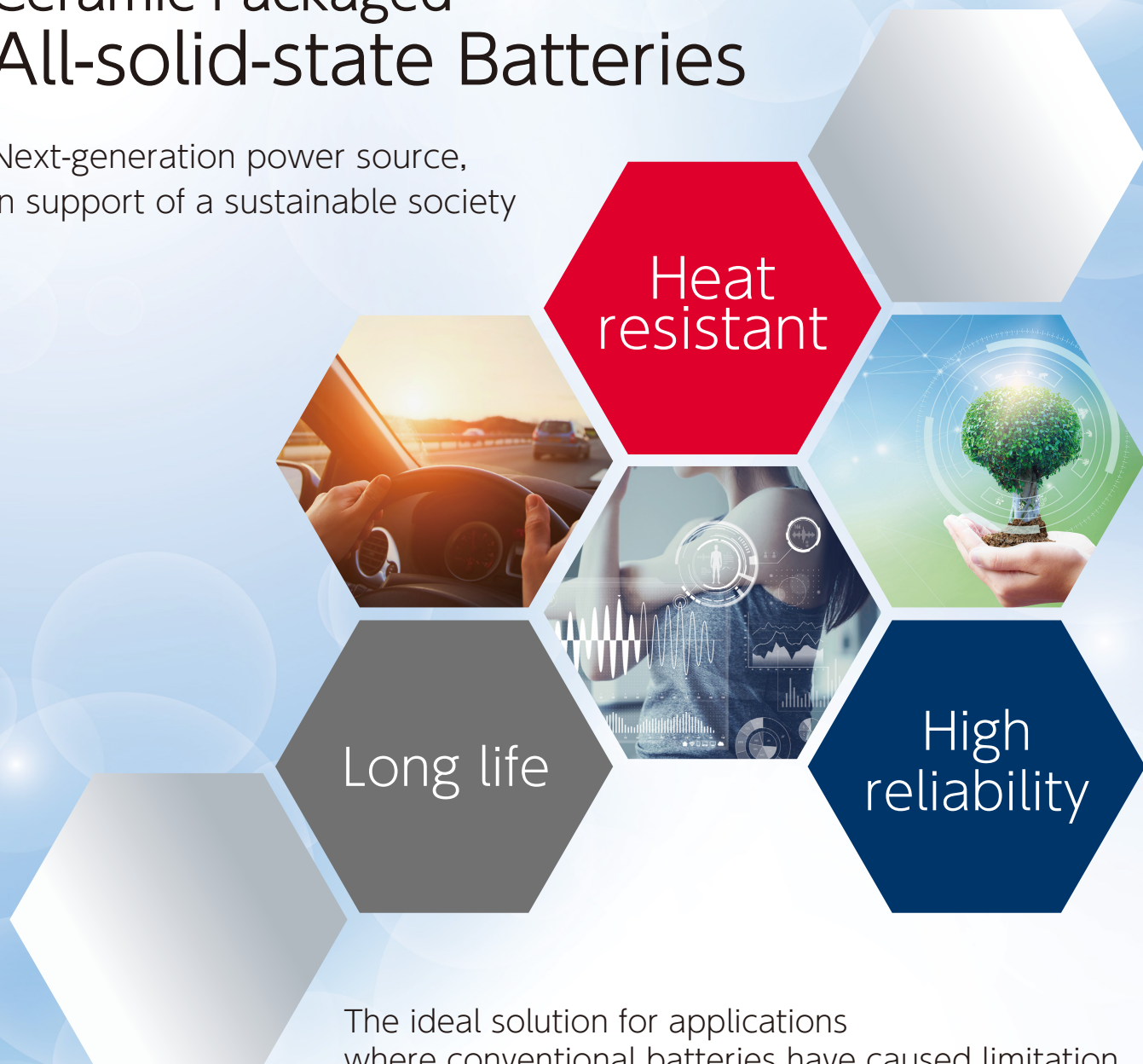


# Ceramic Packaged All-solid-state Batteries

Next-generation power source,  
in support of a sustainable society



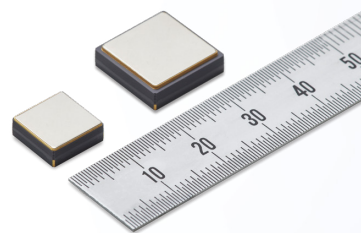
The ideal solution for applications  
where conventional batteries have caused limitation

1961



Maxell continues to offer  
innovative batteries to the world

2024



Ceramic Packaged All-solid-state Battery



# Maxell's Ceramic Packaged All-solid-state Batteries

## Summary

Maxell's proprietary technologies include surface treatment, mixing, dispersion, coating, molding, and encapsulation. These specialized technologies are what enable Maxell's all-solid-state batteries to achieve both high capacity and high load\*1. All-solid-state batteries inherently exceed conventional lithium-ion batteries in long life\*2 and heat resistance, making Maxell's all-solid-state battery apt for applications that were once inaccessible due to the limitations of conventional lithium-ion batteries. Ceramic packaged all-solid-state batteries can be surface mounted on board by reflow soldering\*3.

