

Opening up New Vistas for Sustainable Society with TDK Products

Components made by TDK are found in products all around us, touching upon a wide range of fields: mobile phones and home information appliances, automobiles and rail transport equipment, energy systems for wind power and solar power generation, and much more. TDK's core technological expertise brings out the full potential of the source materials. By constantly improving the quality and performance of our electronic components, we open up new vistas and help to make bold visions a reality. We see this as our way of working towards a better world.

Energy

Creating, storing, converting, and distributing energy are essential tasks. TDK promotes the use and more widespread acceptance of clean, renewable energy sources such as solar power and wind power.

Neodymium magnets with superior characteristics

The TDK lineup offers materials with optimized properties for the respective application. This includes drive motors for hybrid electric vehicles, magnets for energy saving home appliance and industrial equipment motors, magnets for wind power generation systems and more.

■ Main applications
Wind power generators, industrial equipment motors, HEV/EV drive motors, electric power steering systems

High-capacitance aluminum electrolytic capacitors

These capacitors are designed for high capacitance and are especially suited for smoothing and noise suppression applications in power supplies. They are also for high-current applications in wind power generation systems and related products.

■ Main applications
Solar power, wind power

Compact AC-DC power supply for LED equipment

These power supplies for LED lighting systems not only feature highly compact dimensions, a low-profile form factor, and light weight, they also provide superior resistance against dust and water droplet. This makes them particularly suitable for outdoor LED lighting, LED sign boards and similar uses. The lineup includes a range of different types optimized for various applications.

■ Main applications
LED equipment (lighting, sign boards, etc.)

Smartphones

Smartphones and other mobile communication devices are creating a new culture of mobility. The amazingly small dimensions, light weight, and advanced functions of today's smartphones are made possible by an assortment of some 500 small chip components and modules.

Thin-film common mode filters

These noise suppression components make use of sophisticated thin-film technology. They are found in interfaces such as USB and HDMI* that can transfer large volumes of video and audio data at high speeds and with superb quality.

*HDMI: A digital video and audio input/output interface standard for home appliances and audiovisual equipment

■ Main applications
Mobile communication devices, home information appliances



Multilayer ceramic chip capacitors

These chip type capacitors support high circuit integration. Alternating layers of dielectric ceramics and internal electrodes contribute to small dimensions and high capacitance ratings.

■ Main applications
Various electronic devices (in power supply circuitry, signal circuitry, for noise countermeasure, etc.)



SAW filters/RF modules for high-frequency circuits

SAW filters make use of the Surface Acoustic Wave effect to pass only signals for a specific frequency. RF modules allow shrinking the dimensions of mobile communication devices even further.

■ Main applications
Mobile communication devices, home information appliances



Eco Cars

Eco cars including hybrid electric vehicles (HEVs) and electric vehicles (EVs) are the wave of the future. Electronic components from TDK designed for key applications in such vehicles provide high performance and outstanding reliability, which in turn makes driving safer and more pleasant.

* See also "Highlight 1 - TDK's Technological Innovations: Creating Solutions for Global Issues" starting on page 13.

High performance thin-walled anisotropic ferrite magnets

Ferrite magnets are widely used in motors and similar, offering superb cost effectiveness. TDK's Magnets provide industry-leading performance, even with some types that are less than 2 mm thick, utilizing an innovative and proprietary manufacturing method.

■ Main applications
Compact DC motors for automobiles, motors for home appliances and industrial equipment, and various other motors



DC-DC converter for HEV/EV applications

The high voltage of the main battery bank in a hybrid electric vehicle must be converted to a lower voltage to drive other electric and electronic equipment of the car. DC-DC converters are power devices used to charge an auxiliary battery for this purpose. Their increased conversion efficiency greatly contributes to fuel economy.

■ Main applications
HEVs, EVs, plug-in HEVs



e-mobility / high-accuracy current sensor

This sensor detects both the charge current and the discharge current of automotive batteries and contributes to power savings. A Hall element on a doughnut shaped magnetic core allows highly accurate measurements in a non-contact configuration.

■ Main applications
HEVs, EVs, plug-in HEVs

