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**Taiyo Yuden: New Multilayer Choke Coil at Just 0.55mm,
Thinnest in the Industry**
For DC-DC Converters Used in Progressively Thinner Mobile Equipment



Taiyo Yuden announces a new multilayer choke coil, the CKP3216L (EIA 1206, 3.2 x 1.6 x 0.55mm) and the CKP3216M (3.2 x 1.6 x 0.70mm), used in DC-DC converters for mobile equipment (in both cases, the height represents a maximum value). CKP3216L, in particular, marks the advent of the thinnest multilayer choke coil in the industry for DC-DC converters.

Mobile equipment, in particular cell phones, is becoming progressively thinner. This trend has spread to the electronic components used in mobile equipment, and the choke coils used in DC-DC converters are no exception. Taiyo Yuden has consistently been at the forefront of the trend, having just announced in March 2005 the CKP3216 multilayer choke coil, with thickness of just 0.9mm.

However, with ever more functions planned for addition to mobile equipment in the future, demand for lower profile components, driven by thinner mobile equipment, is expected to continue. Reasoning that a lower profile choke coil is essential for facilitating the trend toward thinner equipment, Taiyo Yuden successfully launched low-profile multilayer choke coils with heights of just 0.55mm and 0.7mm while also maintaining choke coil performance characteristics.

Mass production of the CKP3216L and CKP3216M is set to begin at the Tamamura Plant (Tamamura Town, Sawa County, Gunma Prefecture) in October 2005. The sample price is 20 yen per unit. The company is capable of producing 3 million multilayer choke coils per month, a figure that includes the new product line.

To achieve this product, Taiyo Yuden improved its internal electrode printing technology, and successfully boosted the aspect ratio and thickened the internal conductor (increased the ratio of thickness to line width). The internal conductor thickness is double that of the previous generation of multilayer chip inductors (comparison with previous Taiyo Yuden products), for lower DC resistance. In addition, Taiyo Yuden used its own proprietary technology to prevent inductance drop while high current is applied, which is an essential characteristics for high current applications. The result was successful commercialization of the CKP3216L, a multilayer chip inductor achieves a thickness of 0.55mm and 0.5A high current (at 2.2μ H).

Taiyo Yuden has made full use of its capabilities as a supplier of both multilayer type inductors and wire-wound type inductors to provide products that optimally meet the varied demands of a diversifying market, and is moving ahead with development of a wide array of products for new markets.



The specifications for the new low profile multilayer chip inductor CKP3216L and CKP3216M for choke coil applications are as follows.(The size for all products is 3.2 x 1.6mm)

	Inductance [1MHz] (μ H)	DC Resistance (Ω)	Rated current (A)	Thickness (mm)
CKP3216M 2R7	2.7 μ H \pm 20%	0.18	0.5	0.70
CKP3216L 2R2	2.2 μ H \pm 20%	0.20	0.5	0.55