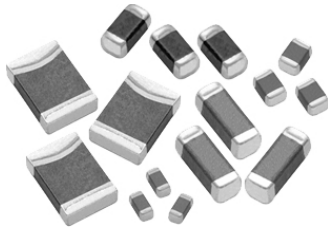




**THE DATASHEET OF  
ILHB1206ER501V**



## High Current Multilayer Ferrite Beads



### MECHANICAL SPECIFICATIONS

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

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

**Terminal Strength:** 0603: 0.3 kg (0.66 lbs), 0805: 0.6 kg (1.3 lbs), 1206: 1.0 kg (2.2 lbs), 1806: 1.0 kg (2.2 lbs), 1812: 1.5 kg (3.3 lbs) for 30 s

**Beam Strength:** 0603: 0.3 kg (0.66 lbs), 0805: 1.0 kg (2.2 lbs), 1206: 2.0 kg (4.4 lbs), 1806: 2.5 kg (5.5 lbs), 1812: 2.5 kg (5.5 lbs)

### STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER | Z ± 25 % (Ω) | TEST FREQUENCY (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) |
|-------------|--------------|----------------------|--------------|-----------------------|
| ILHB-0603   | 60           | 100                  | 0.10         | 2000                  |
|             | 120          | 100                  | 0.10         | 2000                  |
| ILHB-0805   | 30           | 100                  | 0.015        | 6000                  |
|             | 60           | 100                  | 0.03         | 3000                  |
|             | 90           | 100                  | 0.025        | 5000                  |
|             | 120          | 100                  | 0.03         | 5000                  |
|             | 250          | 100                  | 0.04         | 3000                  |
| ILHB-1206   | 50           | 100                  | 0.02         | 6000                  |
|             | 75           | 100                  | 0.03         | 3000                  |
|             | 120          | 100                  | 0.02         | 6000                  |
|             | 500          | 100                  | 0.06         | 2500                  |
| ILHB-1806   | 600          | 100                  | 0.10         | 2500                  |
|             | 60           | 100                  | 0.02         | 6000                  |
| ILHB-1812   | 120          | 100                  | 0.02         | 6000                  |
|             | 600          | 50                   | 0.04         | 3000                  |
|             | 1300         | 60                   | 0.05         | 3000                  |

### FEATURES

- High reliability
- Surface mountable (multiple case sizes)
- Current rating up to 6 A
- 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

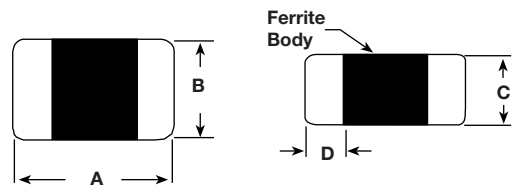
**Operating Temperature:** -55 °C to +125 °C

**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



| SIZE | A                             | B                              | C                              | D                              |
|------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 0603 | 0.06 ± 0.006<br>[1.6 ± 0.15]  | 0.03 ± 0.006<br>[0.8 ± 0.15]   | 0.03 ± 0.006<br>[0.8 ± 0.15]   | 0.012 ± 0.008<br>[0.30 ± 0.20] |
| 0805 | 0.079 ± 0.008<br>[2.0 ± 0.20] | 0.049 ± 0.008<br>[1.25 ± 0.20] | 0.035 ± 0.008<br>[0.90 ± 0.20] | 0.02 ± 0.012<br>[0.50 ± 0.30]  |
| 1206 | 0.126 ± 0.008<br>[3.2 ± 0.20] | 0.063 ± 0.008<br>[1.6 ± 0.2]   | 0.043 ± 0.008<br>[1.1 ± 0.2]   | 0.020 ± 0.012<br>[0.50 ± 0.30] |
| 1806 | 0.177 ± 0.010<br>[4.5 ± 0.25] | 0.063 ± 0.008<br>[1.6 ± 0.2]   | 0.063 ± 0.008<br>[1.6 ± 0.2]   | 0.024 ± 0.016<br>[0.60 ± 0.40] |
| 1812 | 0.177 ± 0.010<br>[4.5 ± 0.25] | 0.126 ± 0.010<br>[3.2 ± 0.25]  | 0.060 ± 0.010<br>[1.5 ± 0.25]  | 0.024 ± 0.016<br>[0.60 ± 0.40] |

### DESCRIPTION

| ILHB  | 1206 | 120             | ± 25 %              | ER           | e3                             |
|-------|------|-----------------|---------------------|--------------|--------------------------------|
| MODEL | SIZE | IMPEDANCE VALUE | IMPEDANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