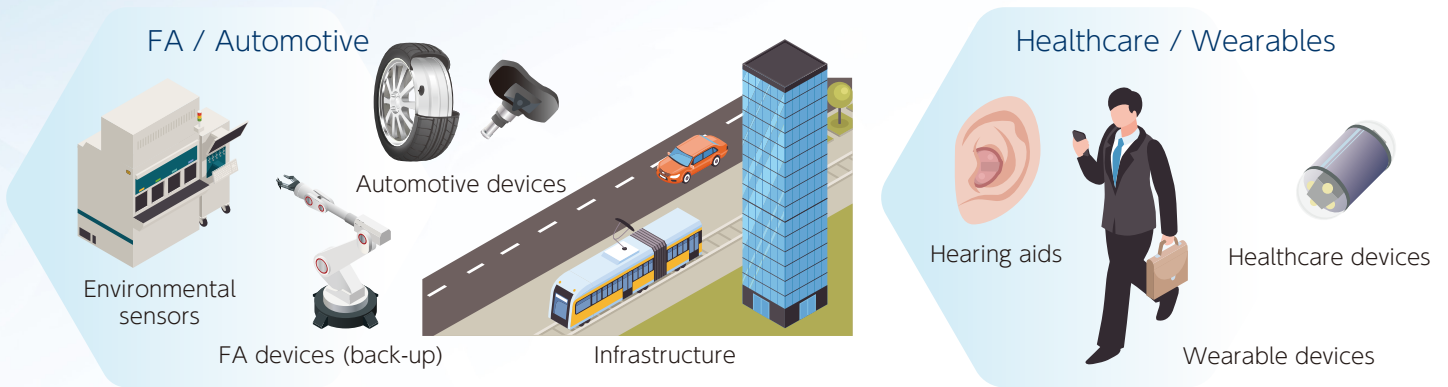
\*1 Maxell's all-solid-state battery has equivalent characteristics to Maxell's coin type lithium-ion battery (927 size) which has the nominal capacity of 8mAh and the maximum discharge rate of 20mA.  
\*2 The number of the days that 90% capacity can be maintained is 10 days for Maxell's coin type lithium-ion battery (927 size), while that for all-solid-state battery is 100 days from the results of acceleration test at 60 °C storage.  
\*3 The reflow at the maximum temperature of 245°C does not show any deterioration in the basic characteristics such as capacity and load characteristics.

## Features



\*4 The lifetime predicted based on the acceleration factor is 20-year level, which is longer than the life of general electronic parts (for example, insulating parts) of 5 years.  
\*5 Since the internal structure of Maxell's all-solid-state battery is simple, it is easy to miniaturize its size, compared to Maxell's coin type lithium-ion battery (4 mmφ can be designed as an example).

## Application examples

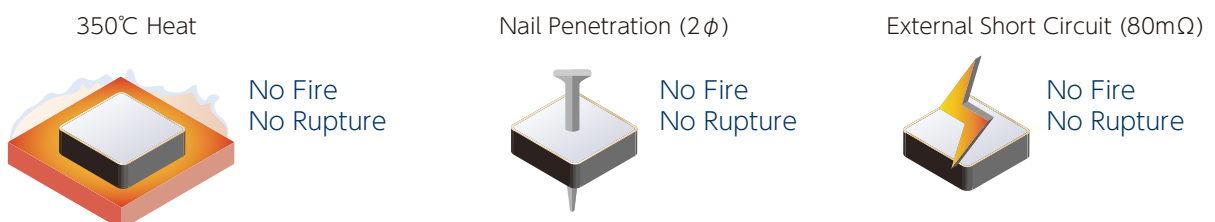


## Specifications

		Ceramic Packaged All-solid-state Battery	
		Mass-produced	Under Development
Model		PSB401010H	PSB401515H
Size	Length (mm)	10.5 × 10.5	14.5 × 14.5
	Height (mm)	4.0	4.0
	Weight (g)	1.4	2.7
Charge (CCCV)	Voltage(V)	2.6	2.6
	Current(mA)	4.0	8.0
	Temp. (°C)	-20 ~ +115	-20 ~ +115
Discharge (CC)	End voltage(V)	1.0	1.0
	Lower limit voltage(V)	0	0
	Maximum current*6(mA)	30.0	60.0
	Temp. (°C)	-50 ~ +125	-50 ~ +125
Nominal Voltage (V)		2.3	2.3
Nominal Capacity (mAh)		8.0	16.0

\*6 Maximum current : \* Maximum current (mA): maximum current that can maintain 1.8V or more after discharge for 1 second in initial fully charged state at 25°C  
\*7 Nominal current : Measured capacity while charging (CCCV: 4.0mA/2.6V/cut-off current 15 hours) and discharging (CC: 0.05mA/E.V. = 1.0V) in an environmental temperature of +23°C  
: Data and dimensions are not guaranteed.  
: Specifications and appearances of the battery are subject to change without notice.

## Safety



\* "High reliability" , according to the result of over discharge performance compared to that of coin type lithium-ion battery with electrolyte solution.

