



DID YOU KNOW? VISHAY IHLE SERIES E-FIELD SHIELDED INDUCTORS

Did you know that any time there is current flowing in a conductor, two fields are created? They're the "B" field, or magnetic field, and the "E" field, or electrostatic field (Figure 1).

Both the B and E fields can produce radiated emissions causing EMI. Composite inductors like the IHLP® series are very good at suppressing radiated B-fields and conducted EMI due to their magnetically shielded construction. But all inductors radiate an E-field that must be suppressed by placing a metal shield (Faraday cage) over the circuit.

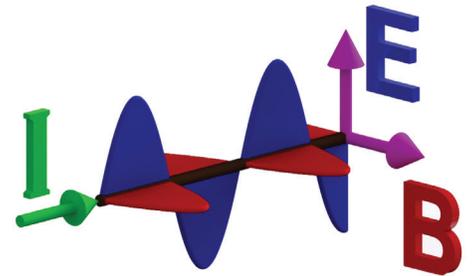


Figure 1

The Vishay Inductors Division now offers IHLP® series inductors with an integrated E-field shield, eliminating the need for separate shielding. These IHLE devices are available in both commercial and Automotive Grade versions, and are offered in a variety of case sizes with more to come (Figure 2).

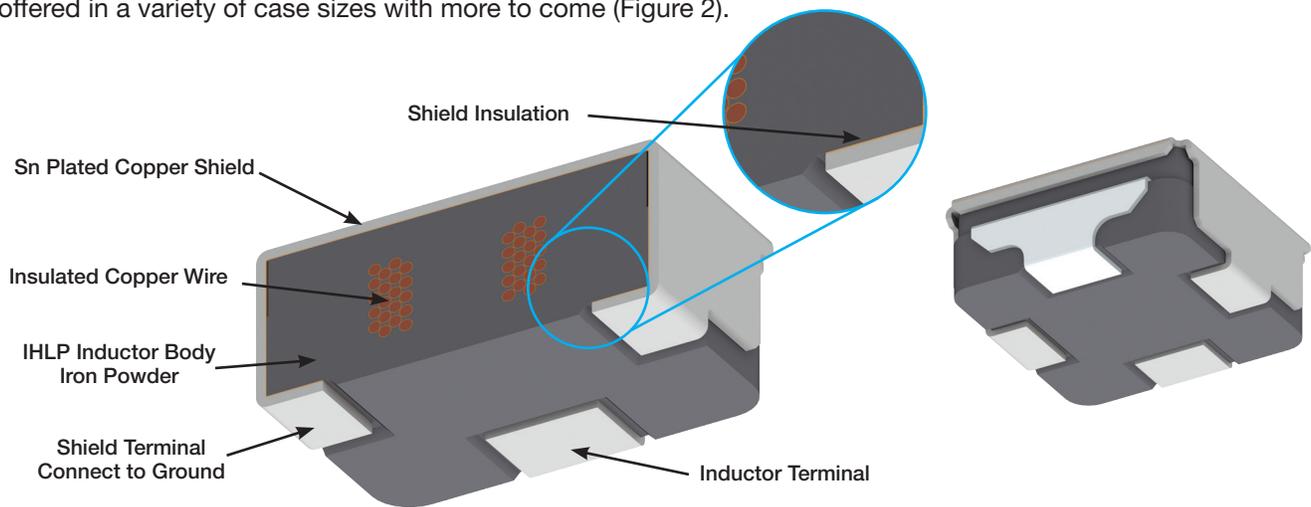


Figure 2

The Vishay IHLE inductors eliminate the need to cover the whole circuit in an expensive Faraday cage. The integrated shield stops the radiation of the E-field and virtually eliminates the B-field.

Specifically, the IHLE series shielding attenuates the E-field, providing up to 20 dB of electrical field reduction at 1 cm when the integrated shield is connected to ground.

Automotive applications for the IHLE series include engine and transmission control units; diesel injection drivers; DC/DC converters for entertainment and navigation systems; and noise suppression for the motors that run windshield wipers, power seats, power mirrors, heating and ventilation blowers, HID lighting, and more.

The IHLE series is manufactured with high temperature material, has an operating temperature range from -55°C to $+155^{\circ}\text{C}$, and is AEC-Q200 qualified.

