

Acoustic components

MEMS microphone with outstanding SNR

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TDK Corporation has extended its range of EPCOS MEMS microphones with the new C928 type. This microphone is distinguished by its particularly high signal-to-noise ratio (SNR) of 66 dB(A) in the frequency range between 20 Hz and 20 kHz. It is thus particularly well suited for demanding applications in smartphones. The high SNR significantly improves the audio quality of distant sound sources, for instance when using the speakerphone or recording videos.

In conventional microphones, an improved signal-to-noise ratio usually leads to a sharp rise in nonlinear distortions at high sound pressures. Thanks to the innovative design of the C928 MEMS microphone, a distortion factor of only one percent is produced even at a sound level of 131 dB. That makes it equally suitable for recording extremely loud sound sources.

Besides its excellent acoustic properties, the C928 features a compact size with a footprint of 3.35 mm x 2.5 mm and an insertion height of only 1 mm. Thanks to its symmetrical output, the new MEMS microphone offers high immunity to interference. Its operating voltage is between 1.6 V and 3.6 V, and its maximum power consumption is 140 μ A.

Main applications

- Smartphones and other mobile electronics devices

Main features and benefits

- Very high signal-to-noise ratio of 66 dB(A)
- Low distortion of 1 percent even at sound levels of 131 dB
- Compact dimensions of 3.35 mm x 2.5 mm x 1 mm

About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio includes electronic components, modules and systems* marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2013, TDK posted total sales of USD 9.1 billion and employed about 80,000 people worldwide.

* The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites, inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors.

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