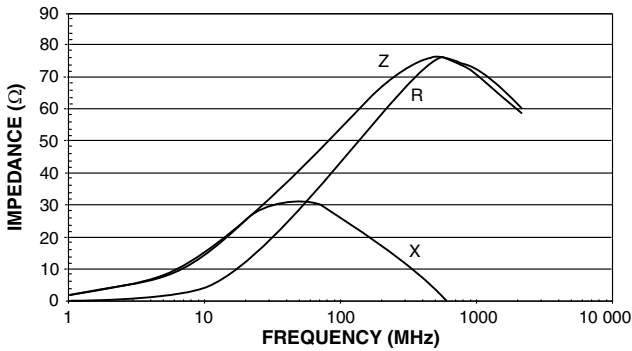
### GLOBAL PART NUMBER

|                |   |   |   |      |   |   |   |              |   |                 |   |   |                     |
|----------------|---|---|---|------|---|---|---|--------------|---|-----------------|---|---|---------------------|
| I              | L | H | B | 1    | 2 | 0 | 6 | E            | R | 1               | 2 | 1 | V                   |
| PRODUCT FAMILY |   |   |   | SIZE |   |   |   | PACKAGE CODE |   | IMPEDANCE VALUE |   |   | IMPEDANCE TOLERANCE |

