

For immediate release

TAIYO YUDEN Commercializes Multilayer Ceramic Capacitors with a Maximum Operating Temperature of 150°C

For automotive power trains with an increasing number of electronic control units such as engine ECUs

TOKYO, June 8, 2020—TAIYO YUDEN CO., LTD. announced today the commercialization of multilayer ceramic capacitors with an increased maximum operating temperature of 150°C. This product lineup is compatible with AEC-Q200, a reliability test qualification standard for automotive passive components.

We have sophisticated various types of elemental technologies nurtured by us to improve the temperature characteristics of X7R (operating temperature range: -55 to 125°C) in our conventional products to X8L (-55 to 150°C). These products are available in a wide assortment of dimensions, from the 1005 size (1.0 × 0.5 mm) to the 3225 size (3.2 × 2.5 mm).

The products will be used for decoupling or anti-noise parts in automotive power trains such as engines and transmissions.

Production of the multilayer ceramic capacitors commenced at the company's Tamamura Plant (Tamamura-machi, Sawa-gun, Gunma Prefecture, Japan), KOREA KYONG NAM TAIYO YUDEN CO., LTD. (Sacheon-si, Gyeongsangnam-do, Korea) starting from May 2020.

Technology Background

In recent years, electrification and electronification of automobiles have increasingly progressed in step with the proliferation of electric and hybrid vehicles. Under this situation, demands for higher reliability have also risen for multilayer ceramic capacitors that are used in such automotive electronic parts. EMC measures are required for such devices to remove external and internally generated noise to prevent malfunction. In addition, as devices increase in functionality and use higher-density packaging, the interior temperature also increases, requiring multilayer ceramic capacitors to withstand such harsh conditions.

In response this situation, TAIYO YUDEN sophisticated its elemental technologies to add automotive multilayer ceramic capacitors with an increased maximum temperature range of 150°C to its lineup.

TAIYO YUDEN will continue to further expand its product lineup to respond to market needs requiring high reliability.

■Application

Decoupling or anti-noise parts that can be used in automotive power trains such as engines and transmissions

■Product Lineup

Size	L [mm]	W [mm]	T [mm]	Rated voltage [V]	Capacitance [μ F]	Sample price [per unit]
1005	1.0 \pm 0.05	0.5 \pm 0.05	0.5 \pm 0.05	6.3~100	0.00022~0.1	20 yen
1608	1.6 \pm 0.1	0.8 \pm 0.1	0.8 \pm 0.1	6.3~100	0.001~0.47	30 yen
	1.6 +0.15/-0.05	0.8 +0.15/-0.05	0.8 +0.15/-0.05	50	0.1	
2012	2.0 \pm 0.1	1.25 \pm 0.1	1.25 \pm 0.1	10~50	0.0047~1.0	40 yen
3216	3.2 \pm 0.15	1.6 \pm 0.15	1.6 \pm 0.2	6.3~25	0.22~4.7	50 yen
3225	3.2 \pm 0.3	2.5 \pm 0.2	2.5 \pm 0.2	10~50	2.2~4.7	60 yen
			1.9 \pm 0.2	25	0.22~1.0	

Note: Products are tested based on the test conditions and methods defined in AEC-Q200. Please consult with TAIYO YUDEN for details of the product specifications and AEC-Q200 test results, etc., and please review and approve TAIYO YUDEN's product specifications before ordering.

TAIYO YUDEN CO., LTD. Product Inquiries: <https://www.yuden.co.jp/or/contact/>