

## High Power Low Cost Inductors

- Insulation Resistance, Minimum 100 MΩ
- Operating Temperature Range -40°C to +125°C
- Ambient Temperature, Maximum 85°C
- Insulation System Class B, 130°C
- Temperature Rise, Maximum 40°C

### Specifications @ 25°C / Packaging

| Part Number          | Inductance <sup>(1)</sup><br>Control Value<br>μH<br>±20% | Rated <sup>(2)</sup><br>Inductance<br>μH<br>Typ. | Rated<br>Current<br>Adc | DCR<br>mΩ<br>Max. | Dimensions (mm)    |                    | Quantity Per Carton<br>(Units) |               |
|----------------------|--|--|-------------------------|-------------------|--------------------|--------------------|--------------------------------|---------------|
|                      |  |  |                         |                   | L / W / Ht         |                    | Vert.<br>Mount                 | Hor.<br>Mount |
|                      |  |  |                         |                   | Vert. Mount        | Hor. Mount         |                                |               |
| HM53-001R1_LF V or H | 1.44   | 1.1  | 14.0                    | 3.0               | 23.0 / 14.0 / 23.0 | 23.0 / 23.0 / 14.0 | 360                            | 300           |
| HM53-001R6_LF V or H | 1.72   | 1.6  | 8.0                     | 4.0               | 16.0 / 11.0 / 16.0 | 16.0 / 16.0 / 11.0 | 560                            | 500           |
| HM53-001R8_LF V or H | 2.6  | 1.8  | 15.0                    | 3.5               | 23.0 / 14.0 / 23.0 | 23.0 / 23.0 / 14.0 | 360                            | 180           |
| HM53-001R9_LF V or H | 2.7  | 1.9  | 10.0                    | 5.1               | 17.5 / 11.4 / 17.5 | 17.5 / 17.5 / 11.4 | 660                            | 500           |
| HM53-002R0_LF V or H | 2.8  | 2.0  | 8.5                     | 4.8               | 16.0 / 9.0 / 16.0  | 16.0 / 16.0 / 9.0  | 560                            | 500           |
| HM53-003R0_LF V or H | 4.4  | 3.1  | 13.5                    | 4.5               | 24.5 / 14.0 / 24.5 | 24.5 / 24.5 / 14.0 | 360                            | 320           |
| HM53-005R5_LF V or H | 7.9  | 5.5  | 8.5                     | 8.9               | 20.5 / 13.0 / 20.5 | 20.5 / 20.5 / 13.0 | 360                            | 180           |
| HM53-007R8_LF V or H | 11.1   | 7.8  | 5.7                     | 12.9              | 17.0 / 13.5 / 17.0 | 17.0 / 17.0 / 13.5 | 450                            | 500           |
| HM53-009R5_LF V or H | 13.5   | 9.5  | 9.0                     | 8.1               | 23.0 / 19.0 / 23.0 | 23.0 / 23.0 / 19.0 | 180                            | 210           |
| HM53-108R0_LF V or H | 10.1   | 8.0  | 3.0                     | 10.5              | 16.2 / 8.5 / 16.2  | 16.2 / 16.2 / 8.5  | 660                            | 500           |
| HM53-10180_LF V or H | 25.3   | 17.9   | 2.0                     | 20.5              | 16.2 / 8.0 / 16.2  | 16.2 / 16.2 / 8.0  | 500                            | 500           |
| HM53-10320_LF V or H | 50.3   | 32.3   | 2.6                     | 59.1              | 16.2 / 9.0 / 16.2  | 16.2 / 16.2 / 9.0  | 560                            | 500           |
| HM53-10650_LF V or H | 104.0  | 65.2   | 2.4                     | 108.6             | 15.5 / 12.4 / 15.5 | 15.5 / 15.5 / 12.4 | 560                            | 250           |
| HM53-10111_LF V or H | 151.7  | 106.4  | 2.3                     | 165.9             | 20.7 / 9.4 / 20.7  | 20.7 / 20.7 / 9.4  | 360                            | 300           |
| HM53-10171_LF V or H | 250.9  | 175.2  | 2.2                     | 224.2             | 20.9 / 13.0 / 20.9 | 20.9 / 20.9 / 13.0 | 360                            | 210           |
| HM53-10351_LF V or H | 505.0  | 354.3  | 1.9                     | 375.1             | 24.0 / 15.3 / 24.0 | 24.0 / 24.0 / 15.3 | 180                            | 140           |
| HM53-10531_LF V or H | 754.4  | 529.2  | 2.4                     | 468.1             | 29.8 / 17.4 / 29.8 | 29.8 / 29.8 / 17.4 | 90                             | 90            |
| HM53-10701_LF V or H | 1000.4   | 701.4  | 2.1                     | 679.4             | 29.8 / 17.1 / 29.8 | 29.8 / 29.8 / 17.1 | 90                             | 90            |
| HM53-208R0_LF V or H | 10.6   | 8.0  | 6.0                     | 8.3               | 22.0 / 9.5 / 22.0  | 22.0 / 22.0 / 9.5  | 360                            | 300           |
