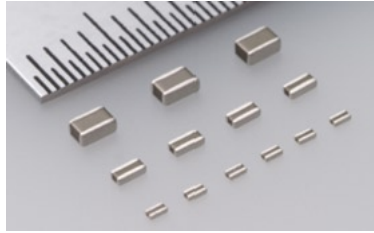


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Reverse-Geometry Multilayer Ceramic Capacitors in Smallest Size and Highest Capacitance

— Utilizing Taiyo Yuden's Thin-Layer and Narrow-Pitch Terminal Electrode Formation Technologies —



Taiyo Yuden has announced the release of the industry's smallest low ESL capacitor, in the EIA 0402 size ($1.0 \times 0.5 \times 0.3\text{mm}$). Moreover, the company has also released the industry's highest capacitance products in the EIA 0603 ($1.6 \times 0.8 \times 0.8\text{mm}$) and EIA 0805 sizes ($2.0 \times 1.25 \times 0.85\text{mm}$), to enter the low ESL capacitor market with nine types and three sizes of multilayer ceramic capacitors with reverse-geometry termination.

The maximum capacitance values achieved in each of these product sizes is $0.47\mu\text{F}$ in the EIA 0402 size, $4.7\mu\text{F}$ in the EIA 0603 size, and $10\mu\text{F}$ in the EIA 0805 size. In the EIA 0402 size, the smallest in the industry, the capacity of $0.47\mu\text{F}$ is almost double the maximum capacitance value seen in earlier products. The same improvement was achieved in the other sizes as well.

Production of this product line is set to commence in December 2005 at the Tamamura Plant (Tamamura Town, Sawa County, Gunma Prefecture), with an initial production of 5 million units per month. Further strengthening of production capacity is planned to be implemented by the fourth quarter of fiscal year 2006. Sample price for the EIA 0402 size is 15 yen, for the EIA 0603 size, 20 yen, and for the EIA 0805 size, 30 yen.

This product will be on display at the Taiyo Yuden booth for CEATEC Japan to be held starting October 4, 2005 at Makuhari Messe (Mihama-ku, Chiba city).

The CPUs used in personal computers and similar equipment are steadily increasing in clock speed, a trend that is boosting demand for further reductions in the ESL (Equivalent Series Inductance) value for decoupling capacitors that are needed for stable operation. While low ESL has been achieved in the past by placing capacitors in parallel circuits, this has necessitated utilization of a large number of capacitors that has led to circuit layout constraints and higher costs.

Taiyo Yuden took its expertise in size reduction and thin-layer technologies obtained in the development of multilayer ceramic capacitors, and then added advancements in terminal electrode formation, to successfully develop the reverse-geometry type in the EIA 0402 size. Use of this product will greatly reduce the number of capacitors required, allowing customers to build decoupling circuits at low cost. The new line-up of low ESL multilayer ceramic capacitors is expected to meet demand in the increasingly sophisticated personal computer and video game console markets.



The specifications for the new Reverse-Geometry Multilayer Ceramic Capacitors applications are as follows.

	Capacitance	Capacitance Tolerance	Temperature characteristics		Rated Voltage	L	W	T
			Capacitance Change	Temperature Range				
AWK105BJ474KP	0.47uF	±10%	±22%	-55~+105°C	4V	1.00 mm	0.50 mm	0.30 mm
AWK105BJ224KP	0.22uF	±10%	±22%	-55~+105°C	4V	1.00 mm	0.50 mm	0.30 mm
AWK105BJ104KP	0.10uF	±10%	±22%	-55~+105°C	4V	1.00 mm	0.50 mm	0.30 mm
AWK107BJ475MA	4.7uF	±20%	±22%	-55~+105°C	4V	1.60 mm	0.80 mm	0.80 mm
JWK107BJ225MV	2.2uF	±20%	±22%	-55~+125°C	6.3V	1.60 mm	0.80 mm	0.50 mm
JWK107BJ105MV	1.0uF	±20%	±22%	-55~+125°C	6.3V	1.60 mm	0.80 mm	0.50 mm
JWK212BJ106MD	10uF	±20%	±22%	-55~+105°C	6.3V	2.00 mm	1.25 mm	0.85 mm
JWK212BJ475KD	4.7uF	±10%	±22%	-55~+105°C	6.3V	2.00 mm	1.25 mm	0.85 mm
EWK212BJ105KD	1.0uF	±10%	±22%	-55~+125°C	16V	2.00 mm	1.25 mm	0.85 mm