

Surge protection

Failsafe chip varistors for automotive battery lines

- Open Mode design
- Fulfilment of failsafe requirements according to VW standard VW 80808-1, 2020-03 edition
- Qualified according to AEC-Q200 and VW standard VW 80808-2, 2020-03 edition
- Reliable protection against transients according to ISO 7637-2

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TDK Corporation presents a new range of Open Mode chip varistors for electronic automotive assemblies that are directly connected to the battery. The new chip varistors offer reliable protection against transient surge voltages according to ISO 7637-2 and meet the failsafe requirements according to the VW standard VW 80808. Even when subject to excessive bending stress, short-circuits are avoided, which is particularly important for unswitched battery terminals (e.g. terminal 30).

The new surge protection components are designed for an operating voltage of 14 V_{RMS} or a maximum direct voltage of 16 V_{DC}. The three types of the B725*0G1140S862 series are designed for surge currents of 120 A, 200 A and 400 A, with each 8/20 µs. Depending on the surge current capability, the chip varistors are available in sizes EIA 0805, 1206 and 1210, and are suitable for a wide temperature range of -55°C to +150°C.

Main fields of application

- Automotive applications, which are directly connected to the battery

Main features and benefits

- Open Mode design
- Fulfilment of failsafe requirements according to VW standard VW 80808-1, 2020-03 edition
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Characteristics

Type	Ordering code	Operating voltage, max. [V]		Surge current, max. (8/20 μ s) [A]	Terminal voltage [V]
		V _{RMS}	V _{DC}		
CT0805S14BAUTOGOM_G	B72510G1140S862	14	16	120	42
CT1206S14BAUTOGOM_G	B72520G1140S862	14	16	200	40
CT1210S14BAUTOGOM_G	B72530G1140S862	14	16	400	40

About TDK Corporation

TDK Corporation is a world leader in electronic solutions for the smart society based in Tokyo, Japan. Built on a foundation of material sciences mastery, TDK welcomes societal transformation by resolutely remaining at the forefront of technological evolution and deliberately “Attracting Tomorrow.” It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK’s comprehensive, innovation-driven portfolio features passive components such as ceramic, aluminum electrolytic and film capacitors, as well as magnetics, high-frequency, and piezo and protection devices. The product spectrum also includes sensors and sensor systems such as temperature and pressure, magnetic, and MEMS sensors. In addition, TDK provides power supplies and energy devices, magnetic heads and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in automotive, industrial and consumer electronics, and information and communication technology. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2020, TDK posted total sales of USD 12.5 billion and employed about 107,000 people worldwide.

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