

## Multilayer Ferrite Beads



### MECHANICAL SPECIFICATIONS

**Solderability:** 90 % coverage after 5 s dip in 235 °C solder following 60 s preheat at 120 °C to 150 °C and type R flux dip

**Resistance to Solder Heat:** 10 s in 260 °C solder, after preheat and flux per above

**Terminal Strength:** 0.3 kg (0.66 lbs) minimum for 30 s

**Beam Strength:** 0.3 kg (0.66 lbs) minimum

### STANDARD ELECTRICAL SPECIFICATIONS

| Z<br>± 25 % AT 100 MHz<br>(Ω) | DCR<br>MAX.<br>(Ω) | RATED<br>DC CURRENT<br>(mA) |
|-------------------------------|--------------------|-----------------------------|
| 10                            | 0.05               | 500                         |
| 30                            | 0.09               | 500                         |
| 40                            | 0.10               | 400                         |
| 60                            | 0.10               | 400                         |
| 68                            | 0.10               | 200                         |
| 80                            | 0.20               | 150                         |
| 120                           | 0.20               | 150                         |
| 150                           | 0.30               | 150                         |
| 180                           | 0.30               | 150                         |
| 220                           | 0.30               | 150                         |
| 300                           | 0.35               | 150                         |
| 420                           | 0.40               | 150                         |
| 450                           | 0.40               | 100                         |
| 600                           | 0.45               | 100                         |
| 750                           | 0.60               | 100                         |
| 1000                          | 0.60               | 100                         |
| 1500                          | 0.70               | 50                          |
| 2000                          | 0.80               | 50                          |

### FEATURES

- High reliability
- Surface mountable
- Magnetically self shielded
- Nickel barrier plating virtually eliminates silver migration
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### ENVIRONMENTAL SPECIFICATIONS

**Operating Temperature:** - 55 °C to + 125 °C

**Thermal Shock:** 100 cycles, - 40 °C to + 125 °C

**Biased Humidity:** 85 % RH at 85 °C, 1000 h at full rated current

### DIMENSIONS in inches [millimeters]

#### Dimensional Outline



#### Ferrite Body



#### Recommended Pad Layout



### PACKAGING OPTIONS

- Tape and Reel: Embossed plastic carrier tape per EIA481-1, 4000 pieces on a 7" [178 mm] reel

### DESCRIPTION

|                  |                 |                     |              |                               |
|------------------|-----------------|---------------------|--------------|-------------------------------|
| <b>ILBB-0603</b> | <b>30</b>       | <b>± 25 %</b>       | <b>ER</b>    | <b>e3</b>                     |
| MODEL            | IMPEDANCE VALUE | IMPEDANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

### GLOBAL PART NUMBER

|                |          |          |          |          |          |          |          |              |          |                 |          |          |                     |
|----------------|----------|----------|----------|----------|----------|----------|----------|--------------|----------|-----------------|----------|----------|---------------------|
| <b>I</b>       | <b>L</b> | <b>B</b> | <b>B</b> | <b>0</b> | <b>6</b> | <b>0</b> | <b>3</b> | <b>E</b>     | <b>R</b> | <b>3</b>        | <b>0</b> | <b>0</b> | <b>V</b>            |
| PRODUCT FAMILY |          |          |          | SIZE     |          |          |          | PACKAGE CODE |          | IMPEDANCE VALUE |          |          | IMPEDANCE TOLERANCE |

