

## Inductors

# TDK launches inductors for small power systems in TWS devices

- New inductors feature a rated current of 500 mA in a small-sized component with an inductance of 2.2  $\mu\text{H}$
- TDK's unique magnetic shield structure reduces magnetic flux leakage

March 23, 2021

TDK Corporation (TSE: 6762) has developed the PLEA67 Series of inductors for use in true wireless stereo (TWS)\* devices. Mass production will begin in March 2021.

This new series of inductors is intended for use in power circuits incorporated into wireless earphones used with smartphones, portable players and similar devices. In addition to an impressive rated current of 500 mA, the PLEA67 series of inductors also boasts one of the industry's smallest external sizes, measuring at 1.0 mm (L) x 0.6 mm (W) x 0.7 mm (H), respectively. The compact external size facilitates space saving in circuit board design and helps reduce the weight of earphones, providing users with mobility comfort. Their magnetic shield structure reduces magnetic flux leakage to pave the way for high density implementation. TDK's original structure design and newly developed materials are used in its thin-film process to achieve a rated current of 500 mA, despite a high inductance of 2.2  $\mu\text{H}$  for a size of 1.0 mm (L) x 0.6 mm (W) x 0.7 mm (H).

TWS devices are finding increasing applications with smartphones, smartwatches and other wearables and in turn, the demand for electronic components in this domain is rising. TDK will continue to broaden its lineup of inductor products with higher efficiency and smaller sizes to meet the demand of customers and the growing market.

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### Glossary

- TWS: Stands for True Wireless Stereo and refers to a technology for delivering stereo sound through completely cable-free earbuds. It is used for playback on smartphones, portable players and other devices.

### Main applications

- TWS earphones and hearing aids, Communication module (GPS, Bluetooth, etc.)

### Main features and benefits

- Compact size of 1.0 mm (L) x 0.6 mm (W) x 0.7 mm (H) to facilitate space saving
- Rated current of 500 mA attained in the compact size for space saving
- Flux leakage reduction structure opening the way for high density implementation.

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## Key data

Type	Inductance [ $\mu$ H] @1MHz	DC resistance[m $\Omega$ ] Max./typ.	Rated current	
			Isat.[mA] Max./typ.	Itemp [mA] Max./typ.
PLEA67BBA2R2M-1PT00	2.2 $\pm$ 20%	620 / 510	500 / 600	500 / 800

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## 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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