

# High Frequency, Surface Mount Molded Inductors



## FEATURES

- Molded construction provides superior strength and moisture resistance
- Compatible with vapor phase infrared and wave soldering methods (100 % tin plating)
- Tape and reel packaging for automatic handling, 2000/reel
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

## STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>( $\mu$ H) | TOL. | TEST<br>FREQ.<br>(MHz) | Q<br>MIN. | SRF<br>MIN.<br>(MHz) | DCR<br>MAX.<br>( $\Omega$ ) | RATED DC<br>CURRENT<br>(mA) <sup>(1)</sup> |
|--------------------|------|------------------------|-----------|----------------------|-----------------------------|--------------------------------------------|
|                    |      | L & Q                  |           |                      |                             |                                            |
| 1.0                | 10 % | 7.96                   | 10        | 95                   | 0.030                       | 1800                                       |
| 1.2                | 10 % | 7.96                   | 10        | 70                   | 0.035                       | 1700                                       |
| 1.5                | 10 % | 7.96                   | 10        | 55                   | 0.040                       | 1600                                       |
| 1.8                | 10 % | 7.96                   | 10        | 47                   | 0.050                       | 1400                                       |
| 2.2                | 10 % | 7.96                   | 10        | 42                   | 0.060                       | 1300                                       |
| 2.7                | 10 % | 7.96                   | 10        | 37                   | 0.070                       | 1200                                       |
| 3.3                | 10 % | 7.96                   | 10        | 34                   | 0.080                       | 1120                                       |
| 3.9                | 10 % | 7.96                   | 10        | 32                   | 0.090                       | 1050                                       |
| 4.7                | 10 % | 7.96                   | 10        | 29                   | 0.110                       | 950                                        |
| 5.6                | 10 % | 7.96                   | 10        | 26                   | 0.130                       | 880                                        |
| 6.8                | 10 % | 7.96                   | 10        | 24                   | 0.150                       | 810                                        |
| 8.2                | 10 % | 7.96                   | 10        | 22                   | 0.180                       | 750                                        |
| 10                 | 10 % | 2.52                   | 10        | 19                   | 0.210                       | 690                                        |
| 12                 | 10 % | 2.52                   | 10        | 17                   | 0.250                       | 630                                        |
| 15                 | 10 % | 2.52                   | 10        | 16                   | 0.300                       | 580                                        |
| 18                 | 10 % | 2.52                   | 10        | 14                   | 0.360                       | 530                                        |
| 22                 | 10 % | 2.52                   | 10        | 13                   | 0.430                       | 480                                        |
| 27                 | 10 % | 2.52                   | 10        | 11.5                 | 0.520                       | 440                                        |
| 33                 | 10 % | 2.52                   | 10        | 10.5                 | 0.620                       | 400                                        |
| 39                 | 10 % | 2.52                   | 10        | 9.5                  | 0.720                       | 370                                        |
| 47                 | 10 % | 2.52                   | 10        | 8.5                  | 0.850                       | 340                                        |
| 56                 | 10 % | 2.52                   | 10        | 7.8                  | 1.00                        | 310                                        |
| 68                 | 10 % | 2.52                   | 10        | 7                    | 1.20                        | 290                                        |
| 82                 | 10 % | 2.52                   | 10        | 6.4                  | 1.40                        | 270                                        |
| 100                | 10 % | 0.796                  | 20        | 6                    | 1.60                        | 250                                        |
| 120                | 10 % | 0.796                  | 20        | 5.4                  | 1.90                        | 230                                        |
| 150                | 10 % | 0.796                  | 20        | 4.8                  | 2.20                        | 210                                        |
| 180                | 10 % | 0.796                  | 20        | 4.4                  | 2.80                        | 190                                        |
| 220                | 10 % | 0.796                  | 20        | 3.9                  | 3.40                        | 170                                        |
| 270                | 10 % | 0.796                  | 20        | 3.6                  | 4.20                        | 155                                        |
| 330                | 10 % | 0.796                  | 20        | 3.2                  | 4.90                        | 140                                        |
| 390                | 10 % | 0.796                  | 20        | 2.9                  | 5.80                        | 130                                        |
| 470                | 10 % | 0.796                  | 20        | 2.6                  | 7.00                        | 120                                        |
| 560                | 10 % | 0.796                  | 20        | 2.4                  | 8.50                        | 110                                        |
| 680                | 10 % | 0.796                  | 20        | 2.2                  | 10.0                        | 100                                        |
| 820                | 10 % | 0.796                  | 20        | 2                    | 13.0                        | 90                                         |
| 1000               | 10 % | 0.252                  | 20        | 1.8                  | 15.0                        | 85                                         |
| 1200               | 5 %  | 0.252                  | 20        | 1.5                  | 17.0                        | 75                                         |
| 1500               | 5 %  | 0.252                  | 20        | 1.4                  | 20.0                        | 70                                         |
| 1800               | 5 %  | 0.252                  | 20        | 1.3                  | 30.0                        | 60                                         |
| 2200               | 5 %  | 0.252                  | 20        | 1.2                  | 35.0                        | 55                                         |
| 2700               | 5 %  | 0.252                  | 20        | 1.1                  | 55.0                        | 45                                         |
| 3300               | 5 %  | 0.252                  | 20        | 1                    | 60.0                        | 40                                         |
| 3900               | 5 %  | 0.252                  | 20        | 1                    | 70.0                        | 38                                         |
| 4700               | 5 %  | 0.252                  | 20        | 0.9                  | 78.0                        | 36                                         |
| 5600               | 5 %  | 0.252                  | 20        | 0.8                  | 85.0                        | 33                                         |
| 6800               | 5 %  | 0.252                  | 20        | 0.7                  | 110.0                       | 30                                         |
| 8200               | 5 %  | 0.252                  | 20        | 0.6                  | 125.0                       | 28                                         |
| 10 000             | 5 %  | 0.0796                 | 15        | 0.5                  | 150.0                       | 25                                         |

