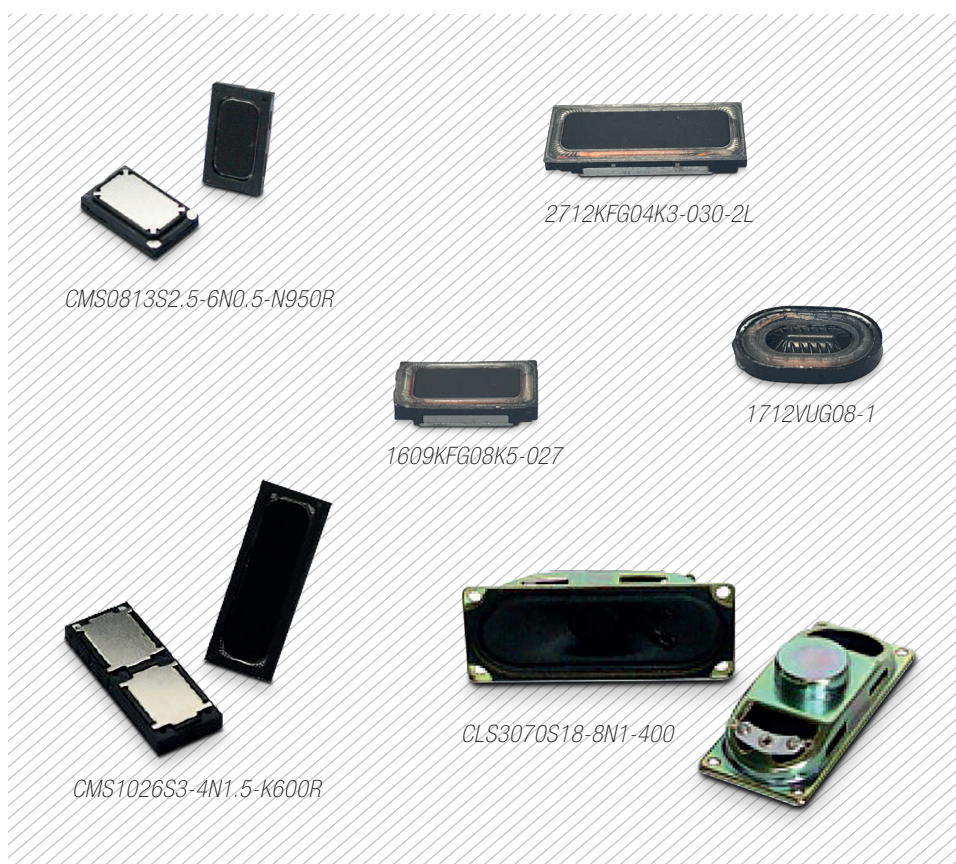
CMS0813S2.5-6N0.5-N950R

2712KFG04K3-030-2L

1609KFG08K5-027

1712VUG08-1

CMS1026S3-4N1.5-K600R

CLS3070S18-8N1-400

FEATURES

- Wider frequency range and better sound, compared to other sound solutions
- Space saving shape & size
- Different impedances available
- Wide range of sizes available
- Wire / connector assembly available
- Automotive specification available
- Expert advice & design-in support available

LOW POWER LOSS, HIGH VOLTAGE, SIC SCHOTTKY DIODE ESIC SERIES

SIC schottky diode ESiC series provide very short reverse recovery time (Trr), it can save 15 – 30 % power loss by replacing the Si diode with SiIC diode.

