

## Inductors, Commercial, Molded, Axial Leaded



### ELECTRICAL SPECIFICATIONS

**Inductance Tolerance:**  $\pm 10\%$  on Q-meter for  $0.10\text{ }\mu\text{H}$  to  $22\text{ }\mu\text{H}$ ,  $\pm 5\%$  1000 cps bridge for  $27\text{ }\mu\text{H}$  to  $100\text{ }\mu\text{H}$ ,  $\pm 5\%$  on Q-meter for  $120\text{ }\mu\text{H}$  to  $1000\text{ }\mu\text{H}$

#### Note

- L and Q are not always tested at the same frequency, inductance values that are tested on Q-meter, are tested at standard test frequencies

**Dielectric Strength:**  $700\text{ V}_{\text{RMS}}$  at sea level

**Operating Temperature:**  $-55\text{ }^{\circ}\text{C}$  to  $+125\text{ }^{\circ}\text{C}$

**Self-Resonant Frequency:** Minimum SRF measured with full length leads on grid-dip meter

**Q:** Measured on Q-meter

### DENSITY SPECIFICATIONS

**Weight:**  $0.9\text{ g}$  maximum

### FEATURES

- Classification is grade 1, class B
- Inductance range is  $0.10\text{ }\mu\text{H}$  to  $1000\text{ }\mu\text{H}$
- Proven reliability molded inductors
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS  
COMPLIANT

### MECHANICAL SPECIFICATIONS

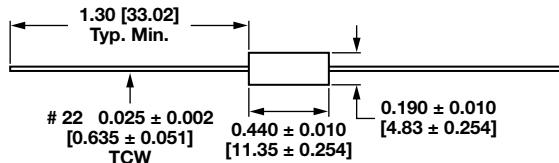
**Terminal Strength:** Meets 5 lb pull per MIL-PRF-15305 (latest revision)

### ENVIRONMENTAL SPECIFICATIONS

**Moisture and Shock Resistance:** Meets requirements of MIL-PRF-15305, grade 1, class B

**Vibration:** High frequency, 10 Hz to 2000 Hz at  $20\text{ g} \pm 10\%$  maximum for 12 logarithmic swings, each of 20 min duration repeated for each of three mutually perpendicular planes

### DIMENSIONS in inches [millimeters]



### STANDARD ELECTRICAL SPECIFICATIONS

| MODEL <sup>(1)</sup> | IND.<br>( $\mu\text{H}$ ) | TOL.<br>(%) | Q<br>MIN. | TEST FREQUENCY<br>(MHz) | SRF MIN.<br>(MHz) | DCR MAX.<br>( $\Omega$ ) | RATED DC CURRENT<br>(mA) | PHENOLIC CORE |
|----------------------|---------------------------|-------------|-----------|-------------------------|-------------------|--------------------------|--------------------------|---------------|
| IM-6RFCS-40          | 0.10                      | $\pm 10$    | 75        | 50                      | 400               | 0.02                     | 4000                     |               |
| IM-6RFCS-40          | 0.12                      | $\pm 10$    | 75        | 50                      | 400               | 0.025                    | 3500                     |               |
| IM-6RFCS-40          | 0.15                      | $\pm 10$    | 75        | 50                      | 400               | 0.03                     | 3000                     |               |
| IM-6RFCS-40          | 0.18                      | $\pm 10$    | 75        | 50                      | 400               | 0.03                     | 3000                     |               |
| IM-6RFCS-40          | 0.22                      | $\pm 10$    | 75        | 50                      | 400               | 0.03                     | 3000                     |               |
| IM-6RFCS-40          | 0.27                      | $\pm 10$    | 70        | 45                      | 376               | 0.04                     | 2700                     |               |
| IM-6RFCS-40          | 0.33                      | $\pm 10$    | 70        | 40                      | 352               | 0.05                     | 2500                     |               |
| IM-6RFCS-40          | 0.39                      | $\pm 10$    | 65        | 40                      | 320               | 0.08                     | 2000                     |               |
| IM-6RFCS-40          | 0.47                      | $\pm 10$    | 60        | 25                      | 288               | 0.08                     | 2000                     |               |
| IM-6RFCS-40          | 0.56                      | $\pm 10$    | 55        | 25                      | 264               | 0.10                     | 1700                     |               |
| IM-6RFCS-40          | 0.68                      | $\pm 10$    | 55        | 25                      | 240               | 0.12                     | 1500                     |               |
| IM-6RFCS-40          | 0.82                      | $\pm 10$    | 50        | 25                      | 220               | 0.18                     | 1300                     |               |
| IM-6RFCS-40          | 1.0                       | $\pm 10$    | 50        | 20                      | 200               | 0.24                     | 1100                     |               |
| IM-6RFCS-40          | 1.2                       | $\pm 10$    | 45        | 20                      | 176               | 0.35                     | 1000                     |               |
| IM-6RFCS-40          | 1.5                       | $\pm 10$    | 45        | 15                      | 160               | 0.43                     | 850                      |               |
| IM-6RFCS-40          | 1.8                       | $\pm 10$    | 45        | 15                      | 144               | 0.65                     | 720                      |               |
| IM-6RFCS-40          | 2.2                       | $\pm 10$    | 45        | 15                      | 132               | 0.80                     | 610                      |               |

