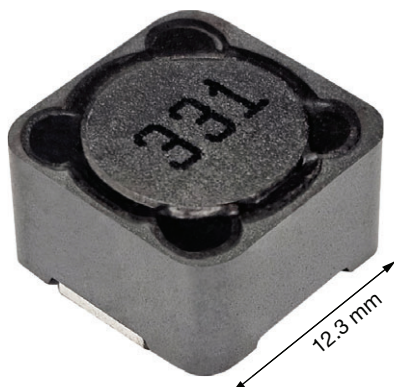


## Shielded SMD Power Inductor



### FEATURES

- 12.3 mm x 12.3 mm x 8.0 mm SMD package
- Shielded ferrite construction
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### APPLICATIONS

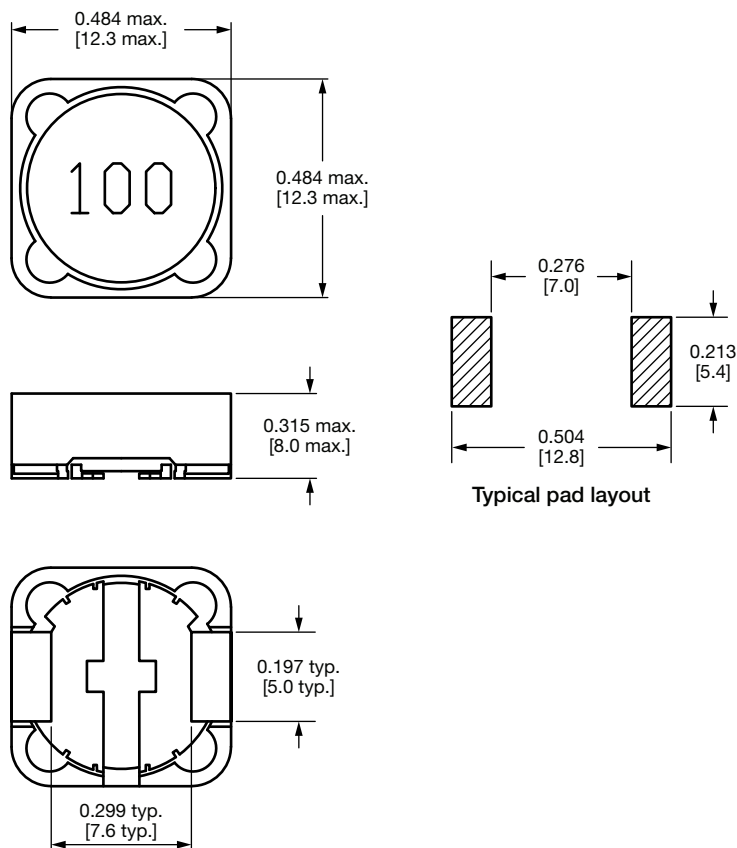
- DC/DC power supplies
- LCD displays
- Noise suppression and filtering
- Lighting drivers

### STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER      | L <sub>0</sub> INDUCTANCE<br>AT 0 A<br>(μH) | DCR TYP.<br>25 °C<br>(mΩ) | DCR MAX.<br>25 °C<br>(mΩ) | HEAT RATING<br>CURRENT<br>DC TYP.<br>(A) <sup>(1)</sup> | SATURATION CURRENT<br>DC TYP.<br>(A) <sup>(2)</sup> |           | SRF TYP.<br>(MHz) |
|------------------|---------------------------------------------|---------------------------|---------------------------|---------------------------------------------------------|-----------------------------------------------------|-----------|-------------------|
|                  |                                             |                           |                           |                                                         | 20 % DROP                                           | 30 % DROP |                   |
| IFDC5050HZER3R3N | 3.3                                         | 11                        | 13                        | 10.3                                                    | 7.8                                                 | 14        | 35                |
| IFDC5050HZER4R7N | 4.7                                         | 13                        | 16                        | 10.1                                                    | 6.8                                                 | 13        | 30                |
| IFDC5050HZER6R1N | 6.1                                         | 16                        | 18                        | 9.6                                                     | 6.6                                                 | 11        | 24                |
| IFDC5050HZER6R8N | 6.8                                         | 18                        | 23                        | 8.7                                                     | 6.4                                                 | 10        | 21                |
| IFDC5050HZER100M | 10                                          | 20                        | 25                        | 7.8                                                     | 5.4                                                 | 8.4       | 17                |
| IFDC5050HZER150M | 15                                          | 23                        | 27                        | 7.1                                                     | 4.5                                                 | 6.8       | 13                |
| IFDC5050HZER180M | 18                                          | 30                        | 39                        | 6.6                                                     | 3.9                                                 | 6.7       | 12                |
| IFDC5050HZER220M | 22                                          | 40                        | 43                        | 6.3                                                     | 3.6                                                 | 5.8       | 11                |
| IFDC5050HZER270M | 27                                          | 44                        | 46                        | 5.7                                                     | 3.4                                                 | 5.4       | 10                |
| IFDC5050HZER330M | 33                                          | 60                        | 65                        | 5.1                                                     | 3                                                   | 4.8       | 9.5               |
| IFDC5050HZER390M | 39                                          | 69                        | 73                        | 4.5                                                     | 2.75                                                | 4.4       | 8.5               |
| IFDC5050HZER470M | 47                                          | 80                        | 100                       | 4.1                                                     | 2.5                                                 | 4.1       | 7.5               |
| IFDC5050HZER560M | 56                                          | 105                       | 110                       | 3.6                                                     | 2.35                                                | 3.6       | 7                 |
| IFDC5050HZER680M | 68                                          | 132                       | 140                       | 3.2                                                     | 2.1                                                 | 3.4       | 6.5               |
| IFDC5050HZER820M | 82                                          | 150                       | 160                       | 2.95                                                    | 1.95                                                | 2.86      | 5                 |
| IFDC5050HZER101M | 100                                         | 165                       | 220                       | 2.6                                                     | 1.7                                                 | 2.7       | 4.5               |
| IFDC5050HZER121M | 120                                         | 200                       | 250                       | 2.4                                                     | 1.6                                                 | 2.6       | 4.3               |
| IFDC5050HZER151M | 150                                         | 240                       | 280                       | 2.15                                                    | 1.42                                                | 2.15      | 4.1               |
| IFDC5050HZER181M | 180                                         | 300                       | 350                       | 1.9                                                     | 1.3                                                 | 2.05      | 4                 |
| IFDC5050HZER221M | 220                                         | 320                       | 390                       | 1.75                                                    | 1.16                                                | 1.9       | 3.4               |
| IFDC5050HZER271M | 270                                         | 400                       | 560                       | 1.6                                                     | 1.06                                                | 1.6       | 3.1               |
| IFDC5050HZER331M | 330                                         | 560                       | 640                       | 1.5                                                     | 0.95                                                | 1.45      | 2.9               |
| IFDC5050HZER391M | 390                                         | 620                       | 700                       | 1.4                                                     | 0.88                                                | 1.4       | 2.7               |
| IFDC5050HZER471M | 470                                         | 755                       | 980                       | 1.25                                                    | 0.79                                                | 1.3       | 2.2               |
| IFDC5050HZER561M | 560                                         | 876                       | 1070                      | 1.1                                                     | 0.73                                                | 1.12      | 2                 |
| IFDC5050HZER681M | 680                                         | 1300                      | 1460                      | 1.0                                                     | 0.67                                                | 1.1       | 1.7               |
| IFDC5050HZER821M | 820                                         | 1422                      | 1640                      | 0.9                                                     | 0.6                                                 | 0.9       | 1.4               |
| IFDC5050HZER102M | 1000                                        | 1640                      | 1820                      | 0.9                                                     | 0.55                                                | 0.9       | 1.3               |

#### Notes

- All test data is referenced to 25 °C ambient
- Test condition: 100 kHz, 0.25 V for 6.8 μH and below, and 1 kHz, 0.25 V for 10 μH and above
- Operating temperature range -40 °C to +125 °C
- Rated operating voltage = 120 V
- <sup>(1)</sup> DC current (A) that will cause an approximate ΔT of 40 °C
- <sup>(2)</sup> DC current (A) that will cause L<sub>0</sub> to drop approximately 20 % and 30 %

**DIMENSIONS** in inches [millimeters]

**DESCRIPTION**

|                    |                              |                              |              |                                |
|--------------------|------------------------------|------------------------------|--------------|--------------------------------|
| <b>IFDC-5050HZ</b> | <b>4.7 <math>\mu</math>H</b> | <b><math>\pm 30</math> %</b> | <b>ER</b>    | <b>e3</b>                      |
| MODEL              | INDUCTANCE VALUE             | INDUCTANCE TOLERANCE         | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

**GLOBAL PART NUMBER**

|                |                    |                    |                   |                                  |
|----------------|--------------------|--------------------|-------------------|----------------------------------|
| <b>I F D C</b> | <b>5 0 5 0 H Z</b> | <b>E R</b>         | <b>4 R 7</b>      | <b>N</b>                         |
| PRODUCT FAMILY | SIZE               | PACKAGE CODE       | IMPEDANCE VALUE   | INDUCTANCE TOLERANCE             |
|                |                    | ER = tape and reel | 4R7 = 4.7 $\mu$ H | M = $\pm 20$ %<br>N = $\pm 30$ % |



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