

# Inductors, Commercial, Molded, Shielded, Miniature, Axial Leaded



## ELECTRICAL SPECIFICATIONS

**Inductance Tolerance:**  $\pm 10\%$  standard,  $\pm 5\%$  available

**Insulation Resistance:** 1000 M $\Omega$  minimum per MIL-STD-202, method 302, test condition B

**Dielectric Withstanding Voltage:** 200 V<sub>AC</sub> per MIL-STD-202, method 301 (at sea level)

**Percent Coupling:** 3 % maximum per MIL-PRF-15305

**Operating Temperature:** - 55 °C to + 105 °C

| ENVIRONMENTAL PERFORMANCE    |            |                         |
|------------------------------|------------|-------------------------|
| TEST                         | CONDITIONS | SPECIFICATIONS          |
| Barometric Pressure          | C          | MIL-STD-202, method 105 |
| Thermal Shock                | A-1        | MIL-STD-202, method 107 |
| Flammability                 | -          | MIL-STD-202, method 111 |
| Overload                     | -          | MIL-PRF-15305           |
| Low Temperature Storage      | -          | MIL-PRF-15305           |
| Resistance to Soldering Heat | A          | MIL-STD-202, method 210 |
| Resistance to Solvents       | -          | MIL-STD-202, method 215 |

## FEATURES

- Flame retardant coating
- Electromagnetic shield
- Small package for a shielded inductor
- Epoxy molded construction provides superior moisture protection
- Precision performance, excellent reliability, sturdy construction
- Compliant to RoHS Directive 2002/95/EC



**RoHS**  
COMPLIANT

## MECHANICAL SPECIFICATIONS

**Terminal Strength:** 3 lb pull per MIL-STD-202, method 211, test condition A, except 180° rotation for a total of 540°

**Weight:** IMS-2 = 0.30 g maximum

## TEST EQUIPMENT <sup>(1)</sup>

- H/P 4342A Q-meter
- Measurements corporation megacycle meter, model 59
- Wheatstone bridge

### Note

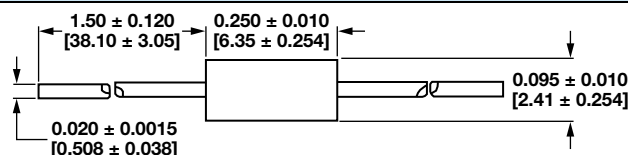
<sup>(1)</sup> Test procedure per MIL-PRF-15305

## MATERIAL SPECIFICATIONS

**Encapsulant:** Epoxy

**Standard Terminals:** #24 AWG, tinned copper

## DIMENSIONS in inches [millimeters]



## STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | IND. (μH) | TOL. (%) | Q MIN. | TEST FREQUENCY L AND Q (MHz) | SRF MIN. (MHz) <sup>(1)</sup> | DCR MAX. (Ω) | RATED DC CURRENT (mA) <sup>(2)</sup> |           |
|-------|-----------|----------|--------|------------------------------|-------------------------------|--------------|--------------------------------------|-----------|
| IMS-2 | 0.10      | $\pm 10$ | 54     | 25.0                         | 490.0                         | 0.10         | 670                                  | IRON CORE |
| IMS-2 | 0.12      | $\pm 10$ | 52     | 25.0                         | 430.0                         | 0.11         | 635                                  |           |
| IMS-2 | 0.15      | $\pm 10$ | 50     | 25.0                         | 415.0                         | 0.12         | 610                                  |           |
| IMS-2 | 0.18      | $\pm 10$ | 49     | 25.0                         | 375.0                         | 0.13         | 585                                  |           |
| IMS-2 | 0.22      | $\pm 10$ | 47     | 25.0                         | 330.0                         | 0.15         | 545                                  |           |
| IMS-2 | 0.27      | $\pm 10$ | 46     | 25.0                         | 300.0                         | 0.16         | 530                                  |           |
| IMS-2 | 0.33      | $\pm 10$ | 44     | 25.0                         | 260.0                         | 0.18         | 495                                  |           |
| IMS-2 | 0.39      | $\pm 10$ | 42     | 25.0                         | 230.0                         | 0.19         | 485                                  |           |
| IMS-2 | 0.47      | $\pm 10$ | 41     | 25.0                         | 220.0                         | 0.21         | 460                                  |           |
| IMS-2 | 0.56      | $\pm 10$ | 41     | 25.0                         | 210.0                         | 0.23         | 440                                  |           |
| IMS-2 | 0.68      | $\pm 10$ | 39     | 25.0                         | 180.0                         | 0.24         | 430                                  |           |
| IMS-2 | 0.82      | $\pm 10$ | 38     | 25.0                         | 165.0                         | 0.27         | 405                                  |           |
| IMS-2 | 1.0       | $\pm 10$ | 37     | 25.0                         | 150.0                         | 0.30         | 385                                  |           |

### Notes

<sup>(1)</sup> Measured with full length lead

<sup>(2)</sup> Rated DC current based on maximum temperature rise as shown in table