**TAPE AND REEL SPECIFICATIONS 0603 SIZE PER EIA-481-1 in inches [millimeters]**



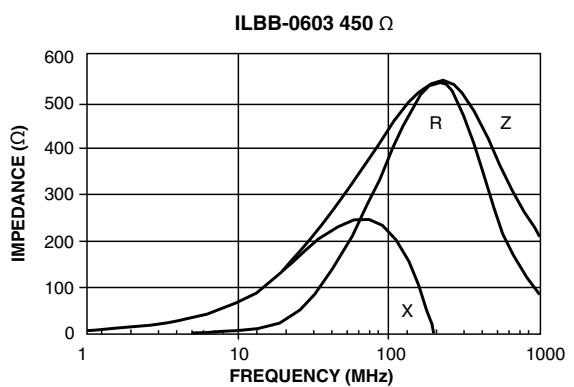
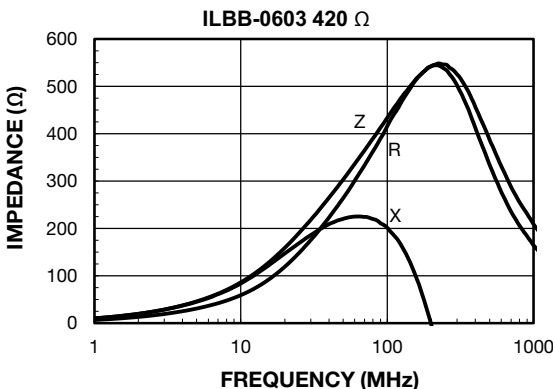
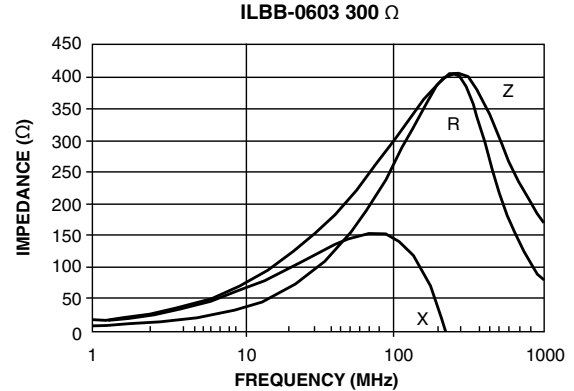
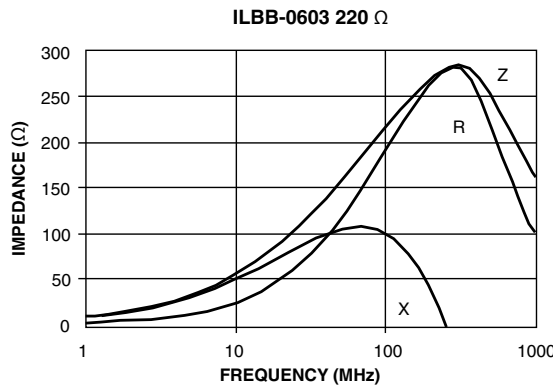
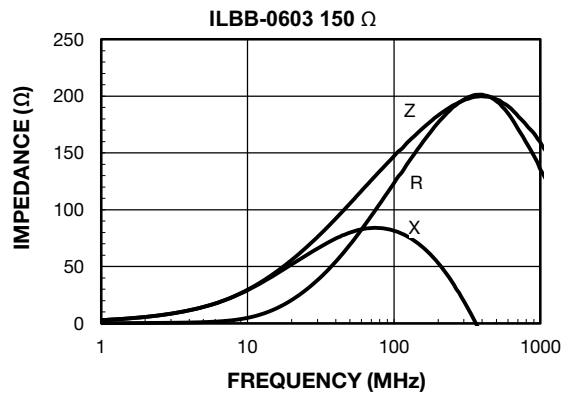
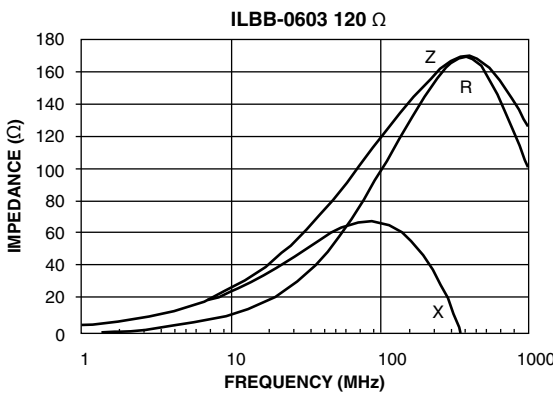
|                |  |
|----------------|--|
| A <sub>0</sub> | 0.045 ± 0.004 [1.14 ± 0.1]               |
| B <sub>0</sub> | 0.071 ± 0.008 [1.80 ± 0.2]               |
| D <sub>0</sub> | 0.059 + 0.004/- 0.000 [1.5 + 0.1/- 0.0]  |
| D <sub>1</sub> | 0.039 min. [1.0 min.]                    |
| E <sub>1</sub> | 0.069 ± 0.004 [1.75 ± 0.1]               |
| F              | 0.138 ± 0.002 [3.50 ± 0.05]              |
| K <sub>0</sub> | 0.045 ± 0.002 [1.15 ± 0.05]              |
| P <sub>0</sub> | 0.157 ± 0.004 [4.00 ± 0.1]               |
| P <sub>1</sub> | 0.157 ± 0.004 [4.00 ± 0.1]               |
| P <sub>2</sub> | 0.079 ± 0.002 [2.00 ± 0.05]              |
| W              | 0.327 max. [8.3 max.]                    |
| T              | 0.008 ± 0.002 [0.2 ± 0.05]               |
| A              | 7.000 ± 0.079 [178 ± 2.0]                |
| N              | 2.500 [63.5] min.                        |
| C              | 0.51 ± 0.020/- 0.008 [13.00 ± 0.5/- 0.5] |
| W <sub>1</sub> | 0.315 + 0.059/- 0.000 [8.00 + 1.5/- 0.0] |
| T <sub>1</sub> | 0.079 ± 0.002 [2.00 ± 0.05]              |

**TYPICAL CURVES - Frequency Characteristics of R, X, and Z**





**TYPICAL CURVES - Frequency Characteristics of R, X, and Z**





**TYPICAL CURVES - Frequency Characteristics of R, X, and Z**





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