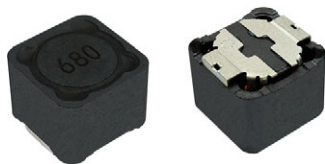




## Ferrite Power Inductor, Shielded Drum Core



### LINKS TO ADDITIONAL RESOURCES



Product Page

### ELECTRICAL SPECIFICATIONS

#### Operating temperature:

-40 °C to +105 °C (temperature rise included)

#### Resistance to solder heat:

255 °C for 10 s (2 times max. through reflow)

### FEATURES

- 12.5 mm x 12.5 mm x 10.0 mm max. SMD package
- Shielded drum core ferrite construction for reduced leakage flux
- Inductance range: 1  $\mu$ H to 1200  $\mu$ H
- 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
- Noise suppression and filtering

### STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER      | L <sub>0</sub> INDUCTANCE<br>( $\mu$ H) | INDUCTANCE<br>TOLERANCE<br>(%) | DCR MAX.<br>(m $\Omega$ ) | HEAT RATING CURRENT<br>DC TYP.<br>(A) <sup>(1)</sup> |
|------------------|-----------------------------------------|--------------------------------|---------------------------|------------------------------------------------------|
| IFDC5050JZER1R0N | 1.0                                     | 30                             | 6                         | 11.00                                                |
| IFDC5050JZER1R8N | 1.8                                     | 30                             | 8                         | 10.20                                                |
| IFDC5050JZER2R2N | 2.2                                     | 30                             | 9                         | 9.50                                                 |
| IFDC5050JZER3R3N | 3.3                                     | 30                             | 10                        | 9.00                                                 |
| IFDC5050JZER4R7N | 4.7                                     | 30                             | 12                        | 8.50                                                 |
| IFDC5050JZER5R6N | 5.6                                     | 30                             | 14                        | 8.00                                                 |
| IFDC5050JZER6R8N | 6.8                                     | 30                             | 15                        | 7.90                                                 |
| IFDC5050JZER8R2N | 8.2                                     | 30                             | 17                        | 7.30                                                 |
| IFDC5050JZER100M | 10                                      | 20                             | 18                        | 6.50                                                 |
| IFDC5050JZER120M | 12                                      | 20                             | 22                        | 6.30                                                 |
| IFDC5050JZER150M | 15                                      | 20                             | 32                        | 5.80                                                 |
| IFDC5050JZER180M | 18                                      | 20                             | 35                        | 5.50                                                 |
| IFDC5050JZER220M | 22                                      | 20                             | 38                        | 5.20                                                 |
| IFDC5050JZER270M | 27                                      | 20                             | 40                        | 5.00                                                 |
| IFDC5050JZER330M | 33                                      | 20                             | 52                        | 4.40                                                 |
| IFDC5050JZER390M | 39                                      | 20                             | 66                        | 4.20                                                 |
| IFDC5050JZER470M | 47                                      | 20                             | 72                        | 3.80                                                 |
| IFDC5050JZER560M | 56                                      | 20                             | 90                        | 3.40                                                 |
| IFDC5050JZER680M | 68                                      | 20                             | 102                       | 3.00                                                 |
| IFDC5050JZER820M | 82                                      | 20                             | 112                       | 2.80                                                 |
| IFDC5050JZER850M | 85                                      | 20                             | 125                       | 2.60                                                 |
| IFDC5050JZER101M | 100                                     | 20                             | 135                       | 2.50                                                 |
| IFDC5050JZER121M | 120                                     | 20                             | 170                       | 2.30                                                 |
| IFDC5050JZER151M | 150                                     | 20                             | 190                       | 2.20                                                 |
| IFDC5050JZER181M | 180                                     | 20                             | 250                       | 1.90                                                 |
| IFDC5050JZER221M | 220                                     | 20                             | 315                       | 1.70                                                 |
| IFDC5050JZER271M | 270                                     | 20                             | 410                       | 1.50                                                 |
| IFDC5050JZER331M | 330                                     | 20                             | 450                       | 1.40                                                 |
| IFDC5050JZER391M | 390                                     | 20                             | 600                       | 1.30                                                 |
| IFDC5050JZER471M | 470                                     | 20                             | 820                       | 1.20                                                 |
| IFDC5050JZER561M | 560                                     | 20                             | 900                       | 1.10                                                 |
| IFDC5050JZER681M | 680                                     | 20                             | 1200                      | 1.00                                                 |
| IFDC5050JZER821M | 820                                     | 20                             | 1320                      | 0.85                                                 |
| IFDC5050JZER102M | 1000                                    | 20                             | 1350                      | 0.78                                                 |
| IFDC5050JZER122M | 1200                                    | 20                             | 1400                      | 0.75                                                 |

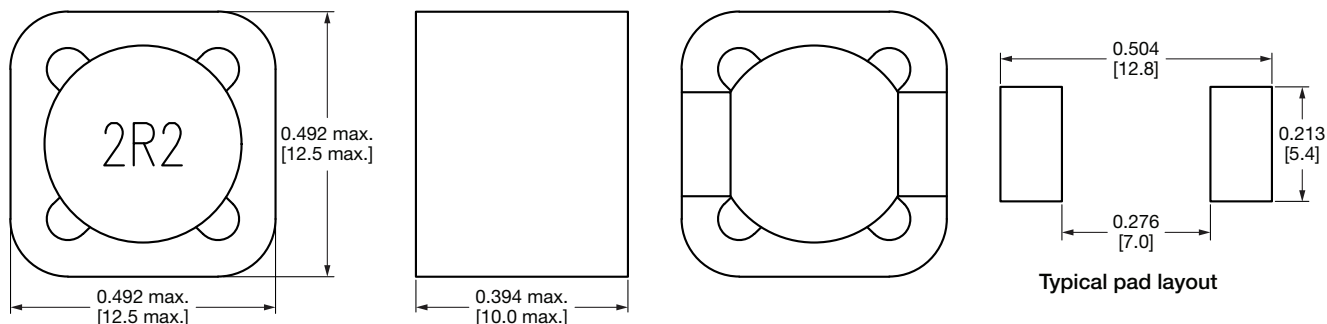
#### Notes

- All test data is referenced to 25 °C ambient
- Test condition: 100 kHz, 0.3 V for 8.2  $\mu$ H and below, and 1 kHz, 0.3 V for 10  $\mu$ H and above
- Storage condition: -40 °C to +105 °C (on board); and -10 °C to +40 °C and < 70 % RH (in component packaging)

<sup>(1)</sup> DC current (A) that will cause an approximate  $\Delta T$  of 40 °C or cause L<sub>0</sub> to drop by 35 %, whichever is lower



**DIMENSIONS** in inches [millimeters]



**DESCRIPTION**

|                   |                              |                               |              |                                |
|-------------------|------------------------------|-------------------------------|--------------|--------------------------------|
| <b>IFDC5050JZ</b> | <b>2.2 <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 J Z</b> | <b>E R</b>                   | <b>2 R 2</b>             | <b>N</b>                                         |
| PRODUCT FAMILY | SIZE               | PACKAGE CODE                 | INDUCTANCE VALUE         | INDUCTANCE TOLERANCE                             |
|                |                    | <b>ER</b> =<br>tape and reel | <b>2R2</b> = 2.2 $\mu$ H | <b>M</b> = $\pm 20 \%$<br><b>N</b> = $\pm 30 \%$ |



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