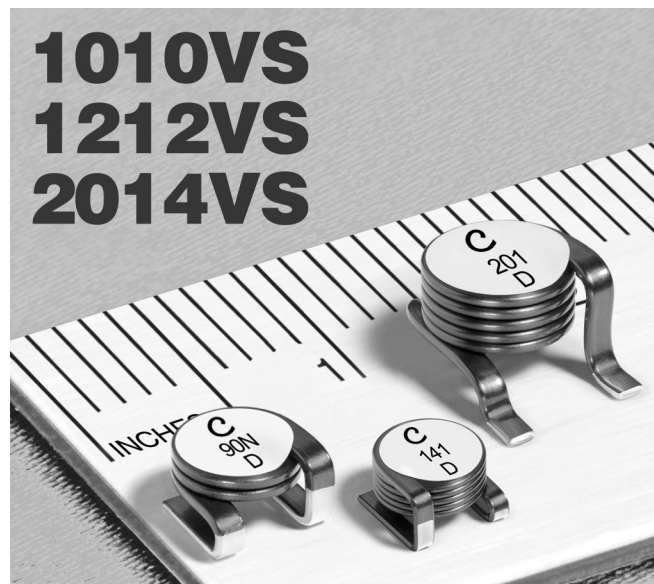



**NEW!**

# High Frequency, High Current Power Inductors



- Excellent Q factors – up to 230 at 400 MHz!
- Current handling as high as 57 Amps
- Inductance values from 22 to 257 nH

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant tin-silver over copper

**Ambient temperature** –40°C to +125°C with Irms current, +125°C to +145°C with derated current

**Storage temperature** Component: –40°C to +145°C.  
Tape and reel packaging: –40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +5 to +70 ppm/°C

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Mean Time Between Failures (MTBF)** 1 billion hours

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf.

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±20%<br>(nH) | Q <sup>3</sup><br>typ | Q test<br>freq<br>(MHz) | SRF typ <sup>4</sup><br>(MHz) | DCR<br>(mOhm) |      | Irms (A) <sup>5</sup> |              | Weight<br>(g) |
|--------------------------|-----------------------------------------|-----------------------|-------------------------|-------------------------------|---------------|------|-----------------------|--------------|---------------|
|                          |                                         |                       |                         |                               | typ           | max  | 20°C<br>rise          | 40°C<br>rise |               |
| 1010VS-23NME_            | 23.5                                    | 95                    | 100                     | 923                           | 1.05          | 1.20 | 18.0                  | 26.0         | 0.49          |
| 1010VS-46NME_            | 46.5                                    | 150                   | 100                     | 526                           | 1.50          | 1.62 | 17.9                  | 25.5         | 0.65          |
| 1010VS-79NME_            | 79.0                                    | 135                   | 50                      | 386                           | 1.95          | 2.11 | 17.8                  | 25.0         | 0.82          |
| 1010VS-111ME_            | 111                                     | 150                   | 50                      | 382                           | 2.53          | 2.73 | 15.7                  | 22.0         | 0.98          |
| 1010VS-141ME_            | 146                                     | 140                   | 50                      | 433                           | 3.08          | 3.33 | 14.1                  | 19.3         | 1.23          |
| 1212VS-22NME_            | 22.0                                    | 200                   | 100                     | 918                           | 0.48          | 0.55 | 40.5                  | 57.0         | 2.20          |
| 1212VS-42NME_            | 42.0                                    | 195                   | 50                      | 557                           | 0.70          | 0.77 | 38.0                  | 52.0         | 2.70          |
| 1212VS-66NME_            | 66.0                                    | 200                   | 50                      | 480                           | 0.90          | 0.99 | 35.0                  | 48.0         | 3.20          |
| 1212VS-90NME_            | 90.0                                    | 175                   | 50                      | 444                           | 1.10          | 1.21 | 33.0                  | 45.0         | 3.70          |
| 1212VS-111ME_            | 117                                     | 165                   | 50                      | 399                           | 1.30          | 1.43 | 32.0                  | 44.0         | 4.20          |
| 2014VS-33NME_            | 33                                      | 230                   | 100                     | 620                           | 0.63          | 0.74 | 32.5                  | 43.0         | 1.60          |
| 2014VS-66NME_            | 66                                      | 200                   | 50                      | 413                           | 0.90          | 1.00 | 31.5                  | 42.5         | 2.30          |
| 2014VS-111ME_            | 108                                     | 210                   | 50                      | 320                           | 1.20          | 1.34 | 31.0                  | 42.0         | 3.10          |
| 2014VS-151ME_            | 155                                     | 205                   | 50                      | 296                           | 1.44          | 1.60 | 29.4                  | 39.7         | 3.60          |
| 2014VS-201ME_            | 202                                     | 200                   | 50                      | 262                           | 1.70          | 1.82 | 26.3                  | 35.8         | 4.40          |
| 2014VS-251ME_            | 257                                     | 200                   | 50                      | 230                           | 1.94          | 2.15 | 24.9                  | 34.5         | 5.00          |

