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**MTC as a solution provider for EMC and thermal**

**management in e-mobility applications**

In addition to a multitude of challenges, developers and manufacturers of electromobility solutions are faced with complex tasks, particularly in the areas of "electromagnetic compatibility" and "thermal management". This includes the entire vehicle and battery technology as well as the charging infrastructure. As one of the leading solution providers for EMC and thermal management, MTC Micro Tech Components GmbH has comprehensive industry knowledge and know-how with 30 years of experience.

**Customised EMC solutions for e-mobility applications**

In terms of electromagnetic compatibility, e-mobility places completely new demands on the automotive industry as well as the associated charging infrastructure. The coexistence of high-voltage (HV) and low-voltage (LV) electrical systems with spatially and electrically connected components requires consistent avoidance of electromagnetic interference. In the electric motor for drive and energy recovery as well as in the traction battery with corresponding charging technology, large electrical powers are converted that can lead to interference emissions in a broad frequency spectrum. For example, inverters and converters cause considerable electromagnetic interference in the HV on-board network, which can have a negative effect on sensitive electronic components of the LV on-board network via coupling paths.

MTC offers EMC shielding materials such as conductive foam or fabric and aluminum gaskets with a wide variety of material properties, sizes and shapes for these diverse applications. Thus, almost any conceivable challenge regarding electromagnetic interference can be implemented together with the customer. In addition, EMC metal parts, such as contact springs, enable gaps and distances between housing parts or printed circuit boards to be bridged so that electrical contacting is permanently and reliably ensured. These and other EMC components are available from MTC as standard or customized solutions, so that the individual requirements of the application can be optimally met.

**Thermal conductive materials for thermal management in electromobility**

The electric powertrain, battery and charging technology and numerous electrical control and regulation systems generate heat loss during operation that must be effectively dissipated from the respective component. Thermally conductive materials such as gap pads with excellent form modification or dispensable 1K/2K gap fillers ensure seamless thermal connection between heat source and heat sink. Insulating air gaps, unevenness, curvatures and tolerances are reliably closed and compensated. The optimized thermal management thus ensures the long-term reliability and performance of heat-sensitive electronics, components and modules. The silicone-based thermal management materials are also available as silicone-free variants. The team of experts at MTC Micro Tech Components GmbH also offers extensive consulting, prototyping and development support. In this way, the right EMC or thermal management solution can be found for every task and problem in close cooperation with the customer.

**For more information, please visit:**

[www.mtc.de](http://www.mtc.de)

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**Company profile MTC Micro Tech Components GmbH:**

**Specialised full-range supplier**

Reliable protection against electromagnetic radiation and against overheating of components and machines - MTC Micro Tech Components GmbH, headquartered in Dillingen (Bavaria), is specialised in the production and sale of innovative components for electromagnetic compatibility (EMC) and thermal management.

Since its foundation in 1992, the company has experienced steady growth and now operates internationally as an accomplished full-range supplier of EMC shielding materials and thermal management products. Comprehensive customer support, short response and delivery times as well as the greatest possible flexibility through its own in-house logistics are among MTC's core competencies.

Since October 2011, MTC has been part of the globally operating discoverIE Group plc, a leading international designer and manufacturer of customised electronics. MTC is an independent company within the group. Thanks to the synergies with the British group, MTC will continue to expand its international presence in the future.

**Customised individual solutions for the international market**

In addition to its headquarters in Dillingen, MTC also maintains a sales office in Hong Kong and production facilities in South Korea and Dillingen.

The extensive MTC product portfolio includes both standard and customized products manufactured to high quality standards. MTC customers benefit from professional consulting services and first-class service and support.

MTC supplies companies worldwide in all sectors, such as automation, automotive, avionics, information technology, medical technology, telecommunications, consumer electronics and renewable energies. The innovative products reliably protect customers' equipment and machinery from malfunctions caused by electromagnetic interference and from overheating.

**Corporate principles and social commitment**

The key source of the company's success is driven primarily by its very high level of customer orientation. That is why MTC attaches great importance to a trusting relationship with employees, customers and suppliers, characterized by reliability, loyalty and mutual respect.

The company’s success also requires increasing levels of social responsibility. With the production site in Dillingen in premises of the Regens-Wagner Foundation, MTC promotes the integration of disabled people into everyday working life. This is only one example of the company’s commitment to continuously improve its environmental, social and corporate governance performance.

MTC is certified according to ISO 9001 and ISO 14001 and meets the highest standards for an environmentally friendly business.