

Shielded IFDC and Semi-Shielded IFSC Series Ferrite Inductors Now Available in 2020DE, 3232DB, and 5050HZ Case Sizes, Offer Saturation Currents to 14 A, Inductance to 1 mH, and 40 % Lower DCR Than Previous-Generation Devices

Product Benefits:

- Provide enhanced efficiency while lowering costs
- Offered in 2020DE, 3232DB, and 5050HZ case sizes
- Shielded and semi-shielded inductors available
- Enhanced performance:
 - Operating temperatures to +125 °C
 - Operating voltages of 120 V
 - DCR down to 6 mΩ
 - Saturation currents to 14 A
 - Maximum inductance to 1 mH
- Utilize efficient manufacturing techniques
- Feature a simple bobbin style wirewound construction
- Minimize EMI and crosstalk to nearby components (IFDC-5050HZ)



Market Applications:

- Energy storage, noise suppression, and filtering in DC/DC converters and LC filters for:
 - Battery-powered consumer electronics
 - Entertainment devices such as televisions, sounds bars, and audio and gaming systems
 - General computing equipment such as desktops, monitors, and scanners
 - Household appliances

The News:

Vishay Intertechnology announces that it has extended its shielded IFDC and semi-shielded IFSC series of wirewound, surface-mount ferrite inductors with three new devices in the 2020DE, 3232DB, and 5050HZ case sizes. Offering improved performance at a lower cost than previous-generation ferrite solutions, the Vishay Dale inductors combine higher inductance and current ratings with lower DCR for computer and consumer applications.

- The IFDC-5050HZ, IFSC-2020DE-01, and IFSC-3232DB-01 match the performance of previous-generation ferrite solutions — but with a 60 % smaller size
 - The inductors offer enhanced performance compared to similar-sized devices, including higher operating temperatures and operating voltages
 - The IFSC-2020DE-01 and IFSC-3232DB-01 feature 40 % lower DCR, while the IFDC-5050HZ supports higher saturation currents
- While other high performance inductors typically offer a maximum inductance of 100 μH, the IFSC and IFDC series devices achieve significantly higher values
 - By utilizing efficient manufacturing techniques and a simple bobbin style wirewound construction, the inductors provide improved quality and reliability at a three times lower cost



- With the enhanced efficiency enabled by their low loss ferrite core construction and low DCR, the devices are ideal for use as energy storage inductors in a variety of DC/DC conversion topologies found in consumer electronics and battery-powered devices
- The IFSC and IFDC families make cost-effective solutions in differential LC filter topologies for noise suppression on power lines
- The IFDC-5050HZ features a coil enclosed in an exterior magnetic material that contains stray flux, minimizing EMI and crosstalk to nearby components

The Key Specifications:

Part number	IFSC-2020DE-01	IFSC-3232DB-01	IFDC-5050HZ
Shielding	Semi-shielded	Semi-shielded	Shielded
Size (mm)	6.0 x 6.0 x 4.5	8.0 x 8.0 x 4.2	12.3 x 12.3 x 8.0
Inductance (μH)	1 to 470	0.9 to 100	3.3 to 1000
DCR typ. ($m\Omega$)	14 to 2000	6 to 290	11 to 1640
Heat rating current (A)	0.35 to 4.2	1 to 7.8	0.9 to 10.3
Saturation current (A)⁽¹⁾	0.4 to 8.5	1 to 11	0.9 to 14
SRF typ. (MHz)	2 to 110	6 to 85	1.3 to 35

⁽¹⁾DC current (A) that will cause L0 to drop approximately 30 %

Availability:

Samples and production quantities of the IFSC and IFDC inductors are available now, with lead times of 10 to 12 weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?34083> (IFSC-2020DE-01)

<http://www.vishay.com/ppg?34607> (IFSC-3232DB-01)

<http://www.vishay.com/ppg?34612> (IFDC-5050HZ)

Contact Information:

THE AMERICAS

Kevin Palmer

Kevin.Palmer@vishay.com

EUROPE

Jens Walther

Jens.Walther@vishay.com

ASIA/PACIFIC

Jacky Kim

Jacky.Kim@vishay.com