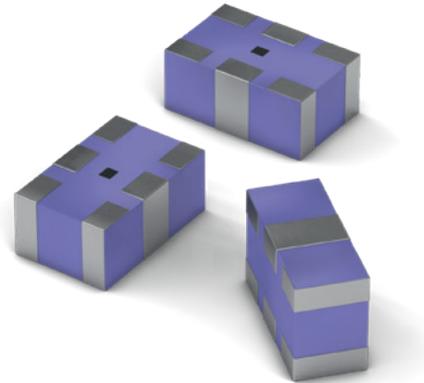


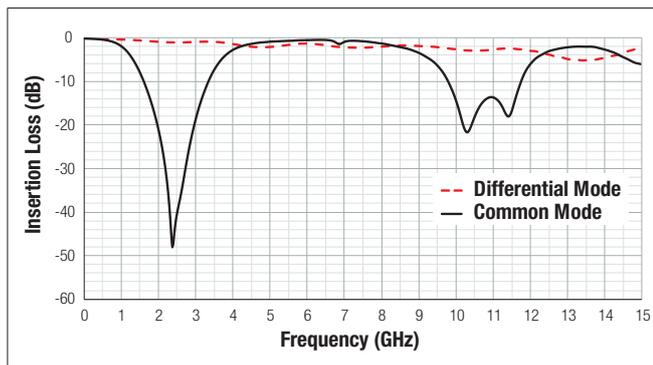
WE-CCMF (Ceramic Common Mode Filter)

WE-CCMF is a next generation common mode filter/choke that blocks common mode noise (up to 30 dB) at Bluetooth, Wi-Fi and LTE frequencies, while allowing the high speed differential/data signal to pass through unharmed.



What is Modern Day Noise?

We are well familiar with the concept of common mode noise and differential signalling when it comes to conventional common mode chokes/filters. But WE-CCMF is designed for next generation digital and wireless communications systems which have very specific requirements when it comes to common mode suppression frequencies.



With the increase in switching speeds in digital circuits like USB 3.1/3.2 or HDMI 2.0, the common-mode noise is being generated at higher and higher frequencies. The common mode noise, generated due to high speed switching, can introduce unwanted radiation into the RF/wireless communication system and result in interference with Wi-Fi or Bluetooth antennas at 2450 MHz.

This interference of common mode noise with antenna signals is also known as antenna de-sense. As the name suggests, de-sense is the loss in ability of an antenna to sense/receive useful signals due to a large amount of noise at the same frequency, resulting in the communication quality drop or, in worst case, a total communication failure.

Applications

WE-CCMF is the sensitivity improvement solution for Wi-Fi/Bluetooth devices at 2450 MHz. This means potentially the filter can be used in any wireless communication device (smart phones, tablets, notebooks, IoT enabled devices ...) which has high speed differential signaling channels such as:

- USB 3.1/3.2
- HDMI 1.4/2.0
- Thunderbolt 2/3
- SATA 3.0/3.2
- PCI-e 2.0/3.0/4.0
- Display Port 1.3/1.4

