

SAW components

Sample kit with SAW filters for advanced metering applications

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TDK-EPC, a group company of TDK Corporation, is presenting a new sample kit with SAW filters for advanced metering infrastructure (AMI) systems. The components are designed for center frequencies of between 315 and 2450 MHz. The sample kit contains filters with broadband and narrowband characteristics. The broadband types have a useful bandwidth from 0.6 to 97 MHz, and the narrowband types from 0.1 to 0.6 MHz. The insertion loss is between only 1.4 and 3.3 dB, depending on the type.

The filters are offered in rugged and hermetically sealed ceramic packages. They can be operated at temperatures between -45 and +125 °C. The dimensions of the package are 3 x 3 x 1 mm³. Typical applications of these filters are wireless systems for measuring, collecting and analyzing usage data. This allows gas, water and electricity meters to be read simply and cost-effectively and tariff information can be sent to the meters.

Glossary

- SAW filters: Surface acoustic wave filters, which are used in applications such as mobile phones, TV tuners and automotive electronics.
- AMI: Advanced metering infrastructure, which refers to systems for recording meter readings wirelessly as well as sending tariff information to the meters. In contrast to traditional automatic meter reading (AMR) systems, AMI enables two-way communications with the meter.
- Center frequency: The center of the filter passband.
- Insertion loss: The filter loss at the frequency to be transmitted.

Main applications

- Advanced metering infrastructure in systems for the wireless recording of usage data.

Main features and benefits

- Center frequency range between 315 and 2450 MHz
- Low insertion loss between 1.4 and 3.3 dB
- Extensive range of operating temperatures between -45 and +125 °C
- Rugged and hermetically sealed ceramic packages

Main characteristics

Series/ Parameter	Bandwidth [MHz]	Insertion loss [dB]
Broadband filters	0.6 to 97	1.4 to 2.9
Narrowband filters	0.1 to 0.6	1.9 to 3.3

About TDK-EPC Corporation

TDK-EPC Corporation (TDK-EPC), a TDK group company, is a leading manufacturer of electronic components, modules and systems headquartered in Tokyo, Japan. TDK-EPC has emerged from the combination of the electronic components business of TDK and the EPCOS Group and markets its products under the product brands, TDK and EPCOS.

The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites and inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors. With this product spectrum TDK-EPC offers a broad range of products and solutions of outstanding value from a single source and focuses on demanding markets in the areas of information and communication technology and automotive, industrial and consumer electronics. The company has design and manufacturing locations and sales offices in Asia, Europe, and in North and South America.

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