1. When ordering, specify **packaging** code:

2014VS-251MEC

- Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape.
- B = Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added (\$25 charge), use code letter C instead.
- D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked.

2. Inductance measured at 1.0 MHz, 0.1 Vrms, 0 A using an Agilent/HP HP4291A impedance analyzer with an Agilent/HP 16193A test fixture or equivalents.
3. Q measured at the specified frequency using an Agilent/HP 4291A impedance analyzer or equivalent.
4. SRF measured using an Agilent/HP 8753 network analyzer or equivalent and a Coilcraft CCF1199 test fixture
5. Current that causes the specified temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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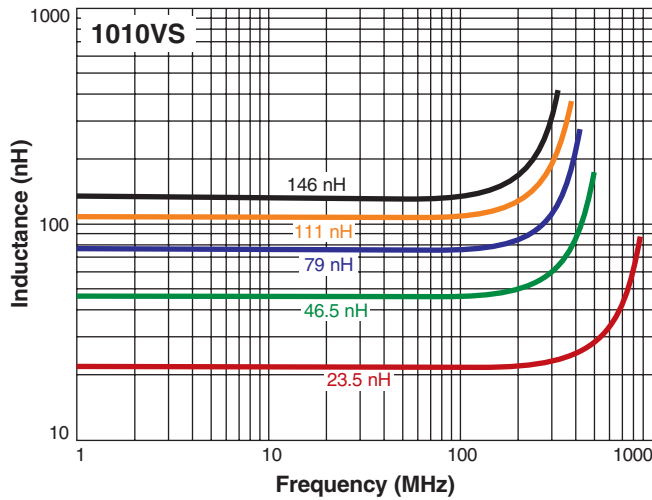
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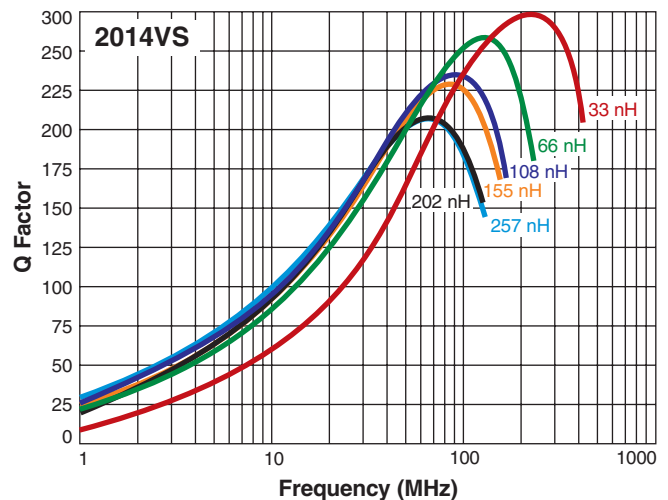
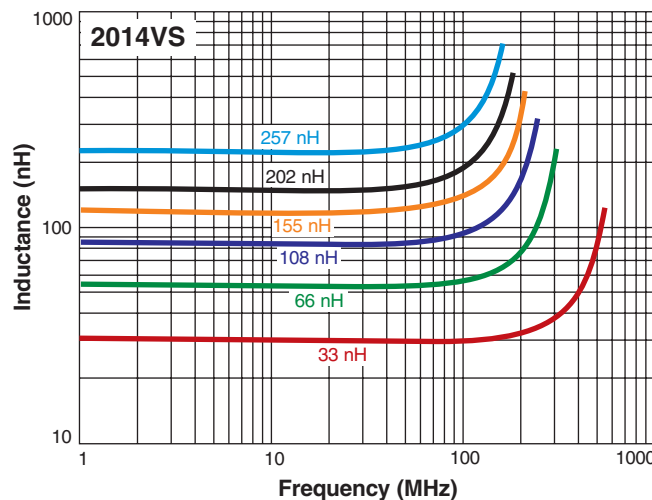
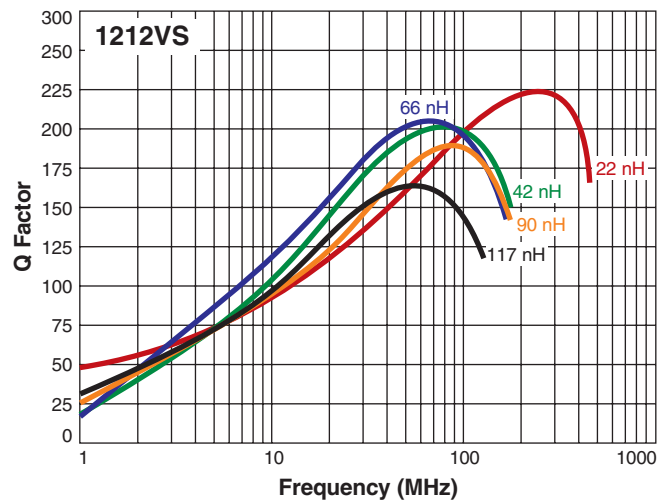
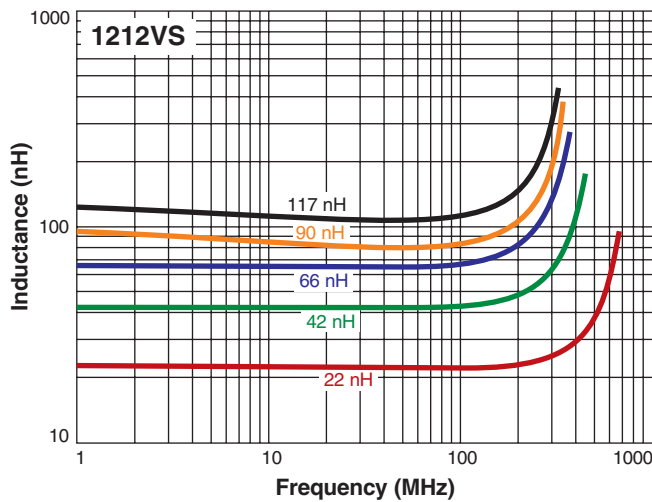
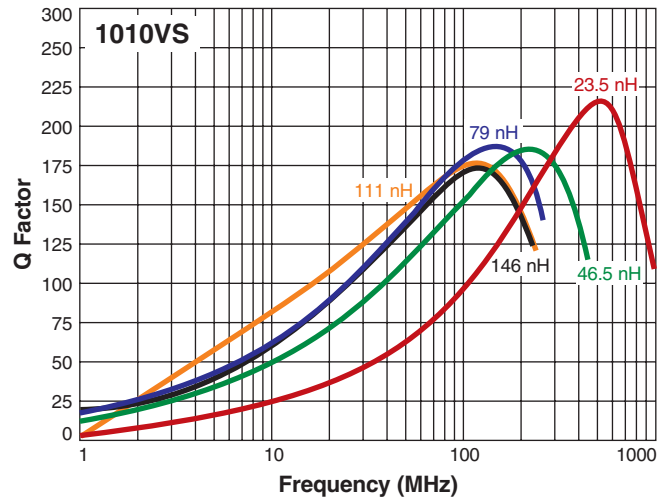