**STANDARD ELECTRICAL SPECIFICATIONS**

| MODEL | IND.<br>( $\mu$ H) | TOL.<br>(%) | Q<br>MIN. | TEST FREQUENCY L AND Q<br>(MHz) | SRF MIN.<br>(MHz) <sup>(1)</sup> | DCR MAX.<br>( $\Omega$ ) | RATED DC CURRENT<br>(mA) <sup>(2)</sup> |           |
|-------|--------------------|-------------|-----------|---------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------|
| IMS-2 | 1.2                | $\pm 10$    | 40        | 7.9                             | 130.0                            | 0.73                     | 247                                     | IRON CORE |
| IMS-2 | 1.5                | $\pm 10$    | 41        | 7.9                             | 115.0                            | 0.86                     | 228                                     |           |
| IMS-2 | 1.8                | $\pm 10$    | 43        | 7.9                             | 105.0                            | 0.95                     | 217                                     |           |
| IMS-2 | 2.2                | $\pm 10$    | 45        | 7.9                             | 95.0                             | 1.1                      | 202                                     |           |
| IMS-2 | 2.7                | $\pm 10$    | 48        | 7.9                             | 90.0                             | 1.2                      | 193                                     |           |
| IMS-2 | 3.3                | $\pm 10$    | 49        | 7.9                             | 80.0                             | 1.3                      | 185                                     |           |
| IMS-2 | 3.9                | $\pm 10$    | 50        | 7.9                             | 75.0                             | 1.5                      | 173                                     |           |
| IMS-2 | 4.7                | $\pm 10$    | 53        | 7.9                             | 70.0                             | 2.4                      | 136                                     |           |
| IMS-2 | 5.6                | $\pm 10$    | 54        | 7.9                             | 60.0                             | 2.9                      | 124                                     |           |
| IMS-2 | 6.8                | $\pm 10$    | 55        | 7.9                             | 55.0                             | 3.2                      | 118                                     |           |
| IMS-2 | 8.2                | $\pm 10$    | 55        | 7.9                             | 53.0                             | 3.6                      | 111                                     |           |
| IMS-2 | 10.0               | $\pm 10$    | 57        | 7.9                             | 50.0                             | 4.0                      | 106                                     |           |
| IMS-2 | 12.0               | $\pm 10$    | 36        | 2.5                             | 35.0                             | 3.0                      | 122                                     |           |
| IMS-2 | 15.0               | $\pm 10$    | 38        | 2.5                             | 30.0                             | 3.4                      | 115                                     |           |
| IMS-2 | 18.0               | $\pm 10$    | 40        | 2.5                             | 26.0                             | 3.8                      | 108                                     |           |
| IMS-2 | 22.0               | $\pm 10$    | 40        | 2.5                             | 24.0                             | 4.9                      | 96                                      |           |
| IMS-2 | 27.0               | $\pm 10$    | 40        | 2.5                             | 21.0                             | 5.8                      | 88                                      |           |
| IMS-2 | 33.0               | $\pm 10$    | 41        | 2.5                             | 20.0                             | 6.5                      | 83                                      |           |
| IMS-2 | 39.0               | $\pm 10$    | 42        | 2.5                             | 19.0                             | 7.9                      | 75                                      |           |
| IMS-2 | 47.0               | $\pm 10$    | 44        | 2.5                             | 16.0                             | 9.3                      | 69                                      |           |
| IMS-2 | 56.0               | $\pm 10$    | 44        | 2.5                             | 15.0                             | 11.0                     | 64                                      |           |
| IMS-2 | 68.0               | $\pm 10$    | 45        | 2.5                             | 13.0                             | 12.0                     | 61                                      |           |
| IMS-2 | 82.0               | $\pm 10$    | 45        | 2.5                             | 11.0                             | 13.0                     | 59                                      |           |
| IMS-2 | 100.0              | $\pm 10$    | 40        | 2.5                             | 10.5                             | 16.8                     | 51                                      |           |

**Notes**<sup>(1)</sup> Measured with full length lead<sup>(2)</sup> Rated DC current based on maximum temperature rise as shown in table**ORDERING INFORMATION**

| IMS-2 | 10 $\mu$ H          | $\pm 10 \%$             | ER              | e2                               |
|-------|---------------------|-------------------------|-----------------|----------------------------------|
| MODEL | INDUCTANCE<br>VALUE | INDUCTANCE<br>TOLERANCE | PACKAGE<br>CODE | JEDEC LEAD (Pb)-FREE<br>STANDARD |

**GLOBAL PART NUMBER**

|       |   |   |   |   |                 |   |                     |   |   |                         |
|-------|---|---|---|---|-----------------|---|---------------------|---|---|-------------------------|
| I     | M | S | 0 | 2 | E               | R | 1                   | 0 | 0 | K                       |
| MODEL |   |   |   |   | PACKAGE<br>CODE |   | INDUCTANCE<br>VALUE |   |   | INDUCTANCE<br>TOLERANCE |



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