#### Note

<sup>(1)</sup> Model electricals and tolerances shown

| <b>STANDARD ELECTRICAL SPECIFICATIONS</b> |                                     |                     |                   |                                 |                           |   |                                  |
|---|-------------------------------------|---------------------|-------------------|---------------------------------|---------------------------|---|----------------------------------|
| <b>MODEL<sup>(1)</sup></b>                | <b>IND.<br/>(<math>\mu</math>H)</b> | <b>TOL.<br/>(%)</b> | <b>Q<br/>MIN.</b> | <b>TEST FREQUENCY<br/>(MHz)</b> | <b>SRF MIN.<br/>(MHz)</b> | <b>DCR MAX.<br/>(<math>\Omega</math>)</b> | <b>RATED DC CURRENT<br/>(mA)</b> |
| IM-6RFCS-40                               | 2.7                                 | $\pm 10$            | 55                | 10                              | 88                        | 0.12                                      | 1600                             |
| IM-6RFCS-40                               | 3.3                                 | $\pm 10$            | 55                | 10                              | 80                        | 0.15                                      | 1400                             |
| IM-6RFCS-40                               | 3.9                                 | $\pm 10$            | 60                | 10                              | 76                        | 0.23                                      | 1200                             |
| IM-6RFCS-40                               | 4.7                                 | $\pm 10$            | 70                | 7.9                             | 72                        | 0.30                                      | 1000                             |
| IM-6RFCS-40                               | 5.6                                 | $\pm 10$            | 65                | 7.9                             | 64                        | 0.45                                      | 900                              |
| IM-6RFCS-40                               | 6.8                                 | $\pm 10$            | 65                | 7.9                             | 56                        | 0.55                                      | 800                              |
| IM-6RFCS-40                               | 8.2                                 | $\pm 10$            | 60                | 7.9                             | 52                        | 0.65                                      | 720                              |
| IM-6RFCS-40                               | 10                                  | $\pm 10$            | 60                | 5.0                             | 48                        | 0.73                                      | 650                              |
| IM-6RFCS-40                               | 12                                  | $\pm 10$            | 65                | 5.0                             | 42                        | 1.1                                       | 590                              |
| IM-6RFCS-40                               | 15                                  | $\pm 10$            | 80                | 2.5                             | 38                        | 1.4                                       | 500                              |
| IM-6RFCS-40                               | 18                                  | $\pm 10$            | 75                | 2.5                             | 34                        | 1.6                                       | 460                              |
| IM-6RFCS-40                               | 22                                  | $\pm 10$            | 75                | 2.5                             | 32                        | 1.8                                       | 430                              |
| IM-6RFCS-40                               | 27                                  | $\pm 5$             | 75                | 2.5                             | 29                        | 2.7                                       | 360                              |
| IM-6RFCS-40                               | 33                                  | $\pm 5$             | 85                | 2.5                             | 26                        | 3.5                                       | 300                              |
| IM-6RFCS-40                               | 39                                  | $\pm 5$             | 80                | 2.5                             | 21                        | 3.8                                       | 290                              |
| IM-6RFCS-40                               | 47                                  | $\pm 5$             | 80                | 2.5                             | 18                        | 4.0                                       | 275                              |
| IM-6RFCS-40                               | 56                                  | $\pm 5$             | 75                | 2.5                             | 15                        | 4.4                                       | 265                              |
| IM-6RFCS-40                               | 68                                  | $\pm 5$             | 75                | 2.5                             | 13                        | 4.7                                       | 250                              |
| IM-6RFCS-40                               | 82                                  | $\pm 5$             | 75                | 2.5                             | 10                        | 5.3                                       | 235                              |
| IM-6RFCS-40                               | 100                                 | $\pm 5$             | 75                | 1.5                             | 8.0                       | 6.0                                       | 220                              |
| IM-6RFCS-40                               | 120                                 | $\pm 5$             | 65                | 0.79                            | 5.7                       | 5.0                                       | 170                              |
| IM-6RFCS-40                               | 150                                 | $\pm 5$             | 65                | 0.79                            | 5.4                       | 5.8                                       | 164                              |
| IM-6RFCS-40                               | 180                                 | $\pm 5$             | 65                | 0.79                            | 5.0                       | 6.6                                       | 158                              |
| IM-6RFCS-40                               | 220                                 | $\pm 5$             | 65                | 0.79                            | 4.7                       | 7.4                                       | 155                              |
| IM-6RFCS-40                               | 270                                 | $\pm 5$             | 65                | 0.79                            | 4.5                       | 8.0                                       | 150                              |
| IM-6RFCS-40                               | 300                                 | $\pm 5$             | 65                | 0.79                            | 4.2                       | 8.6                                       | 145                              |
| IM-6RFCS-40                               | 330                                 | $\pm 5$             | 65                | 0.79                            | 4.0                       | 8.9                                       | 142                              |
| IM-6RFCS-40                               | 360                                 | $\pm 5$             | 65                | 0.79                            | 3.8                       | 9.6                                       | 137                              |
| IM-6RFCS-40                               | 390                                 | $\pm 5$             | 65                | 0.79                            | 3.6                       | 9.9                                       | 135                              |
| IM-6RFCS-40                               | 430                                 | $\pm 5$             | 65                | 0.79                            | 3.4                       | 10.4                                      | 131                              |
| IM-6RFCS-40                               | 470                                 | $\pm 5$             | 65                | 0.79                            | 3.2                       | 10.9                                      | 128                              |
| IM-6RFCS-40                               | 510                                 | $\pm 5$             | 65                | 0.79                            | 3.0                       | 11.6                                      | 124                              |
| IM-6RFCS-40                               | 560                                 | $\pm 5$             | 65                | 0.79                            | 2.9                       | 11.8                                      | 123                              |
| IM-6RFCS-40                               | 620                                 | $\pm 5$             | 60                | 0.79                            | 2.8                       | 12.5                                      | 120                              |
| IM-6RFCS-40                               | 680                                 | $\pm 5$             | 60                | 0.79                            | 2.7                       | 13.5                                      | 115                              |
| IM-6RFCS-40                               | 750                                 | $\pm 5$             | 60                | 0.79                            | 2.6                       | 14.0                                      | 113                              |
| IM-6RFCS-40                               | 820                                 | $\pm 5$             | 60                | 0.79                            | 2.5                       | 15.0                                      | 110                              |
| IM-6RFCS-40                               | 910                                 | $\pm 5$             | 60                | 0.79                            | 2.4                       | 15.5                                      | 107                              |
| IM-6RFCS-40                               | 1000                                | $\pm 5$             | 60                | 0.79                            | 2.2                       | 16.5                                      | 104                              |