ESIC05065SD

SCHOTTKY BARRIER RECTIFIERS

PART NUMBER	PEAK REPETITIVE REVERSE VOLTAGE	MAX. AVERAGE RECTIFIED CURRENT	MAX.PEAK FORWARD SURGE CURRENT	MAX. REVERSE CURRENT @V_{RRM}	TOTAL CAPACITIVE CHARGE (TYP.)	MAX. FORWARD VOLTAGE	
	V_{RRM}	I_F	I_{FSM}	I_R	Q_C	V_F @ I_F	
4.0 AMPERE / TO-220 AC							
ESIC04065S	650 V	4.0 A	75 A	100.0 µA	15 nC	1.70 V	4.0 A
5.0 AMPERE / TO-220 AC							
ESIC05065S	650 V	5.0 A	75 A	100.0 µA	15 nC	1.80 V	5.0 A
ESIC05120S	1200 V	5.0 A	35 A	100.0 µA	36 nC	1.80 V	5.0 A
5.0 AMPERE / DPAK							
ESIC05065SD	650 V	5.0 A	75 A	100.0 µA	15 nC	1.80 V	5.0 A
ESIC05120SD	1200 V	5.0 A	50 A	100.0 µA	36 nC	1.70 V	5.0 A
6.0 AMPERE / TO-220 AC							
ESIC06065S	650 V	6.0 A	95 A	100.0 µA	26 nC	1.70 V	60.0 A
8.0 AMPERE / TO-220 AC							
ESIC08065S	650 V	8.0 A	56 A	100.0 µA	23 nC	1.80 V	80.0 A
10.0 AMPERE / TO-220 AC							
ESIC10065S	650 V	10.0 A	60 A	100.0 µA	36 nC	1.80 V	10.0 A
ESIC10120S	1200 V	10.0 A	60 A	100.0 µA	69 nC	1.80 V	10.0 A
20.0 AMPERE / TO220 AC							
ESIC20065S	650 V	20.0 A	200 A	100.0 µA	56 nC	1.80 V	20.0 A

HAVE A LOOK (multiple tabs)

APPLICATIONS

- Power converter product
- Electric Vehicle (EV)
- Hybrid Electric Vehicle (HEV)
- PFC Circuit (Power Factor Correction)
- Uninterruptible Power System
- LED Lighting
- Inverter
- Converter
- Switching Circuit
- Motor Driver Circuit
- etc.

FEATURES

- Low forward voltage
- Very short reverse recovery time (trr), and excellence in high frequency switching circuit
- Much lower power loss so increasing the efficiency of power supply
- With stable temperature characteristics
- Require smaller heatsink and save dimension to achieve slimmer and smaller product system

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PAN1762 – BLUETOOTH® LE V5.0 MODULE WITH HIGHEST LINK BUDGET ON THE MARKET

HAVE A LOOK

PAN1762 is Panasonic's next generation Bluetooth® LE module based on industry's leading sensitivity SoC TC35680 from Toshiba.

The module supports the major BT 5.0 features – long range as well as high data throughput: With a link budget of 113 dBm the module ensures several hundred meters of range and a 2 Mbps high-speed physical layer enables a bigger data transfer in less time via Bluetooth® low energy.

PAN1762 also impresses with the best range / current consumption ratio of 11.5 mA in TX (@ 8 dBm) and 5.1 mA in RX mode (1 Mbps). Therefore the module is highly recommended for battery powered devices, beacon and mesh applications as well as long range applications.

The module embeds a 128 kB flash memory and a 144 kB RAM. 51 kB RAM are freely configurable for user application. In stand-alone mode, the PAN1762 can be used for many applications without the need for an external processor, saving cost, complexity, and space.

As a small SMD module (15,6 x 8,7 mm) with integrated Bluetooth® chip antenna, PAN1762 supports all features of BT 5.0. Older module versions with the same footprint and form factor (PAN1760, PAN1760A, PAN1761, PAN1026) can easily be migrated with minimal effort.
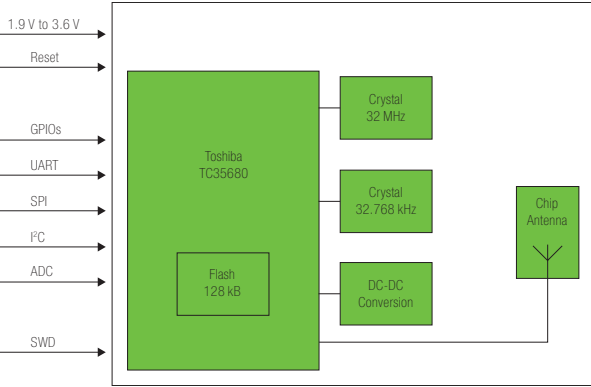
FEATURES

