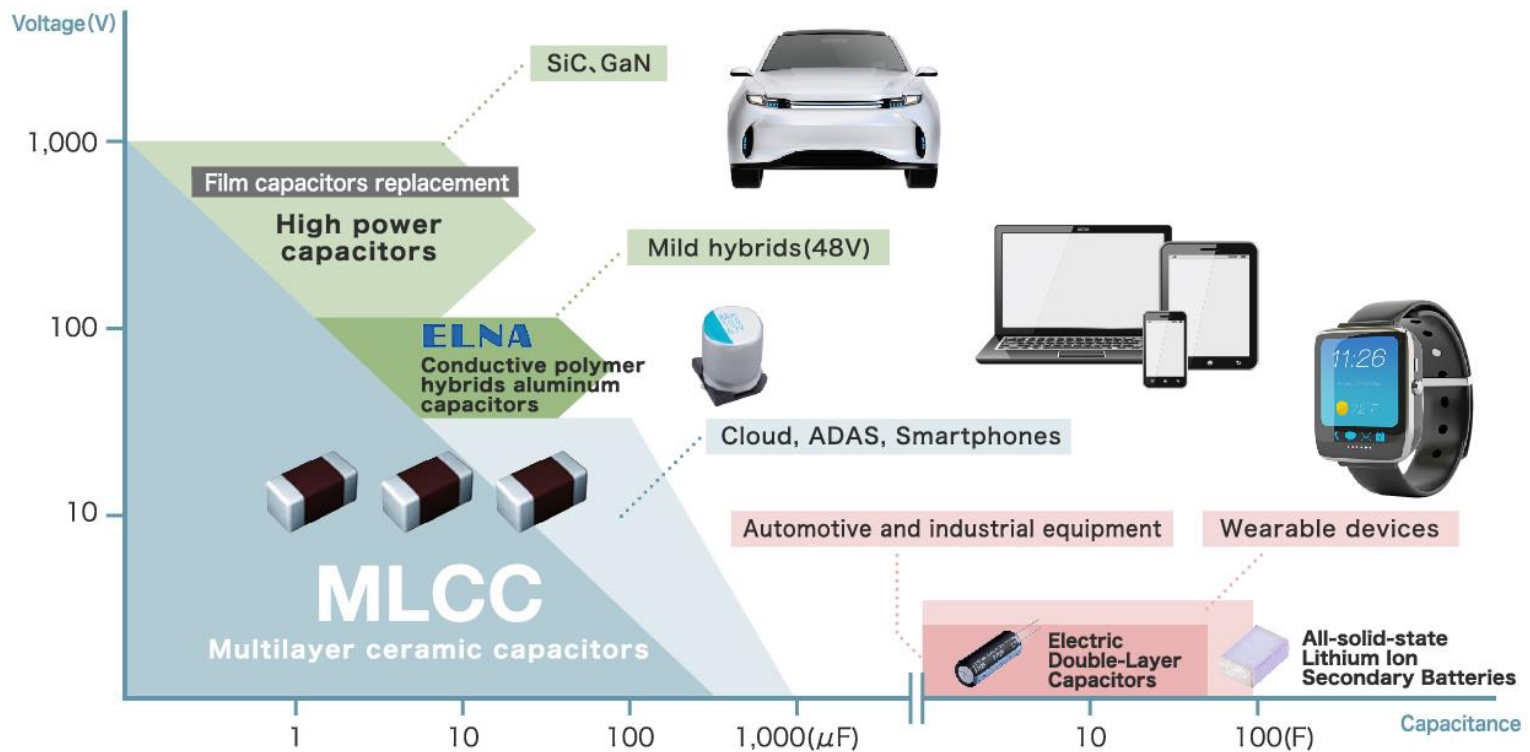


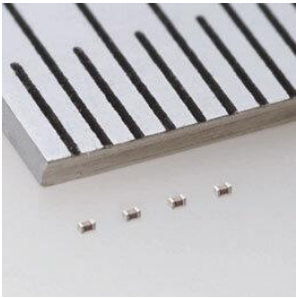
Multilayer Ceramic Capacitors

Product development based on strategic directions in the capacitor market which is expected to see a continued increase in demand

In addition to multilayer ceramic capacitors, there are also electrolytic capacitors and film capacitors. Due to the acceleration in the shift to energy conservation and the Internet of Things, the demand for high-performance capacitors is expected to increase over the medium to long-term. In particular, multilayer ceramic capacitors are essential for creating miniature and high performance electronic devices. TAIYO YUDEN offers a broad lineup of small size, low profile, high capacitance value, and high reliability products from the initial materials used to development and production to meet customer needs.

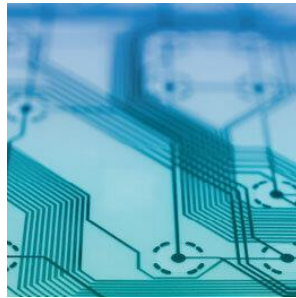


TAIYO YUDEN's multilayer ceramic capacitors are produced at locations in Japan and other Asian countries. They require advanced technologies and production systems to accurately layer several hundred dielectric sheets with a thickness of $1\ \mu\text{m}$ ($1/1000\ \text{mm}$ or approximately $1/100$ th the thickness of hair) or less. This section introduces the advantages of TAIYO YUDEN's multilayer ceramic capacitors.



