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Maxell, Ltd

## **Maxell Develops Coin Type All-Solid-State Battery “PSB2032” Suitable for Main Power Supply for IoT Devices**

Samples to be available in late December 2025



Coin Type All-Solid-State Battery “PSB2032” (Sample)

Maxell, Ltd. (President and Representative Director: Keiji Nakamura; hereinafter “Maxell”) has developed the “PSB2032”, a coin type all-solid-state battery suitable for use as the main power source for IoT devices. Samples will be available in late December.

In infrastructure facilities and factories, significant labor is required for monitoring the operational status of equipment and performing maintenance work on such equipment.

However, with the recent decline in the labor force, it is becoming increasingly difficult to maintain conventional practices. To improve the situation, there is a growing demand for automation and efficiency improvement through IoT and AI technologies. As a result, the adoption of IoT sensor devices equipped with communication functions that allow for continuous monitoring of equipment and facility conditions over extended periods without requiring human effort is progressing, along with the demand for power sources that offer greater capacity and higher reliability.

To meet these market needs, Maxell has newly developed the “PSB2032”, a coin type all-solid-state battery designed to be suitable as the main power source for IoT devices. The battery features 20 mm in diameter and 3.2 mm in height.

Since developing coin type all-solid-state battery in 2019, Maxell has been advancing research and development of all-solid-state batteries of various types, including ceramic package type, bipolar type, and cylindrical type. The newly developed “PSB2032” delivers a capacity of 35 mAh - approximately four times that of the ceramic- packaged “PSB401010H” currently in mass production, making it suitable for use as the main power source for IoT devices.

The “PSB2032” incorporates key features of Maxell’s all-solid-state batteries, such as a wide discharge temperature range, high reliability, and high safety<sup>\*1</sup>, while maintaining the high sealing capability<sup>\*2</sup> equivalent to ceramic-packaged models. In addition, while the “PSB401010H” is suitable for reflow mounting, the “PSB2032” samples come pre-equipped

with connection terminals<sup>\*3</sup> suitable for mounting into small-sized devices, enabling Maxell's all-solid-state batteries to accommodate different mounting methods.

Maxell is advancing the development of all-solid-state batteries with high-performance and high reliability, that can be applied to areas where existing batteries cannot be used, focusing on four key features: high reliability, high heat resistance, high output, and large capacity. In addition, Maxell is developing modules that combine all-solid-state batteries with wireless power transfer and energy harvesting technologies, contributing to solving social challenges and realizing a sustainable society.

\*1 Key features of Maxell's all-solid-state batteries: High reliability, high heat resistance, high output, and large capacity. Please visit Maxell's all-solid-state battery webpage for details.

\*2 High sealing capability: Achieved a level of  $10^{-11}$  (Pa·m<sup>3</sup>/sec) in the helium leak test.

\*3 Pre-equipped with connection terminals: This applies to the samples of "PSB2032" scheduled for release in late December 2025.

#### **All-solid-state-battery webpage**

[https://biz.maxell.com/en/rechargeable\\_batteries/allsolidstate.html](https://biz.maxell.com/en/rechargeable_batteries/allsolidstate.html)

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#### **Contacts**

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[https://biz.maxell.com/en/rechargeable\\_batteries/inquiry\\_form\\_input1.html](https://biz.maxell.com/en/rechargeable_batteries/inquiry_form_input1.html)

Appendix

**Outline Specifications of Coin Type All-Solid-State Battery “PSB2032”**

(Compared with Ceramic-packaged All-Solid-State Battery “PSB401010H”)

Items	PSB2032 (sample)	PSB401010H
Type	Coin type	Ceramic package type
Operating Temperature (°C)	Charge: -20 ~ +115 Discharge: -50 ~ +125	Charge: -20 ~ +115 Discharge: -50 ~ +125
Nominal Voltage(V)	2.3	2.3
Dimensions (mm)	Diameter 20.0 × Height 3.2 (Excluding connection terminals)	Length 10.5 × Width 10.5 × Height 4.0
Nominal Capacity (mAh)	35.0	8.0
Implementation method	With connection terminals	Reflow mounting (Surface mounting)

The above specifications are subject to change without notice.