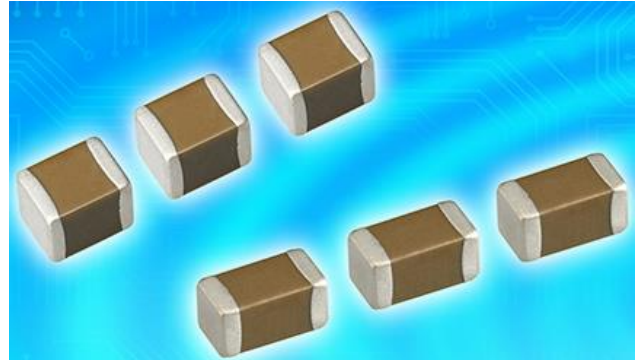


# The first commercially available X5R/X6S 330 $\mu$ F multilayer ceramic capacitor

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TAIYO YUDEN (U.S.A.) INC.'s high-capacity (over 100 $\mu$ F) multilayer ceramic capacitor line continues to grow in capacity and number. With the introduction of the first commercially available X5R/X6S 330 $\mu$ F-capacitance EIA 1210 size AMK325ABJ337MM (3.2 x 2.5 x 2.5mm), TAIYO YUDEN has improved capacitance by over 50% in the same size capacitor as compared to its product AMK325ABJ227MM (220 $\mu$ F capacitance).



High value MLCCs are designed to replace electrolytic capacitors and offer significant downsizing and better performance. They are intended for use in power supply circuits to smooth ripple current and reduce noise, especially in demanding or high frequency power circuits.

In addition to the 330 $\mu$ F EIA 1210 MLCC, Taiyo Yuden now offers the 150 $\mu$ F capacitance X5R, EIA 1206 size AMK316BBJ157ML (3.2 x 1.6 x 1.6mm). Both versions provide low ESR and low impedances at high frequencies. These capacitors further enhance the company's wide line up of high value (over 100 $\mu$ F) MLCC in case sizes EIA 1210, 1206 and 0805.

Taiyo Yuden in-house ceramic material development and material fabrication techniques enable the company to create smaller MLCCs that provide more reliable performance than electrolytic capacitors or than using multiple MLCCs.

Applications for high value MLCCs include information-related devices like PCs and servers, and all-in-one printers.

Production has begun at the company's Tamamura Plant in Gunma Prefecture, Japan at a production rate of one million units per month. Sample prices are \$1.50 per unit for the 330 $\mu$ F-capacitance EIA 1210 size AMK325ABJ337MM and \$0.80 per unit for the 150 $\mu$ F-capacitance EIA 1206 size AMK316BBJ157ML.

## Material fabrication techniques

Taiyo Yuden's proprietary micro-fabrication techniques precisely laminate MLCC layers using fine ceramic powder and uniform dielectric sheets; a process critical in achieving high performance capacitors over 100 $\mu$ F.

## Technology background

To improve device efficiency a large number of digital devices are now being provided with switching-type power supply circuits. Power supply circuits use combinations of high capacitance capacitors to smooth the output and ensure the stable operation of a device.

Generally, multilayer ceramic capacitors have a low ESR and superior frequency characteristics as compared to tantalum or aluminum electrolytic capacitors and are effective as smoothing capacitors for controlling the ripple current in increasingly high-frequency power circuits.

For more information, visit [www.t-yuden.com](http://www.t-yuden.com)