- Small 15.6 x 8.7 x 1.9 mm SMD module
- Same form factor and pinout as PAN1026A and PAN1760A
- Bluetooth® low energy 5.0 compliant
- 128 kB flash memory and 144 kB internal RAM
- Bluetooth® stack in ROM, flash memory available for application
- Max. 51 kB RAM for application code and ROM patches
- AT command mode, host mode and stand-alone mode
- Standard SIG BLE profiles as well as SPPoverBLE profile
- 2·SPI, 2·I²C, UART, PWM, wake-up inputs, general purpose ADC, 18 programmable I/O
- Toshiba TC35680 featuring ARM® Cortex®-M0 with SWD interface

BLUETOOTH®

- 2 Mbps high-speed PHY, LE long range coded PHY
- LE advertising extensions (advertising on 40 channels)
- Channel selection algorithm #2
- LE secure connections
- Advertising function without CPU wake-up and interaction
- Bluetooth® SIG certified mesh stack

CHARACTERISTICS

- Target sensitivity -94 dBm @ 1 Mb/s and -105 dBm @ 125 kb/s
- Target max. output power 8 dBm
- Target typical current consumption of 11 mA in TX (@ 8 dBm) and 5.1 mA in RX
- Voltage range: 1.9 V to 3.6 V
- Temperature range: -40 °C to 85 °C

Block diagram

APPLICATIONS

- Smart home / building
- Smart city / agriculture
- Smart lighting
- Industrial advanced wearables
- Internet of Things (IoT)
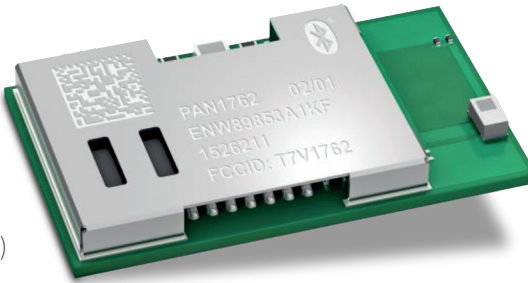
EVERSWITCH BRINGS PIEZO TECHNOLOGY TO PERFECTION

HAVE A LOOK

The EverSwitch Touch Metal technology is based on stand-alone piezoelectric modules that can be arranged in a myriad of configurations from individual switches to multi-function switch panels and keypads. The technology uses the piezoelectric effect to create switches and keypads that are completely sealed, impervious to the environment and operate from -40 °C to +125 °C.

This patented, modular approach eliminates the need for a solder connection to the delicate piezo ceramic and creates a robust 125 msec minimum switch closure, which is a significant improvement over market standards of just 20 msec. With no moving parts, EverSwitch products last indefinitely even in the most extreme operating conditions as switch failure due to motion, friction, dirt, moisture, vandalism or ice is completely eliminated.

EverSwitch offers a wide range of switches and keypads that meet or exceed CE, UL, IP69K, NEMA, MIL-STD, ATEX, ETL and FAA requirements.
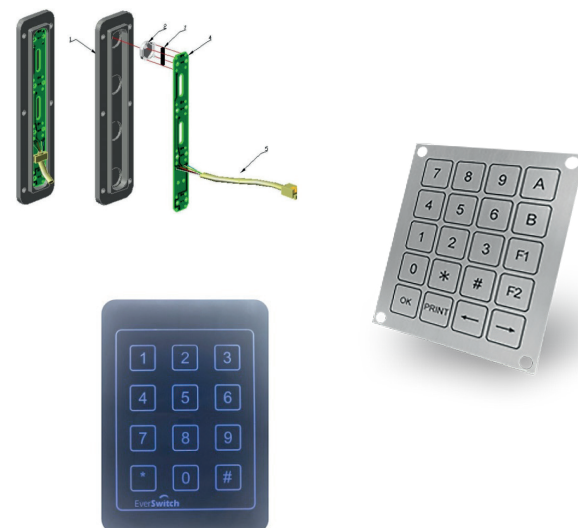
CUSTOM SOLUTION

EverSwitch Touch Metal technology is modular, versatile and readily adapted to a wide range of applications from luxury white appliance controls to hazardous locations. Please let us know what you need to modify…

KEYPADS

EverSwitch Touch Metal keypads are time proven across a range of diverse markets… from correctional facilities, petroleum refineries to submerged oceanographic equipment. The custom made keypads and keyboards range from a minimal 2 key keypad solution to large keyboards in various configurations, printing colors, designs and software required. The patented technology allows for extremely economical prototypes and short production runs.