| HM53-20190_LF V or H | 25.0   | 19.1   | 4.0                     | 20.3              | 22.0 / 9.0 / 22.0  | 22.0 / 22.0 / 9.0  | 360                            | 300           |
| HM53-20350_LF V or H | 50.0   | 35.0   | 4.9                     | 29.1              | 21.6 / 13.6 / 21.6 | 21.6 / 21.6 / 13.6 | 360                            | 320           |
| HM53-20580_LF V or H | 73.9   | 58.1   | 2.5                     | 59.9              | 22.0 / 9.0 / 22.0  | 22.0 / 22.0 / 9.0  | 360                            | 300           |
| HM53-20710_LF V or H | 101.7  | 70.8   | 4.3                     | 48.5              | 24.0 / 16.6 / 24.0 | 24.0 / 24.0 / 16.6 | 200                            | 140           |
| HM53-20101_LF V or H | 148.0  | 103.6  | 4.0                     | 70.5              | 30.6 / 11.4 / 30.6 | 30.6 / 30.6 / 11.4 | 90                             | 135           |
| HM53-20171_LF V or H | 251.1  | 175.4  | 4.2                     | 96.0              | 31.2 / 19.0 / 31.2 | 31.2 / 31.2 / 19.0 | 90                             | 90            |
| HM53-20351_LF V or H | 499.4  | 349.0  | 3.3                     | 183.0             | 36.7 / 14.8 / 36.7 | 36.7 / 36.7 / 14.8 | 45                             | 75            |
| HM53-20521_LF V or H | 749.3  | 521.9  | 3.4                     | 225.4             | 43.3 / 18.2 / 43.3 | 43.3 / 43.3 / 18.2 | 45                             | 90            |
| HM53-306R8_LF V or H | 9.7  | 6.8  | 11.1                    | 8.3               | 22.2 / 13.9 / 22.2 | 22.2 / 22.2 / 13.9 | 180                            | 210           |
| HM53-30150_LF V or H | 21.3   | 14.9   | 9.3                     | 17.8              | 24.5 / 16.6 / 24.5 | 24.5 / 24.5 / 16.6 | 200                            | 140           |
| HM53-30350_LF V or H | 49.6   | 34.9   | 9.4                     | 21.9              | 32.3 / 18.9 / 32.3 | 32.3 / 32.3 / 18.9 | 90                             | 90            |
| HM53-30580_LF V or H | 78.0   | 58.5   | 4.0                     | 40.9              | 30.0 / 13.0 / 30.0 | 30.0 / 30.0 / 13.0 | 200                            | 140           |
| HM53-30690_LF V or H | 97.2   | 67.9   | 7.5                     | 31.0              | 37.8 / 16.8 / 37.8 | 37.8 / 37.8 / 16.8 | 45                             | 75            |
| HM53-30101_LF V or H | 150.6  | 105.4  | 7.5                     | 45.6              | 46.4 / 19.8 / 46.4 | 46.4 / 46.4 / 19.8 | 45                             | 90            |
| HM53-30181_LF V or H | 254.4  | 178.2  | 8.1                     | 48.2              | 53.7 / 24.3 / 53.7 | 53.7 / 53.7 / 24.3 | 45                             | 45            |
| HM53-407R0_LF V or H | 10.0   | 7.0  | 13.5                    | 7.9               | 25.7 / 18.0 / 25.7 | 25.7 / 25.7 / 18.0 | 45                             | 90            |
| HM53-40150_LF V or H | 21.0   | 14.7   | 14.5                    | 11.5              | 32.4 / 19.8 / 32.4 | 32.4 / 32.4 / 19.8 | 90                             | 90            |
| HM53-40360_LF V or H | 52.3   | 36.5   | 10.2                    | 18.3              | 39.0 / 16.8 / 39.0 | 39.0 / 39.0 / 16.8 | 45                             | 75            |
| HM53-40550_LF V or H | 74.5   | 54.8   | 6.0                     | 26.1              | 35.0 / 16.0 / 35.0 | 35.0 / 35.0 / 16.0 | 90                             | 90            |
| HM53-40710_LF V or H | 101.4  | 71.1   | 9.1                     | 21.2              | 48.5 / 21.8 / 48.5 | 48.5 / 48.5 / 21.8 | 45                             | 45            |
| HM53-40111_LF V or H | 152.8  | 106.8  | 10.5                    | 29.8              | 54.5 / 25.4 / 54.5 | 54.5 / 54.5 / 25.4 | 45                             | 45            |
| HM53-507R0_LF V or H | 10.0   | 7.0  | 20.9                    | 5.6               | 34.0 / 21.4 / 34.0 | 34.0 / 34.0 / 21.4 | 90                             | 75            |
| HM53-50150_LF V or H | 21.2   | 14.8   | 16.0                    | 8.2               | 40.5 / 18.0 / 40.5 | 40.5 / 40.5 / 18.0 | 45                             | 75            |
| HM53-50370_LF V or H | 52.4   | 36.7   | 12.7                    | 15.2              | 47.5 / 21.3 / 47.5 | 47.5 / 47.5 / 21.3 | 45                             | 45            |

