

# Inductors

Epoxy Conformal Coated, Axial Leaded



| STANDARD ELECTRICAL SPECIFICATIONS |               |        |                        |                            |                 |                       |
|------------------------------------|---------------|--------|------------------------|----------------------------|-----------------|-----------------------|
| IND. (μH)                          | TOL.          | Q MIN. | TEST FREQ. L & Q (MHz) | SELF-RES. FREQ. MIN. (MHz) | DCR MAX. (Ohms) | RATED DC CURRENT (mA) |
| 0.10                               | ± 5 %, ± 10 % | 30     | 25.2                   | 280                        | 0.085           | 1400                  |
| 0.12                               | ± 5 %, ± 10 % | 30     | 25.2                   | 280                        | 0.085           | 1350                  |
| 0.15                               | ± 5 %, ± 10 % | 30     | 25.2                   | 280                        | 0.095           | 1270                  |
| 0.18                               | ± 5 %, ± 10 % | 30     | 25.2                   | 280                        | 0.12            | 1200                  |
| 0.22                               | ± 5 %, ± 10 % | 40     | 25.2                   | 280                        | 0.15            | 1150                  |
| 0.27                               | ± 5 %, ± 10 % | 40     | 25.2                   | 260                        | 0.15            | 1110                  |
| 0.33                               | ± 5 %, ± 10 % | 40     | 25.2                   | 260                        | 0.15            | 1110                  |
| 0.39                               | ± 5 %, ± 10 % | 40     | 25.2                   | 220                        | 0.17            | 1000                  |
| 0.47                               | ± 5 %, ± 10 % | 40     | 25.2                   | 200                        | 0.17            | 1000                  |
| 0.56                               | ± 5 %, ± 10 % | 40     | 25.2                   | 180                        | 0.17            | 950                   |
| 0.68                               | ± 5 %, ± 10 % | 40     | 25.2                   | 160                        | 0.18            | 900                   |
| 0.82                               | ± 5 %, ± 10 % | 40     | 25.2                   | 140                        | 0.18            | 900                   |
| 1.0                                | ± 5 %, ± 10 % | 40     | 25.2                   | 135                        | 0.18            | 815                   |
| 1.2                                | ± 5 %, ± 10 % | 40     | 7.96                   | 135                        | 0.18            | 740                   |
| 1.5                                | ± 5 %, ± 10 % | 40     | 7.96                   | 130                        | 0.20            | 700                   |
| 1.8                                | ± 5 %, ± 10 % | 40     | 7.96                   | 125                        | 0.23            | 655                   |
| 2.2                                | ± 5 %, ± 10 % | 40     | 7.96                   | 80                         | 0.25            | 630                   |
| 2.7                                | ± 5 %, ± 10 % | 40     | 7.96                   | 80                         | 0.28            | 595                   |
| 3.3                                | ± 5 %, ± 10 % | 40     | 7.96                   | 70                         | 0.30            | 575                   |
| 3.9                                | ± 5 %, ± 10 % | 40     | 7.96                   | 65                         | 0.32            | 555                   |
| 4.7                                | ± 5 %, ± 10 % | 40     | 7.96                   | 45                         | 0.35            | 530                   |
| 5.6                                | ± 5 %, ± 10 % | 40     | 7.96                   | 40                         | 0.40            | 500                   |
| 6.8                                | ± 5 %, ± 10 % | 40     | 7.96                   | 30                         | 0.45            | 470                   |
| 8.2                                | ± 5 %, ± 10 % | 40     | 7.96                   | 28                         | 0.56            | 425                   |
| 10                                 | ± 5 %, ± 10 % | 40     | 7.96                   | 22                         | 0.72            | 370                   |
| 12                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 20                         | 0.80            | 350                   |
| 15                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 16                         | 0.88            | 335                   |
| 18                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 15                         | 1.0             | 315                   |
| 22                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 13                         | 1.2             | 285                   |
| 27                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 11                         | 1.35            | 270                   |
| 33                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 10                         | 1.50            | 255                   |
| 39                                 | ± 5 %, ± 10 % | 40     | 2.52                   | 9.5                        | 1.70            | 240                   |
| 47                                 | ± 5 %, ± 10 % | 50     | 2.52                   | 8.5                        | 2.30            | 205                   |
| 56                                 | ± 5 %, ± 10 % | 50     | 2.52                   | 7.5                        | 2.60            | 195                   |
| 68                                 | ± 5 %, ± 10 % | 50     | 2.52                   | 6.5                        | 2.90            | 185                   |
| 82                                 | ± 5 %, ± 10 % | 50     | 2.52                   | 6.0                        | 3.20            | 175                   |
| 100                                | ± 5 %, ± 10 % | 50     | 2.52                   | 5.5                        | 3.70            | 165                   |
| 120                                | ± 5 %, ± 10 % | 60     | 0.796                  | 5.4                        | 3.80            | 160                   |
| 150                                | ± 5 %, ± 10 % | 60     | 0.796                  | 4.75                       | 4.90            | 150                   |
| 180                                | ± 5 %, ± 10 % | 60     | 0.796                  | 4.35                       | 5.0             | 140                   |
| 220                                | ± 5 %, ± 10 % | 60     | 0.796                  | 4.0                        | 6.50            | 130                   |
| 270                                | ± 5 %, ± 10 % | 60     | 0.796                  | 3.7                        | 7.5             | 120                   |
| 330                                | ± 5 %, ± 10 % | 60     | 0.796                  | 3.4                        | 9.5             | 100                   |
| 390                                | ± 5 %, ± 10 % | 60     | 0.796                  | 2.8                        | 10.5            | 95                    |
| 470                                | ± 5 %, ± 10 % | 60     | 0.796                  | 2.56                       | 17.5            | 90                    |
| 560                                | ± 5 %, ± 10 % | 60     | 0.796                  | 2.35                       | 18.5            | 85                    |
| 680                                | ± 5 %, ± 10 % | 60     | 0.796                  | 2.0                        | 20.0            | 75                    |
| 820                                | ± 5 %, ± 10 % | 60     | 0.796                  | 1.60                       | 23.7            | 65                    |
| 1000                               | ± 5 %, ± 10 % | 50     | 0.796                  | 1.15                       | 30.0            | 60                    |