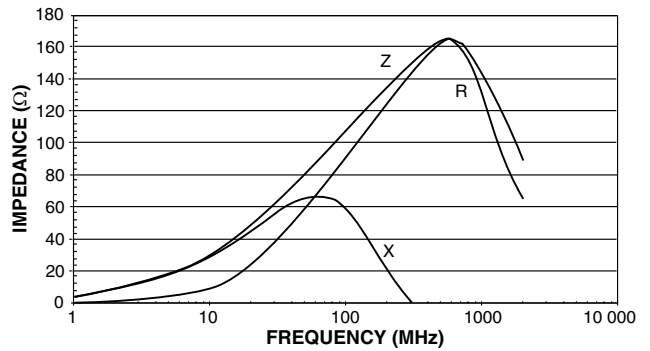


**TYPICAL CURVES** (Frequency Characteristics of R, X, and Z)

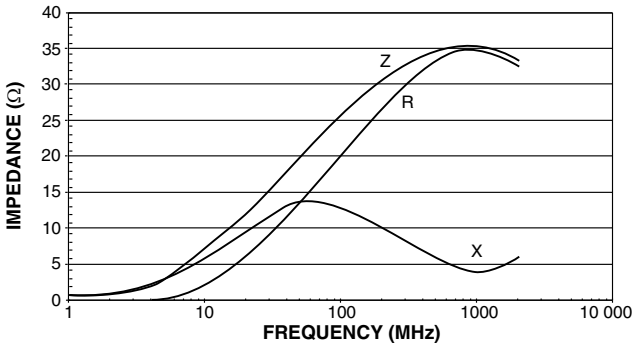
ILHB-0603 60 Ω



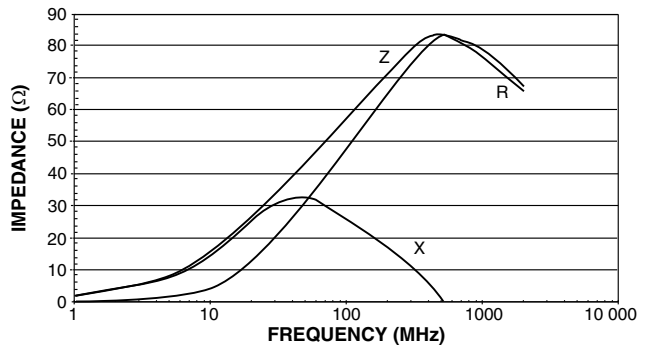
ILHB-0603 120 Ω



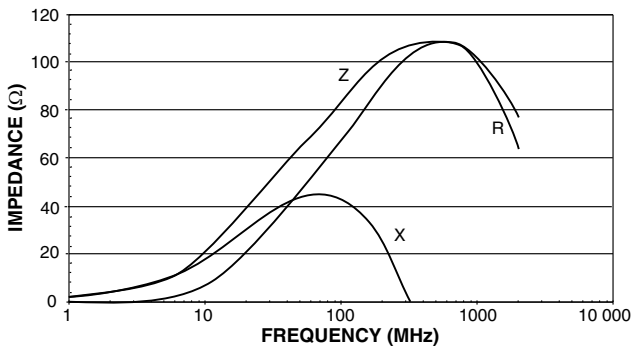
ILHB-0805 30 Ω



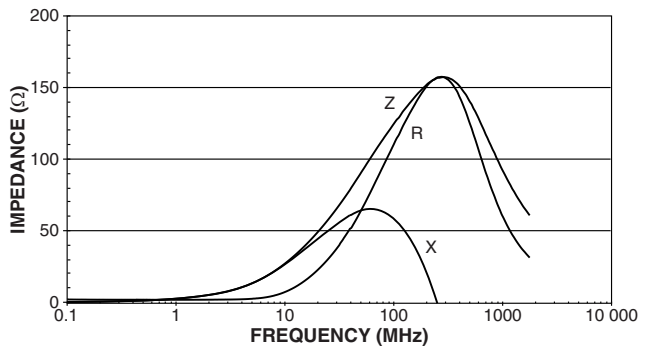
ILHB-0805 60 Ω



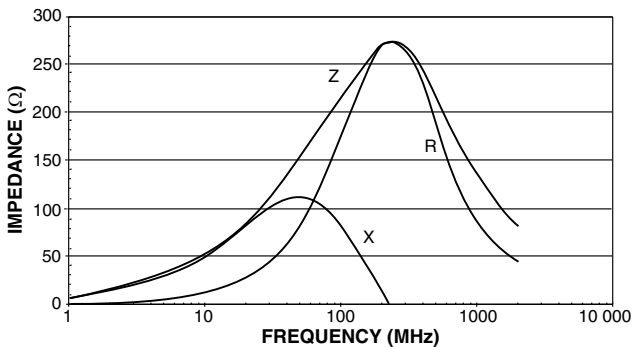
ILHB-0805 90 Ω



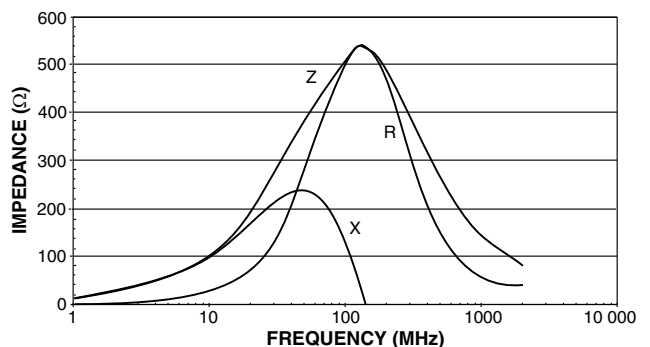
ILHB-0805 120 Ω



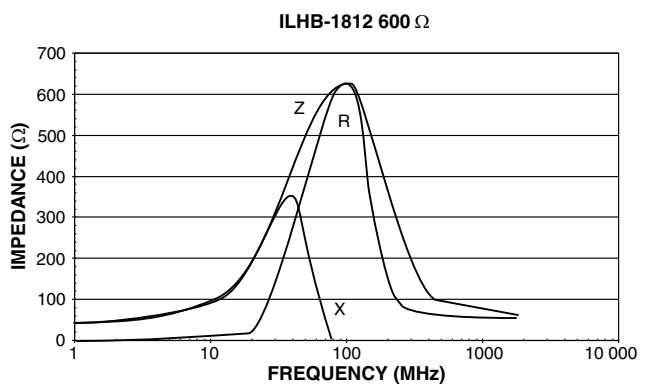
