

Multilayer ceramic chip capacitors

Portfolio of automotive-grade NP0 MLCCs expanded

- Industry's broadest portfolio in terms of voltage range and capacitance range
- Specified for up to +150 °C and suitable for harsh automotive environments
- Qualified to AEC-Q200

October 28, 2014

TDK Corporation has expanded its CGA series of automotive-grade MLCCs based on NP0 ceramics and now offers the industry's broadest portfolio of NP0 products in terms of voltage range and capacitance range. The new lineup of NP0 types, which feature a temperature coefficient of 0 and a tolerance of ± 30 ppm/K up to +150 °C, includes types rated voltages of 250 V to 630 V. The CGA series of NP0 MLCCs thus are now available with rated voltages from 50 V to 630 V and rated capacitances from 100 pF to 220 nF. The NP0 MLCCs feature a temperature range of -55 °C to +150 °C. The CGA series is qualified to AEC-Q200. Mass production will be launched in November 2014.

The extension of the existing range of NP0 MLCCs in case sizes EIA 0402 to 2220 (IEC 1005 to 5750) is based on TDK's comprehensive competence and experience in materials and multilayer technologies. Thanks to their nearly zero capacitance drift related to temperature and aging, these capacitors are suitable for demanding automotive applications requiring stable temperature characteristics over a wide range. They thus make it possible to achieve precisely the output as intended by the design.

The expanded series underscores TDK's leadership in terms of MLCC product configurations as well as voltage and capacitance ratings.*

* As of October 2014, according to TDK investigations

Glossary

- NP0 characteristics: temperature range -55 °C to +150 °C, temperature coefficient of 0 ± 30 ppm/K

Main applications

- Automotive electronic control units (ECUs) mounted in high-temperature environments such as the engine compartment
- All circuits where high reliability is required, such as time constant circuits, filter circuits, resonant circuits and snubber circuits

Main features and benefits

- Specified for up to +150 °C, suitable for harsh environments
- Broad product lineup for rated voltages from 50 V to 630 V
- Wide capacitance range from 100pF to 220nF
- Qualified to AEC-Q200

Key data

Series	Dimensions [mm]	Rated voltage [V]	Capacitance [pF ... nF]
CGA2	1.0 x 0.5	50 to 100	100 pF to 1 nF
CGA3	1.6 x 0.8	50 to 250	100 pF to 10 nF
CGA4	2.0 x 1.25	50 to 450	100 pF to 33 nF
CGA5	3.2 x 1.6	50 to 630	3.9 nF to 100 nF
CGA6	3.2 x 2.5	50 to 630	8.2 nF to 100 nF
CGA8	4.5 x 3.2	50 to 630	33 nF to 220 nF
CGA9	5.7 x 5.0	50 to 450	100 nF to 150 nF

About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio includes electronic components, modules and systems* marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2014, TDK posted total sales of USD 9.6 billion and employed about 83,000 people worldwide.

* The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites, inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors.

You can download this text and associated images from www.global.tdk.com/news_center/press/201410281501.htm.

Further information on the products can be found under http://product.tdk.com/capacitor/mlcc/en/documents/mlcc_automotive_hightemp_en.pdf.

Contacts for regional media

Region	Contact	Phone	Mail
Japan	Ms. Mari MIYAUCHI TDK Corporation Tokyo, Japan	+813 6852-7102	pr@jp.tdk.com
ASEAN	Ms. Jiang MAN Mr. Shota KANZAKI TDK Singapore (Pte) Ltd. Singapore	+65 6273 5022	asean.inquiry@sg.tdk.com
Greater China	Ms. Clover XU TDK China Co., Ltd. Shanghai, China	+86 21 61962307	pr@cn.tdk.com
Europe	Mr. Frank TRAMPNAU TDK Europe GmbH Duesseldorf, Germany	+49 211 9077 127	trampnau@eu.tdk.com
America	Ms. Sara M. LAMBETH TDK Corporation of America Irving, TX, USA	+1 972-409-4519	sara.lambeth@us.tdk.com