ACCESS CONTROL

The EverSwitch line of door keypads and prox readers are compatible with all access control keypads and legacy systems and are durable, dependable and rugged utilizing unrivaled Touch Metal technology housed in a solid aluminium case. All products are completely sealed (IP69 rated) with patented piezo switch elements and encapsulated HID proximity reader in either 125 kHz or 13.56 MHz, iClass, DESFire and other formats and protocols.

SWITCHES

EverSwitch Touch Metal switches help to resolve difficult HMI issues across the toughest environmental conditions. With no moving parts, our products excel in high use, high-abuse areas and are impervious to weather and temperature extremes. Available functions: Momentary (120 Msec. Pulse) – continuous (circuit closed as long as switch is pressed -up to 6 seconds) – toggle (switch changes position at each activation).
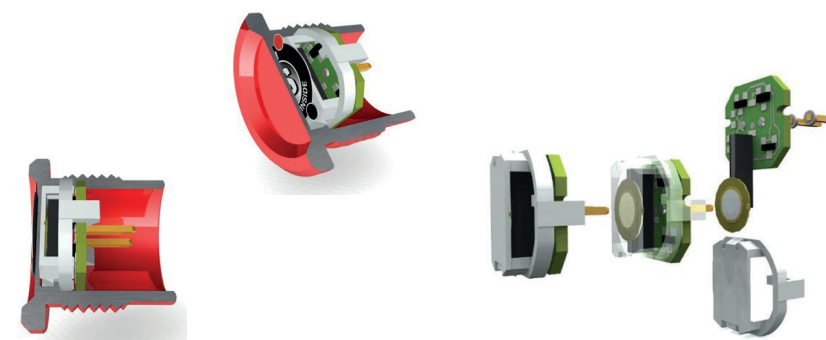
APPLICATIONS

- White appliances
- Outdoor vending machines / bike docking stations / payment
- Fuel dispensing e-car charging
- Dairy equipment
- Food processing & commercial kitchen
- Chemical industry, oil and gas
- Parking systems & public transportation
- Airport / aviation
- Emergency switches
- Medical industry & clean rooms
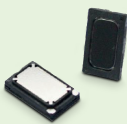- Rail traffic & public transport

Toll collection system

HAVE A LOOK **HAVE A LOOK**

CMS0813S2.5-6N0.5-N950R | **CLS3070S18-8N1-400**

	CMS0813S2.5-6N0.5-N950R	CLS3070S18-8N1-400
APPEARANCE	Square	Square
DIMENSIONS	13.0 x 8.0 x 2.5 mm	70.0 x 30.0 x 17.8 mm
IMPEDANCE ±15%	6 Ω	8 Ω
NORMAL POWER	500 mW	1000 mW
SPL	70 dB	91 dB
OPERATING TEMP.	-30 to +70 °C	-20 to +60 °C
LOW. RES. FREQ.	950 Hz	400 Hz
FREQUENCY RANGE	950 to 20.000 Hz	400 to 10.000 Hz

Payment terminals

HAVE A LOOK **HAVE A LOOK**

1609KFG08K5-027 | **1712VUG08-1**

	1609KFG08K5-027	1712VUG08-1
APPEARANCE	Square	Oval
DIMENSIONS	16.0 x 9.0 x 2.7 mm	17.0 x 12.0 x 3.6 mm
IMPEDANCE ±15%	8 Ω	8 Ω
NORMAL POWER	1000 mW	1000 mW
SPL	94 dB	75 dB
OPERATING TEMP.	-25 to +60 °C	-25 to +60 °C
LOW. RES. FREQ.	650 Hz	600 Hz
FREQUENCY RANGE	480 to 20.000 Hz	600 to 20.000 Hz