**FEATURES**

- High performance ferrite core is used in this epoxy conformally coated choke which allows for inductance values to 1000 μH
- Axial lead type, small lightweight design
- Special magnetic core structure contributes to high Q and self-resonant frequencies
- Treated with epoxy resin coating for humidity resistance to ensure long life
- Heat resistant adhesives


**RoHS COMPLIANT**
**ELECTRICAL SPECIFICATIONS**
**Inductance Range:** 0.1 μH to 1000 μH

**Inductance Tolerance:** ± 10 % from 0.1 μH to 1000 μH standard, ± 5 % optional

**Operating Temperature Range:** - 20 °C to + 105 °C

**Dielectric Strength:** 250 V RMS

**MECHANICAL SPECIFICATIONS**
**Terminal Strength:** Pull = 5 pounds. Twist = 360 °C x 3

**Protection:** Epoxy uniform roll coated

**Leads:** Tinned copper

**ENVIRONMENTAL SPECIFICATIONS**
**Maximum Temperature Rise:** + 20 °C

| DIMENSIONS in inches [millimeters] |             |             |              |             |
|------------------------------------|-------------|-------------|--------------|-------------|
|                                    |             |             |              |             |
| MODEL                              | A (Max.)    | B (Max.)    | C (Max.)     | D (Max.)    |
| IRF-24                             | 0.157 [4.0] | 0.118 [3.0] | 0.394 [10.0] | 0.020 [0.5] |

| DESCRIPTION     |                               |                                   |                       |                                  |
|-----------------|-------------------------------|-----------------------------------|-----------------------|----------------------------------|
| IRF-24<br>MODEL | 6.8 μH<br>INDUCTANCE<br>VALUE | ± 10 %<br>INDUCTANCE<br>TOLERANCE | ER<br>PACKAGE<br>CODE | e2<br>JDEC LEAD FREE<br>STANDARD |

| GLOBAL PART NUMBER |   |                  |      |   |
|--------------------|---|------------------|------|---|
| I                  | R | F                | 2    | 4 |
| PRODUCT FAMILY     |   |                  | SIZE |   |
| E                  | R | 6                | R    | 8 |
| PACKAGE CODE       |   | INDUCTANCE VALUE |      | K |
| TOL.               |   |                  |      |   |

See the end of this data book for conversion tables



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