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Application Note – Wireless Speakers

Cellergy Supercapacitors Improve Wireless Microphone's Audio Quality

Description of Application

A wireless microphone is a microphone without a physical cable connecting it directly to the sound recording or amplifying equipment with which it is associated. The wireless microphone has a battery-powered radio transmitter in the microphone body, which transmits the audio signal from the microphone by radio waves to a receiver unit, which recovers the audio.

The Problem

Wireless microphone is used in extremely vibrational environments. Singers or presenters who hold the microphone are mostly move a lot on the stage hence the microphone must be robust & reliable to maintain interference-free performance. The battery is located in battery-holder which is soldered to the transmission and membrane units. Mechanically the battery-holder is unable to keep the battery in its very same position under high vibrations and this can lead to a sudden power down event that causes discontinuation of the audio transmission between the microphone and the bases station.

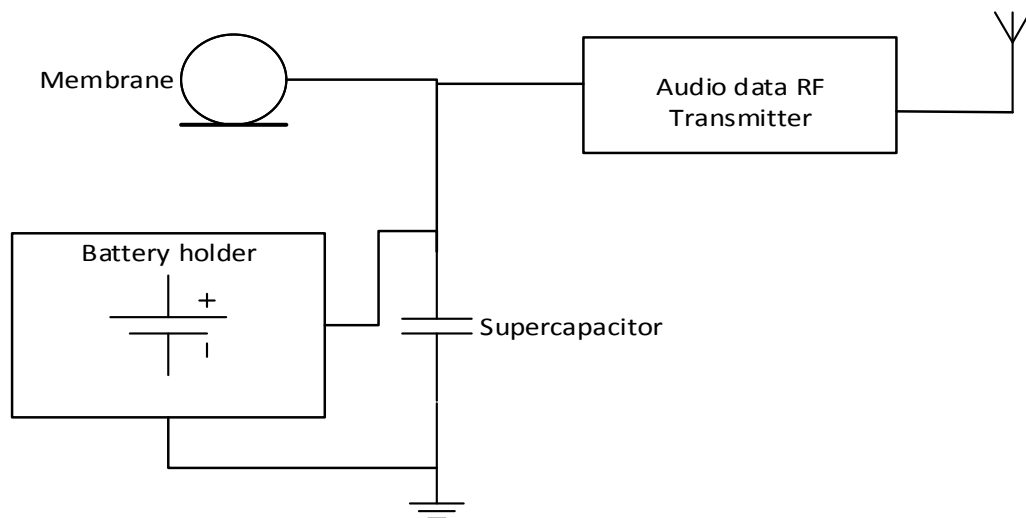
Cellergy Solution

The scheme below shows a typical design including Cellergy supercapacitor (SC). SC is **soldered** to the battery-holder output in order to provide a back-up power to the microphone in case of a sudden battery failure. The battery charges the SC and in case of a mechanical failure that leads to a power down event the SC delivers the required power for the audio transmission. This assures maximum reliability and interference-free operation.



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Wireless Microphone scheme



Thanks to our unique production process, we are able to manufacture small footprints that fit in limited-space devices.

For more detailed information about our offering visit our website: www.cellergycap.com



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