

PRESS RELEASE



FOR IMMEDIATE RELEASE

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TDK introduces noise-suppressing magnetic sheets with ultra-high magnetic permeability

TDK Corporation announced today the release of a new magnetic sheet, the Flexield IRJ17, for noise suppressing applications that achieves both magnetic permeability¹ at the industry's highest levels and excellent fire resistance.

A flexible sheet of Flexield IRJ17 as thin as 0.1mm can absorb noise at frequencies between 5MHz and 3GHz. The product's ultra-high magnetic permeability means that more unwanted radiation can be blocked with less material, providing more effective noise suppression in space-constrained applications such as mobile phones.

The product of advanced research by TDK in materials technology, the new Flexield magnetic sheets combine original soft magnetic and polymer materials, and employ a magnetic powder created through the use of innovative powder composition and formation methods.

As a result of these developments, the new IRJ17 magnetic sheets exhibit outstanding attenuation effects on noise reflected from ICs and flexible printed circuit boards over a wide frequency range from low (above 5MHz) 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.

The Flexield IRJ17 is expected to find uses in numerous types of electronic devices such as digital cameras and mobile phones that have become more compact and slimmer at the same time as they provide 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. 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 launch of the new IRJ17 magnetic sheets will make possible noise countermeasures finely tailored to customer needs over a broad range of frequencies from high to low. The IRJ17 extends TDK's range of magnetic sheets, which also includes the IRJ09 and IRJ04 products.

IRJ17 magnetic sheets are available now in production volumes. More information about TDK's range of magnetic noise-suppression sheets can be found at www.tdk-components.eu.

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).

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

About TDK Electronics Europe GmbH

TDK is a recognised world leader in the design and manufacture of electronic components. This position has been achieved through dedication to the development of new materials, new products, advanced manufacturing processes, improvements in product quality and exceptional customer service. Founded in Japan in 1935, TDK was created with the aim of becoming the world's first manufacturer of the magnetic material ferrite. TDK's European operations, head quartered in Duesseldorf, Germany, includes 7 regional sales offices, 2 R&D laboratories and 2 manufacturing centres. From these bases and with the support of a wide distribution network, TDK provides more than just access to components and technology.

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