



For Immediate Release

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TDK Develops New Magnetic Sheets with Ultra-High Magnetic Permeability

Achieving Highest Magnetic Permeability ($\mu' = 180$) for Noise Suppression

TOKYO JAPAN, March 19, 2009 —TDK Corporation announced today that it recently developed a new magnetic sheet for noise suppressing applications that achieves both magnetic permeability¹ at the industry's highest levels and excellent fire resistance. Mass production for the **IRJ17** series is scheduled to begin in this month in Japan.

The new magnetic sheets make use of TDK's strengths in materials technology, combine original soft magnetic materials² with polymer materials, and employ a magnetic powder created through the use of innovative powder composition and formation methods. The magnetic powder was developed by TDK to achieve outstanding noise suppressing effects at the industry's best levels at low frequencies ($\mu' = 180$) while maintaining fire resistance (UL94V-0). Applications for the IRJ17 include mobile phones, PC, digital still cameras, digital video cameras, and other electronic devices.

In recent years, numerous types of electronic devices such as digital cameras and mobile phones have become more compact and slimmer even as they adopt more functions. In conjunction with these changes, their internal circuit boards have become increasingly integrated and noise countermeasures must exhibit excellent control effects over a wide range of frequencies from low to high. Noise countermeasures are implemented through board circuit designs and various electronic components mounted on the boards, but it is also necessary to control unexpected and unwanted radiated noise.

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The use of magnetic sheets made of soft magnetic materials that are capable of absorbing noise and converting it to thermal energy can prevent noise from leaking outside devices and prevent harmful effects on other boards and components from internal reflection.

The new IRJ17 magnetic sheets meet these market needs by exhibiting outstanding attenuation effects on noise reflected from ICs and flexible printed circuit boards over a wide frequency range from low frequencies above 5 MHz to high frequencies. The noise control effects of IRJ17 magnetic sheets include the industry's highest magnetic permeability ($\mu' = 180$) and magnetic characteristics that are approximately 1.7 times better than those of earlier TDK products. With regard to the fire resistance requirements of electronic components, IRJ17 magnetic sheets have obtained certification under the American UL94V-0 standard.³ The new sheets are also RoHS Directive compliant.

The launch of these new magnetic sheets will make possible noise countermeasures finely tailored to customer needs over a broad range of frequencies from high to low in combination. Additional TDK magnetic sheets that are currently available include IRJ09 and IRJ04. For more information on this product please email TDK_IRJ@tdktca.com.

Glossary

1. Magnetic permeability: The rate of increase in magnetization when a magnetic field is applied to a magnetic object; an indication of the ease of absorption of magnetic force lines by a magnetic object. Magnetic permeability is expressed by μ (mu).
2. Soft magnetic materials: Magnetic materials with low coercive force and high magnetic permeability.
3. UL94V-0: A fire resistance (UL-94) standard adopted by Underwriters Laboratories Inc. of the United States.

Main Characteristics

Recommended frequency range	5 MHz – 3 GHz
Operating temperature range	-40°C – +85°C
Magnetic permeability(μ')1MHz	180
Fire resistance	UL94V-0
Thickness (mm)	0.1, 0.2, 0.3, and 0.4

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About TDK:

TDK Corporation of America (TCA) was established in 1974 in California as the sales and marketing force for electronic components in North America and Latin America. TCA has grown into a sales force of fifteen offices in the U.S. and a headquarter office located in Mount Prospect, Illinois. The combined efforts of sales, marketing and technical personnel have built the TDK name as a respected leader in the industry. Known for reliability and expertise, TDK strives to respond to all customers' needs anywhere in North America. For additional information on TDK products visit our web site at www.tdk.com.

TDK Corporation (NYSE: TDK), a leading global electronics company based in Japan. The company was established in 1935 to commercialize "ferrite," a key material in electronics and magnetics. TDK's current product line includes ferrite materials, electronic components, factory automation solutions, anechoic chambers & test systems, magnetic heads for hard disk drives (HDD) and power supplies. Net sales in FY08 were US\$8.7 billion.

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