### Note

<sup>(1)</sup> Rated DC current based on the maximum temperature rise, not to exceed 40 °C at +85 °C ambient

## ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.0  $\mu$ H to 10 000  $\mu$ H

**Inductance and Tolerance:**  $\pm 10$  %,  $\pm 5$  %

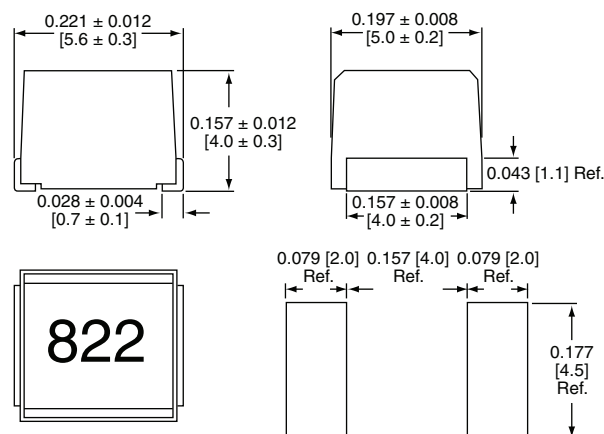
**Operating Temperature:** -40 °C to +125 °C

**Storage Temperature:** -40 °C to +125 °C

## TEST EQUIPMENT

- Inductance and Q measured on HP4191
- SRF measured on HP3755
- DCR measured on HP34401

## DIMENSIONS in inches [millimeters]



## DESCRIPTION

| IMC-2220 | 22 $\mu$ H       | $\pm 10$ %           | ER           | E3                             |
|----------|------------------|----------------------|--------------|--------------------------------|
| MODEL    | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

## GLOBAL PART NUMBER

|                |   |   |      |   |   |   |              |   |                  |   |   |      |
|----------------|---|---|------|---|---|---|--------------|---|------------------|---|---|------|
| I              | M | C | 2    | 2 | 2 | 0 | E            | R | 2                | 2 | 0 | K    |
| PRODUCT FAMILY |   |   | SIZE |   |   |   | PACKAGE CODE |   | INDUCTANCE VALUE |   |   | TOL. |



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