**NEW!**

# High Frequency, High Current Power Inductors – 1010VS, 1212VS, 2014VS

## L vs Frequency



## Q vs Frequency


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Document 893-2 Revised 01/23/13

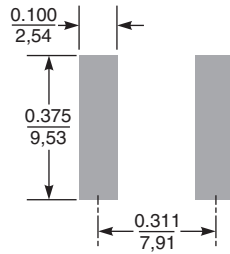
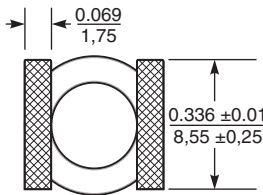
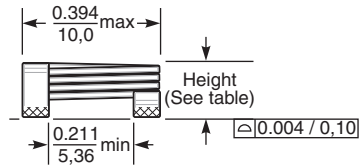
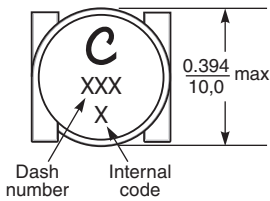
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**NEW!**

# High Frequency, High Current Power Inductors – 1010VS, 1212VS, 2014VS

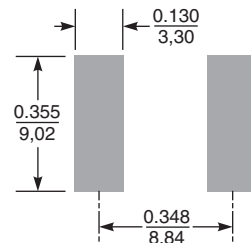
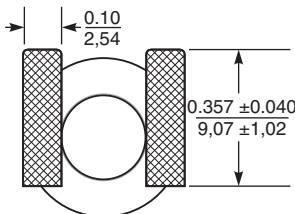
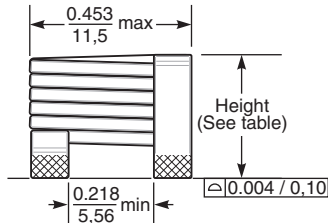
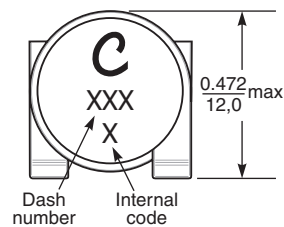
## 1010VS



**Recommended Land Pattern**

| Part number | Height |      | Weight (g) |
|-------------|--------|------|------------|
|             | inches | mm   |            |
| 1010VS-23N  | 0.142  | 3.60 | 0.49       |
| 1010VS-46N  | 0.161  | 4.10 | 0.65       |
| 1010VS-79N  | 0.189  | 4.80 | 0.82       |
| 1010VS-111  | 0.220  | 5.60 | 0.98       |
| 1010VS-141  | 0.240  | 6.10 | 1.23       |