**Note**
<sup>(1)</sup> Model electricals and tolerances shown

**MARKING**

- Color coded per MIL-PRF-15305 (latest revision)

**ORDERING INFORMATION**

| <b>IM-6RFCS-40</b> | <b>10 <math>\mu</math>H</b> | <b><math>\pm 10</math> %</b>    | <b>ER</b>               | <b>e2</b>                                 |
|--------------------|-----------------------------|---------------------------------|-------------------------|---|
| <b>MODEL</b>       | <b>INDUCTANCE<br/>VALUE</b> | <b>INDUCTANCE<br/>TOLERANCE</b> | <b>PACKAGE<br/>CODE</b> | <b>JEDEC® LEAD (Pb)-FREE<br/>STANDARD</b> |

**GLOBAL PART NUMBER**

|          |          |          |          |                 |          |          |          |                     |          |          |          |                         |          |          |          |
|----------|----------|----------|----------|-----------------|----------|----------|----------|---------------------|----------|----------|----------|-------------------------|----------|----------|----------|
| <b>I</b> | <b>M</b> | <b>0</b> | <b>6</b> | <b>R</b>        | <b>F</b> | <b>C</b> | <b>S</b> | <b>E</b>            | <b>R</b> | <b>1</b> | <b>0</b> | <b>0</b>                | <b>K</b> | <b>4</b> | <b>0</b> |
| MODEL    |          |          |          | PACKAGE<br>CODE |          |          |          | INDUCTANCE<br>VALUE |          |          |          | INDUCTANCE<br>TOLERANCE |          |          |          |
|          |          |          |          |                 |          |          |          |                     |          |          |          |                         |          |          |          |

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