### Specification @ 25 °C / Packaging (Cont'd)

| Part Number          | Inductance (1)<br>Control Value<br>μH<br>±20% | Rated (2)<br>Inductance<br>μH<br>Typ. | Rated<br>Current<br>Adc | DCR<br>mΩ<br>Max. | Dimensions (mm)    |                    | Quantity Per Carton<br>(Units) |            |
|----------------------|---|---------------------------------------|-------------------------|-------------------|--------------------|--------------------|--------------------------------|------------|
|                      |   |                                       |                         |                   | Vert. Mount        | Hor. Mount         | Vert. Mount                    | Hor. Mount |
| HM53-50550_LF V or H | 77.6  | 54.2                                  | 10.5                    | 21.1              | 47.5 / 21.3 / 47.5 | 47.5 / 47.5 / 21.3 | 45                             | 45         |
| HM53-50700_LF V or H | 99.4  | 69.5                                  | 13.0                    | 13.6              | 57.0 / 27.5 / 57.0 | 57.0 / 57.0 / 27.5 | 45                             | 45         |
| HM53-607R0_LF V or H | 9.9   | 6.9                                   | 29.3                    | 4.3               | 50.3 / 24.0 / 50.3 | 50.3 / 50.3 / 24.0 | 45                             | 45         |
| HM53-60130_LF V or H | 19.2  | 13.5                                  | 29.5                    | 4.8               | 59.0 / 28.0 / 59.0 | 59.0 / 59.0 / 28.0 | 45                             | 45         |
| HM53-60350_LF V or H | 50.2  | 35.1                                  | 21.0                    | 9.2               | 63.0 / 36.0 / 63.0 | 63.0 / 63.0 / 36.0 | 20                             | 20         |

Notes: (1) Inductance is measured at 100kHz, 0.1V without DC current.  
 (2) Value with rated DC current and the operating  $E_{T_{OP}}$  across the inductor.