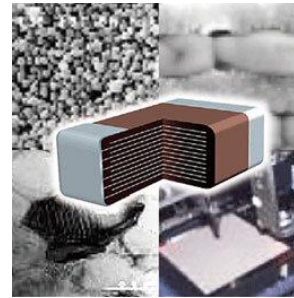
High technical capabilities and an abundant lineup

- High value: $\leq 1000\ \mu\text{F}$
- Small size: $\geq 0.25 \times 0.125\ \text{mm}$
- Low profile: $\geq 0.064\ \text{mm}$



Highly reliable products in small case size have been achieved with using all ceramic devices in power supply circuits

- Low ESR
- Low ESL



Uniform production process from material development to high accuracy printing and lamination technology

- Material technology
- Printing technology
- Lamination technology



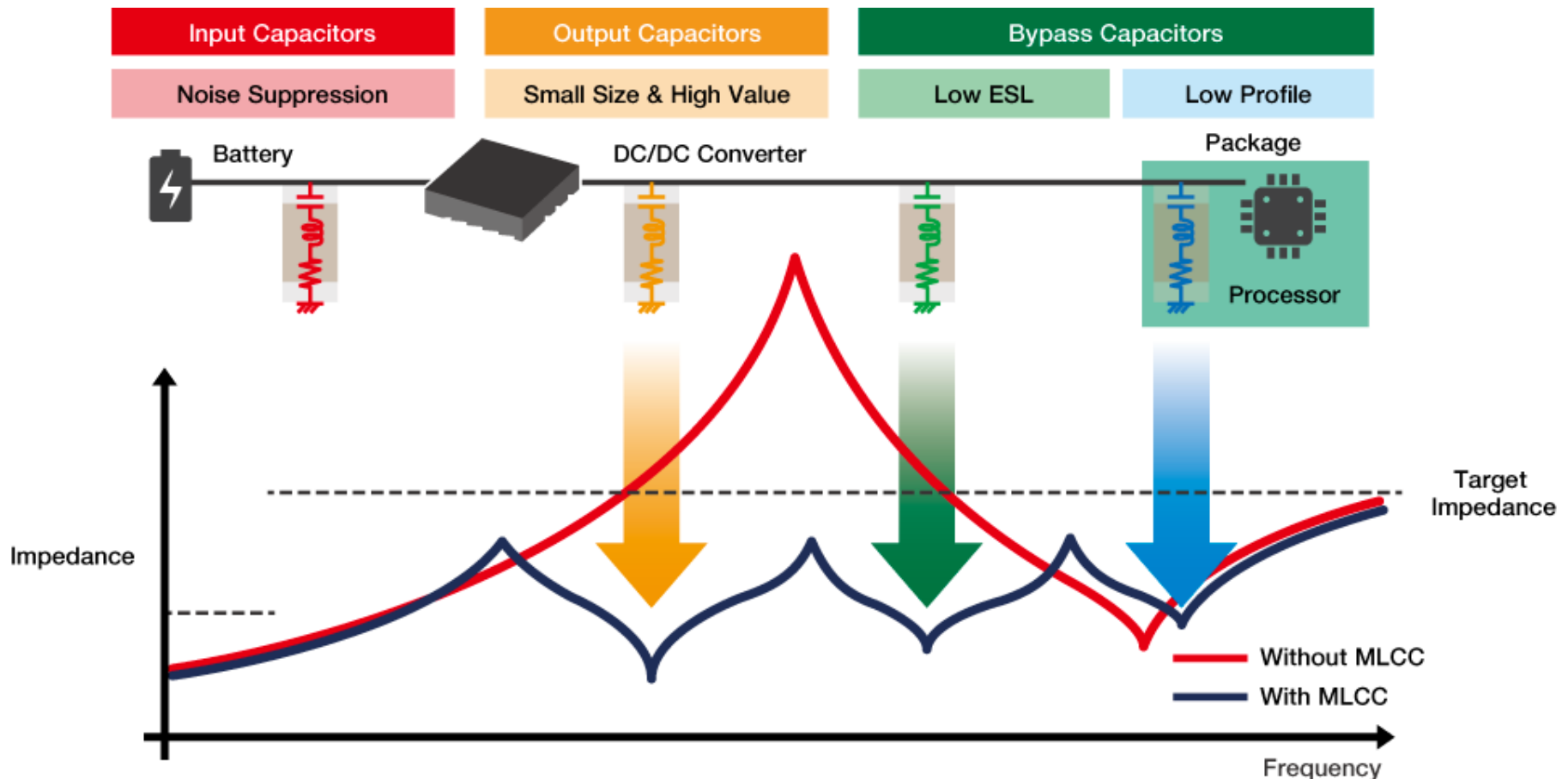
Deploying production bases in various places around the world to ensure a stable production system

