

IDC5020ER100M Datasheet



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| | |
|------------------------------|---|
| DiGi Electronics Part Number | IDC5020ER100M-DG |
| Manufacturer | Vishay Dale |
| Manufacturer Product Number | IDC5020ER100M |
| Description | FIXED IND 10UH 3.9A 38 MOHM SMD |
| Detailed Description | 10 μ H Unshielded Drum Core, Wirewound Inductor 3.9 A 38mOhm Max Nonstandard |



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DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

IDC5020ER100M

Series:

IDC-5020

Type:

Drum Core, Wirewound

Inductance:

10 μ H

Current Rating (Amps):

3.9 A

Shielding:

Unshielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

100 kHz

Package / Case:

Nonstandard

Size / Dimension:

0.510" L x 0.370" W (12.95mm x 9.40mm)

Manufacturer:

Vishay Dale

Product Status:

Active

Material - Core:

Ferrite

Tolerance:

\pm 20%

Current - Saturation (Isat):

3.8A

DC Resistance (DCR):

38mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-40°C ~ 125°C

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.205" (5.21mm)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.4000

Moisture Sensitivity Level (MSL):

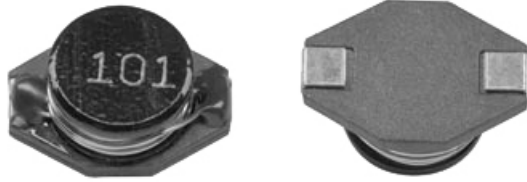
1 (Unlimited)

ECCN:

EAR99



High Current, Surface-Mount Inductors - Non-Shielded



ELECTRICAL SPECIFICATIONS

Inductance Range: 1.0 μH to 1000 μH , tested at 0.1 V_{RMS}

Inductance Tolerance: 20 %, tighter tolerance available upon request

Operating Temperature: -40 °C to +125 °C

Resistance to Solder Heat: 260 °C for 10 s

FEATURES

- High energy storage
- Low resistance
- Tape and reel packaging for automatic handling
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

MECHANICAL SPECIFICATIONS

Core: ferrite

Wire: enamelled copper wire

Base: LCP

Terminals: nickel bronze

Adhesive: epoxy resin

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | |
|------------------------------------|------------------------------|------------|------------------------|-----------------------|----------------------|----------------------|
| PART NUMBER | INDUCTANCE (μH) | TOLERANCE | TEST FREQUENCY L (kHz) | DCR MAX. (Ω) | I_{SAT} (A) | I_{RMS} (A) |
| IDC5020ER1R0M | 1.0 | $\pm 20\%$ | 100 | 0.009 | 9.0 | 6.8 |
| IDC5020ER1R5M | 1.5 | $\pm 20\%$ | 100 | 0.010 | 8.0 | 6.4 |
| IDC5020ER2R2M | 2.2 | $\pm 20\%$ | 100 | 0.012 | 7.0 | 6.1 |
| IDC5020ER3R3M | 3.3 | $\pm 20\%$ | 100 | 0.015 | 6.4 | 5.4 |
| IDC5020ER4R7M | 4.7 | $\pm 20\%$ | 100 | 0.018 | 5.4 | 4.8 |
| IDC5020ER6R8M | 6.8 | $\pm 20\%$ | 100 | 0.027 | 4.6 | 4.4 |
| IDC5020ER100M | 10 | $\pm 20\%$ | 100 | 0.038 | 3.8 | 3.9 |
| IDC5020ER150M | 15 | $\pm 20\%$ | 100 | 0.046 | 3.0 | 3.1 |
| IDC5020ER220M | 22 | $\pm 20\%$ | 100 | 0.085 | 2.6 | 2.7 |
| IDC5020ER330M | 33 | $\pm 20\%$ | 100 | 0.10 | 2.0 | 2.1 |
| IDC5020ER470M | 47 | $\pm 20\%$ | 100 | 0.14 | 1.6 | 1.8 |
| IDC5020ER680M | 68 | $\pm 20\%$ | 100 | 0.20 | 1.4 | 1.5 |
| IDC5020ER101M | 100 | $\pm 20\%$ | 100 | 0.28 | 1.2 | 1.3 |
| IDC5020ER151M | 150 | $\pm 20\%$ | 100 | 0.40 | 1.0 | 1.0 |
| IDC5020ER221M | 220 | $\pm 20\%$ | 100 | 0.61 | 0.8 | 0.8 |
| IDC5020ER331M | 330 | $\pm 20\%$ | 100 | 1.02 | 0.6 | 0.6 |
| IDC5020ER471M | 470 | $\pm 20\%$ | 100 | 1.27 | 0.5 | 0.5 |
| IDC5020ER681M | 680 | $\pm 20\%$ | 100 | 2.02 | 0.4 | 0.4 |
| IDC5020ER102M | 1000 | $\pm 20\%$ | 100 | 3.00 | 0.3 | 0.3 |

Notes

- Inductance drop = 10 % typ. at I_{SAT}
- $\Delta T = 15\text{ }^\circ\text{C}$ typ. at I_{RMS}

| DIMENSIONS in inches [millimeters] | | | | | | | | |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | | | | | | |
| A (Max.) | B (Max.) | D (Max.) | E | F | G | H | I | J |
| 0.510 [12.95] | 0.370 [9.40] | 0.205 [5.21] | 0.100 [2.54] | 0.100 [2.54] | 0.300 [7.62] | 0.115 [2.92] | 0.290 [7.37] | 0.110 [2.79] |

**DESCRIPTION**

| | | | | |
|-----------------|-----------------------------|------------------------------|--------------|--------------------------------|
| IDC-5020 | 10 μH | $\pm 20\%$ | ER | e3 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER

| | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|--|---|---|--|---|---|---|---|---|
| <table border="1"> <tr><td>I</td><td>D</td><td>C</td></tr> </table> PRODUCT FAMILY | I | D | C | <table border="1"> <tr><td>5</td><td>0</td><td>2</td><td>0</td></tr> </table> SIZE | 5 | 0 | 2 | 0 | <table border="1"> <tr><td>E</td><td>R</td></tr> </table> PACKAGE CODE | E | R | <table border="1"> <tr><td>1</td><td>0</td><td>0</td></tr> </table> INDUCTANCE VALUE | 1 | 0 | 0 | <table border="1"> <tr><td>M</td></tr> </table> TOL. | M |
| I | D | C | | | | | | | | | | | | | | | |
| 5 | 0 | 2 | 0 | | | | | | | | | | | | | | |
| E | R | | | | | | | | | | | | | | | | |
| 1 | 0 | 0 | | | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | | | | | |



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