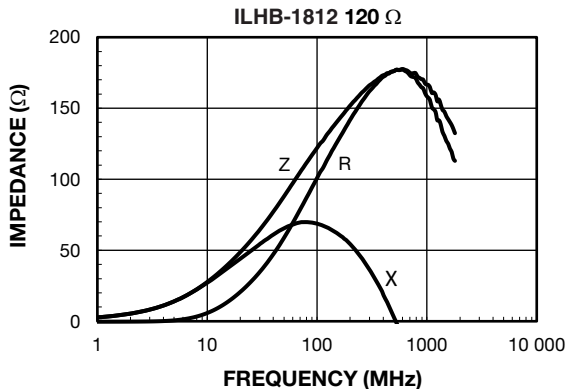
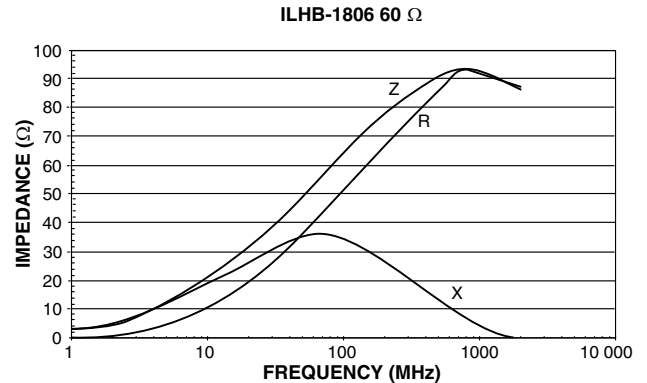
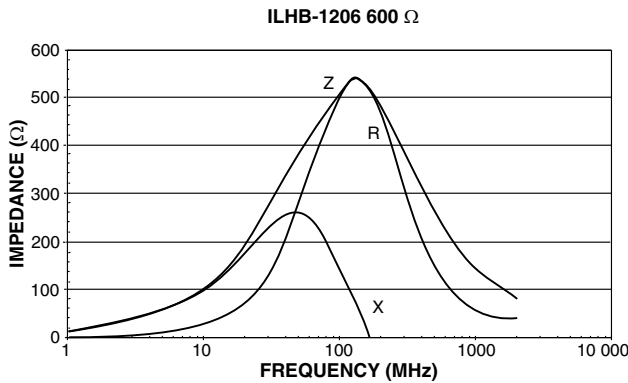
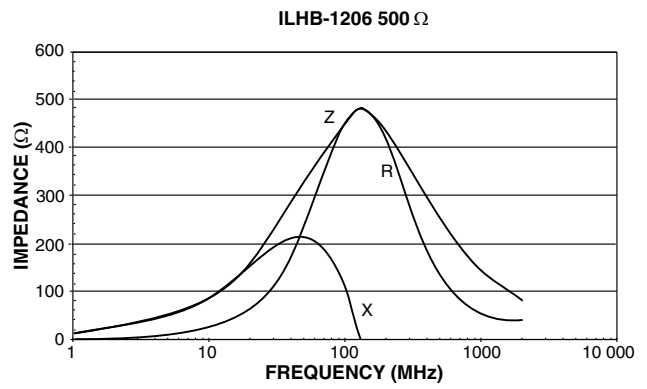
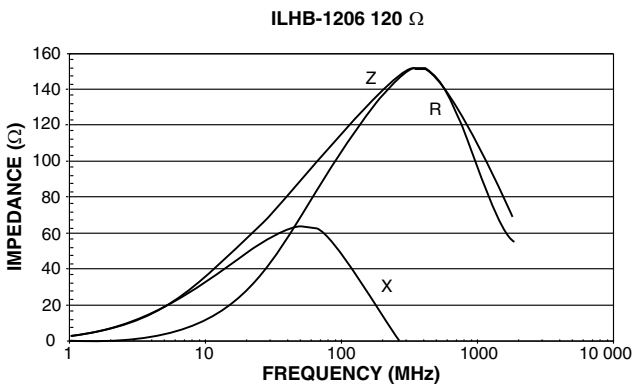
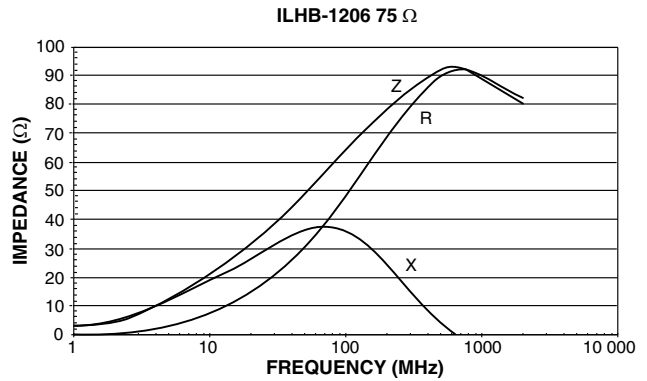
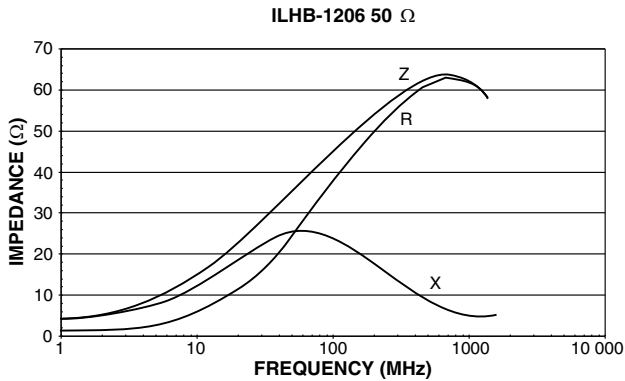
ILHB-0805 250 Ω



ILHB-0805 600 Ω

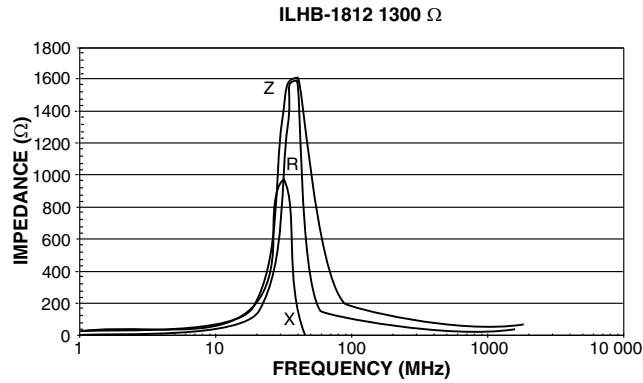


**TYPICAL CURVES** (Frequency Characteristics of R, X, and Z)





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