### Outline Dimensions (mm)

Figure 1 Vertical Mount

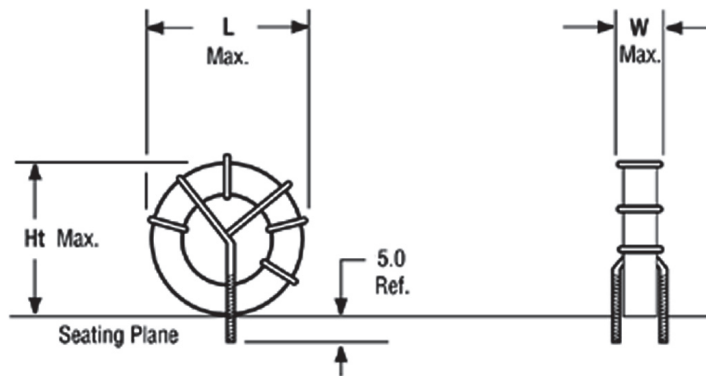
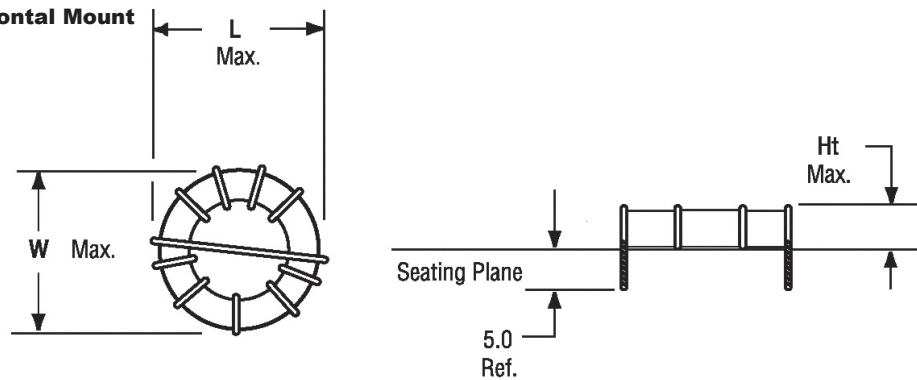
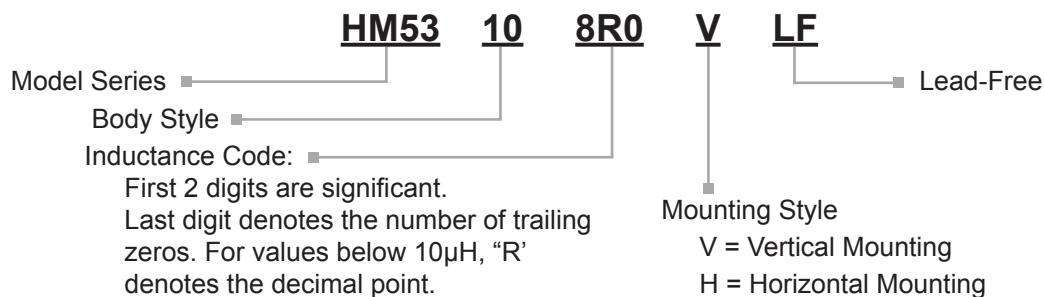