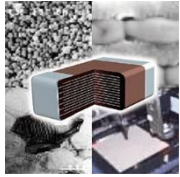
- Japan
- South Korea
- China
- Malaysia



Highly reliable products in small case size have been achieved with using all ceramic devices in power supply circuits

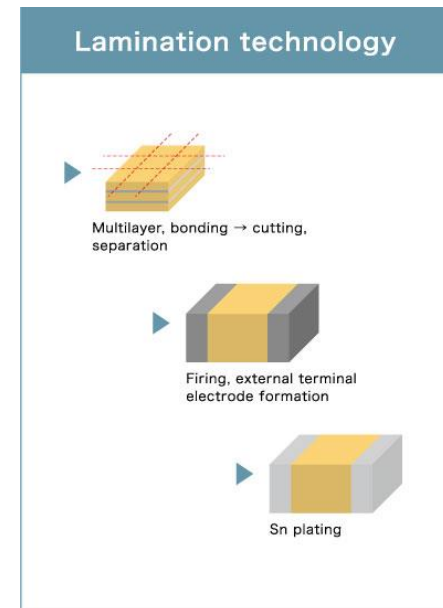
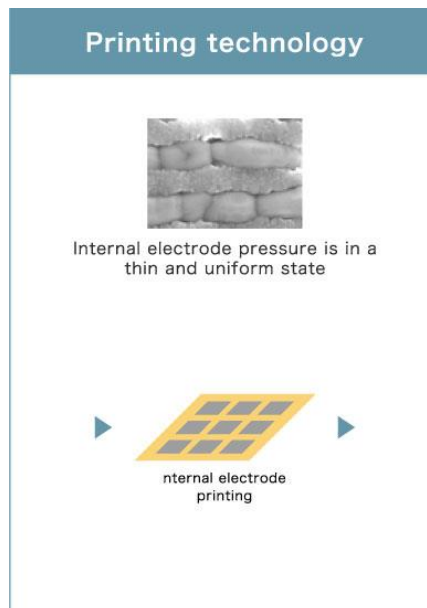
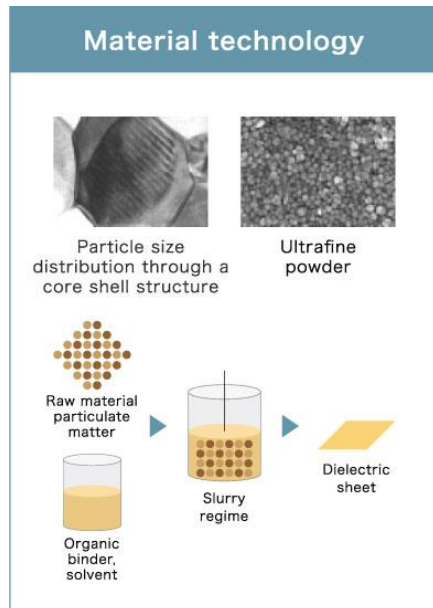
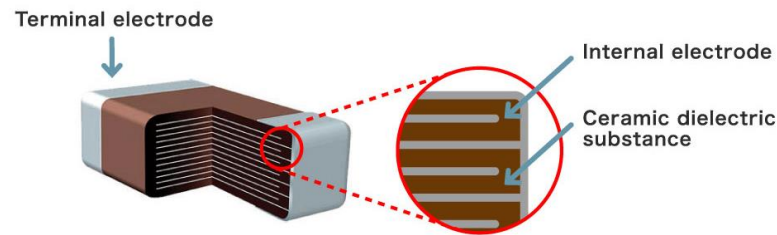
High-reliability and a reduced size can be achieved by utilizing multilayer ceramic capacitors with a lower ESR and ESL than electrolytic capacitors in power supply circuits.





Uniform production process from material development to high accuracy printing and lamination technology

Multilayer ceramic capacitors are ultra-small and low profile, using a multilayered structure which internally alternates ceramic and electrode layers. TAIYO YUDEN uses its strengths in material development for commercialization and similarly invests its technical capabilities into printing and lamination technologies, while continuing to develop high-quality and high-reliability multilayer ceramic capacitors.





Deploying production bases in various places around the world to ensure a stable production system

TAIYO YUDEN's multilayer ceramic capacitors are produced in Japan as well as Malaysia, South Korea, and China. We will continue to propose higher value added products to the market at a rapid pace through strategic site deployment close to the markets we serve and a global division of labor through mutual cooperation between those sites.



Niigata Prefecture, JAPAN

NIIGATA TAIYO YUDEN CO., LTD.



Gunma Prefecture, JAPAN

TAIYO YUDEN CO., LTD.
Tamamura Plant



SOUTH KOREA

KOREA KYONG NAM
TAIYO YUDEN CO., LTD.



CHINA

TAIYO YUDEN
(GUANGDONG) CO., LTD.



CHINA

TAIYO YUDEN
(CHANGZHOU) CO., LTD.



MALAYSIA

TAIYO YUDEN
(SARAWAK) SDN.BHD.