Medical devices

HAVE A LOOK **HAVE A LOOK**

CMS1026S3-4N1.5-K600R | **2712KFG04K3-030-2L**

	CMS1026S3-4N1.5-K600R	2712KFG04K3-030-2L
APPEARANCE	Square	Square
DIMENSIONS	26.0 x 10.0 x 3.0 mm	27.0 x 12.0 x 3.0 mm
IMPEDANCE ±15%	4 Ω	4 Ω
NORMAL POWER	1500 mW	1500 mW
SPL	78 dB	81 dB
OPERATING TEMP.	-30 to +70 °C	-25 to +60 °C
LOW. RES. FREQ.	600 Hz	500 Hz
FREQUENCY RANGE	600 to 20.000 Hz	500 to 20.000 Hz

MORE RECTANGULAR SPEAKER

	PART NO.	APPEARANCE	DIMENSIONS	IMPEDANCE ±15%	NORMAL POWER	SPL	OPERATING TEMP.	LOW. RES. FREQ.	FREQUENCY RANGE
HAVE A LOOK	2010KFG08K3-030-1	Square	20.0 x 10.0 x 3.2 mm	8 Ω	1000 mW	79 dB	-25 to +60 °C	280 Hz	280 to 20.000 Hz
HAVE A LOOK	2514KCG04L-9	Square	25.0 x 14.0 x 5.0 mm	4 Ω	1500 mW	78 dB	-25 to +60 °C	420 Hz	420 to 20.000 Hz
HAVE A LOOK	3411KFG04T-040-1	Square	34.0x11.0x3.9 mm	4 Ω	2000 mW	80 dB	-25 to +60 °C	320 Hz	320 to 20.000 Hz
HAVE A LOOK	CLS2040S6.8-8N1-C800R-2	Square	40.0 x 20.0 x 8.3 mm	8 Ω	1000 mW	84 dB	-10 to +60 °C	800 Hz	800 to 20.000 Hz
HAVE A LOOK	CMS1115SA2.5-8N0.7-K700R	Square	15.0 x 11.0 x 2.5 mm	8 Ω	700 mW	75 dB	-30 to +70 °C	700 Hz	700 to 20.000 Hz
HAVE A LOOK	CMS1420S3-8N0.7-K650R	Square	20.0 x 14.0 x 3.0 mm	8 Ω	700 mW	76 dB	-30 to +70 °C	650 Hz	650 to 20.000 Hz

FEATURES

- Wider frequency range and better sound, compared to other sound solutions
- Space saving shape & size
- Different impedances available
- Wide range of sizes available
- Wire / connector assembly available
- Automotive specification available
- Expert advice & design-in support available

APPLICATIONS

- All portable devices for voice, music and alarm
- Point of sale systems / payment terminals
- Building communications systems (smart home)
- Houshold applications / white goods
- Communication devices
- Electronic "non-stop" toll collection system
- Medical devices
- Smartphones

TTO SERIES – WATERPROOF TEMPERATURE SENSORS

HAVE A LOOK

TTO series sensors are IP68 waterproof temperature probes encapsulated with thermoplastic elastomer materials in overmoulding technology. Excellent per-formance in extreme freeze-thaw conditions resulting from a wide choice of insulation material. The TTO overmoulded probes are a perfect solution for applications where the best waterproof and moisture protection is required.

FEATURES

- Excellent insulation against moisture
- Degree of waterproof protection IP68
- Flexible size and tolerances (smallest tip diameter 4.5 mm)
- Excellent resistance to UV (black insulation)
- RoHS compliant and halogen free
- Wide range of R/T characteristics
- Marking possible on request
- NTC and PTC thermistors, PtRTD versions are available
- Cable remains flexible at minimum design temperature

APPLICATIONS

- Refrigeration applications (evaporator)
- Air conditioning
- Underfloor heating
- Climate control systems
- Industral process control

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