Figure 2 Horizontal Mount

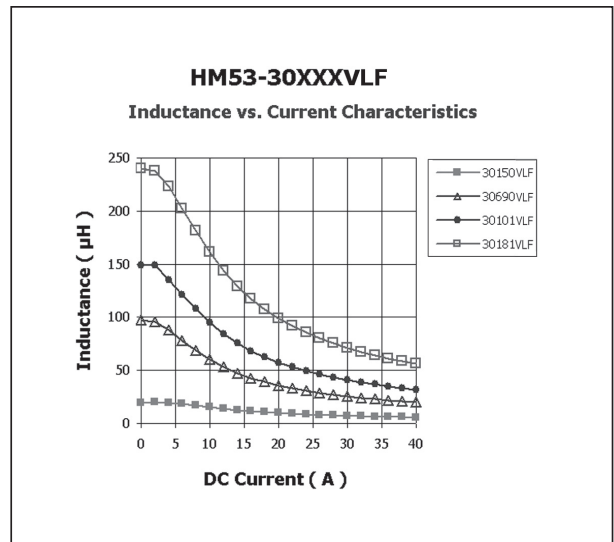
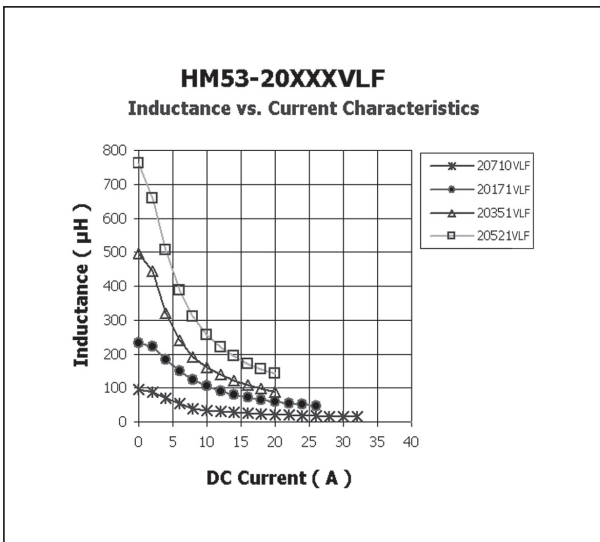
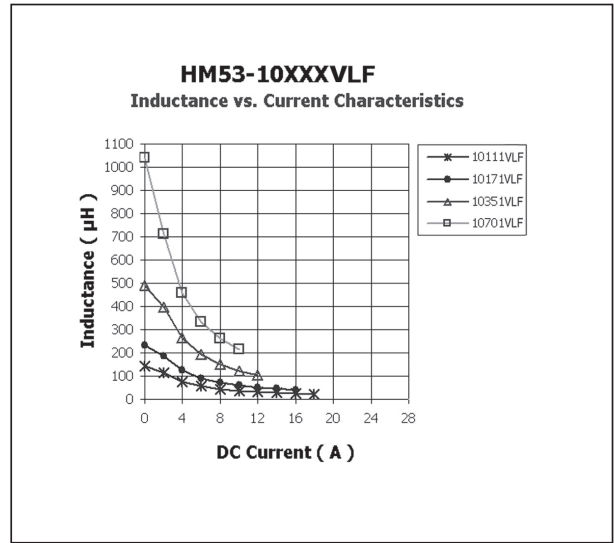
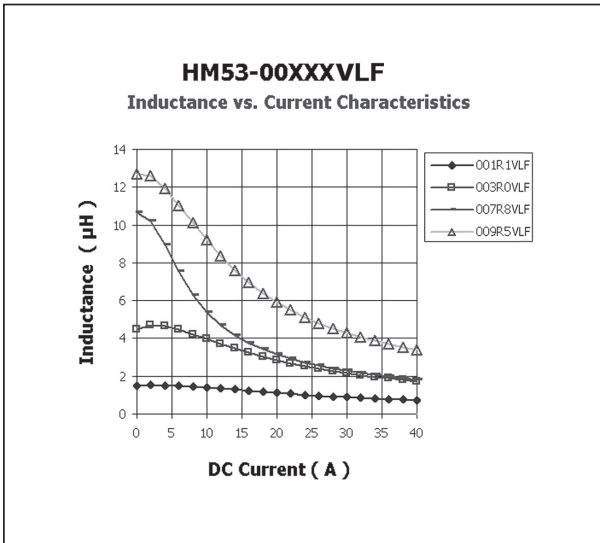


Refer to Specifications table for 'L', 'W' & 'Ht' dimensions of each model.

### Ordering Information



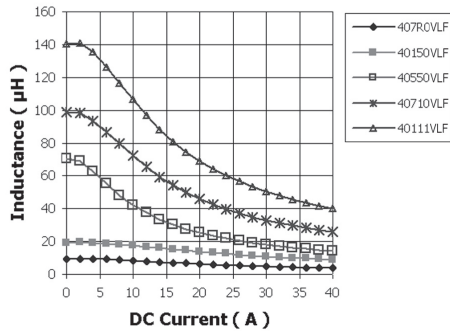
Electrical Characteristics @ 25 °C



**Electrical Characteristics @ 25 °C (Cont'd)**

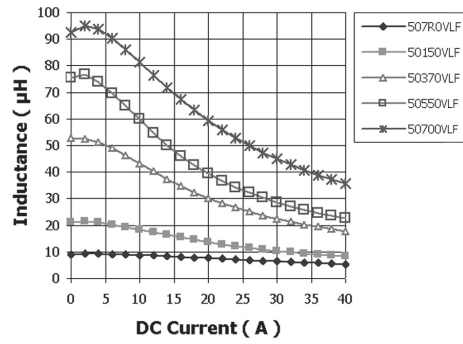
**HM53-40XXXVLF**

**Inductance vs. Current Characteristics**



**HM53-50XXXVLF**

**Inductance vs. Current Characteristics**



**HM53-60XXXVLF**

**Inductance vs. Current Characteristics**