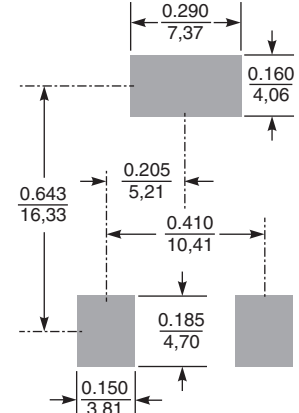
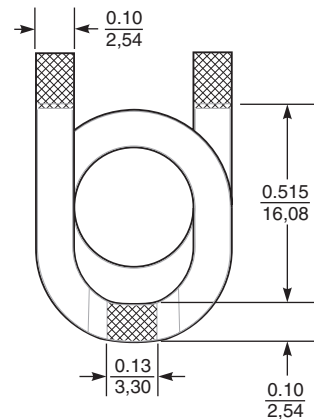
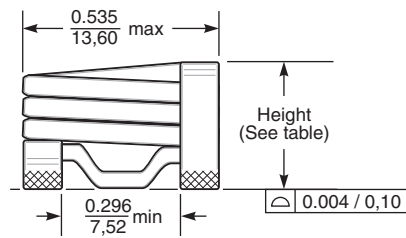
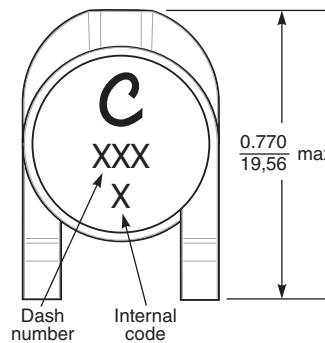
## 1212VS



**Recommended Land Pattern**

| Part number | Height |      | Weight (g) |
|-------------|--------|------|------------|
|             | inches | mm   |            |
| 1212VS-22N  | 0.260  | 6.60 | 2.2        |
| 1212VS-42N  | 0.299  | 7.60 | 2.7        |
| 1212VS-66N  | 0.346  | 8.80 | 3.2        |
| 1212VS-90N  | 0.409  | 10.4 | 3.7        |
| 1212VS-111  | 0.445  | 11.3 | 4.2        |

## 2014VS



**Recommended Land Pattern**

| Part number | Height |      | Weight (g) |
|-------------|--------|------|------------|
|             | inches | mm   |            |
| 2014VS-33N  | 0.236  | 5.99 | 1.6        |
| 2014VS-66N  | 0.279  | 7.09 | 2.3        |
| 2014VS-111  | 0.327  | 8.31 | 3.1        |
| 2014VS-151  | 0.362  | 9.19 | 3.6        |
| 2014VS-201  | 0.409  | 10.4 | 4.4        |
| 2014VS-251  | 0.449  | 11.4 | 5.0        |

## Packaging

**1010VS-23N** 250/7" reel ; 1000/13" reel ; 3.81 mm pocket depth

**1010VS-46N** 250/7" reel ; 900/13" reel ; 4.32 mm pocket depth

**1010VS-79N** 200/7" reel ; 800/13" reel ; 5.05 mm pocket depth

Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing

**1010VS-111** 175/7" reel ; 700/13" reel ; 5.84 mm pocket depth

**1010VS-141** 150/7" reel ; 600/13" reel ; 6.35 mm pocket depth

Plastic tape: 24 mm wide, 0.40 mm thick, 16 mm pocket spacing

**1212VS-22N** 450/13" reel ; 8.86 mm pocket depth

**1212VS-42N** 400/13" reel ; 7.87 mm pocket depth

**1212VS-66N** 350/13" reel ; 9.02 mm pocket depth

**1212VS-90N** 300/13" reel ; 10.67 mm pocket depth

**1212VS-111** 250/13" reel ; 11.68 mm pocket depth

Plastic tape: 24 mm wide, 0.50 mm thick, 20 mm pocket spacing

**2014VS-33N** 500/13" reel ; 6.22 mm pocket depth

**2014VS-66N** 450/13" reel ; 7.37 mm pocket depth

**2014VS-111** 400/13" reel ; 8.56 mm pocket depth

**2014VS-151** 350/13" reel ; 9.45 mm pocket depth

**2014VS-201** 350/13" reel ; 10.67 mm pocket depth

**2014VS-251** 250/13" reel ; 11.68 mm pocket depth

Plastic tape: 44 mm wide, 0.50 mm thick, 20 mm pocket spacing

All dimensions are in  $\frac{\text{inches}}{\text{mm}}$ .



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