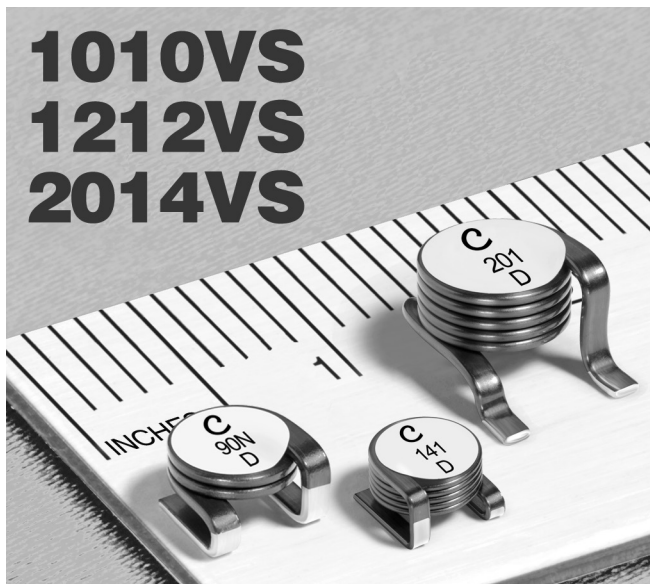




High Frequency, High Current Power Inductors



- 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 I_{rms} current

Maximum part temperature +155°C (ambient + temp rise).

Storage temperature Component: –40°C to +155°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 to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	Inductance ² ±20% (nH)	Q ³ typ	Q test freq (MHz)	SRF typ ⁴ (MHz)	DCR (mOhm)		I _{rms} (A) ⁵		Weight (g)
					typ	max	20°C rise	40°C 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, please specify **packaging** code:

2014VS-251MEC

Packaging: C = 7" machine-ready reel (Standard for 1010VS.)
EIA-481 embossed plastic tape.
D = 13" machine-ready reel (Standard for 1212VS and
2014VS; optional, factory order only, not stocked for
1010VS.) 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 for 1010VS; D for 1212VS and 2014VS
instead.

- 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.
 - Q measured at the specified frequency using an Agilent/HP 4291A impedance analyzer or equivalent.
 - SRF measured using an Agilent/HP 8753 network analyzer or equivalent and a Coilcraft CCF1199 test fixture
 - Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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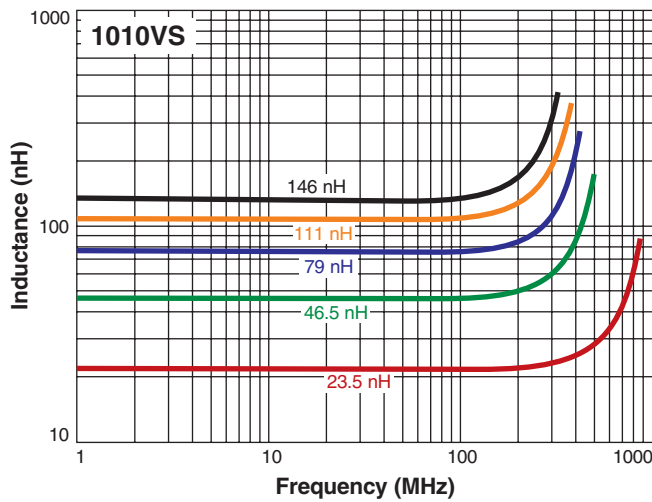
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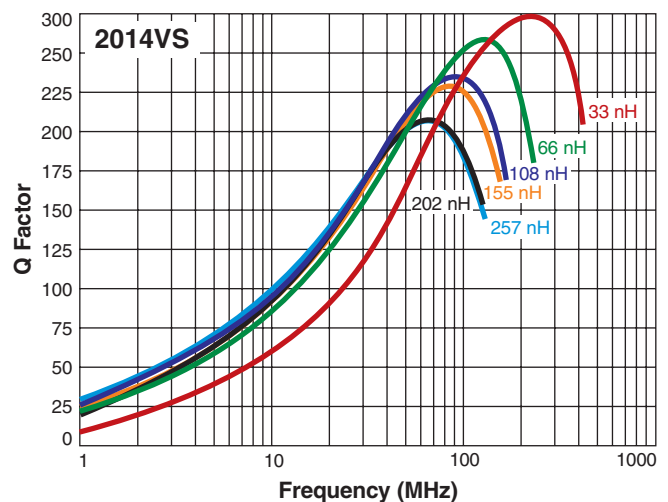
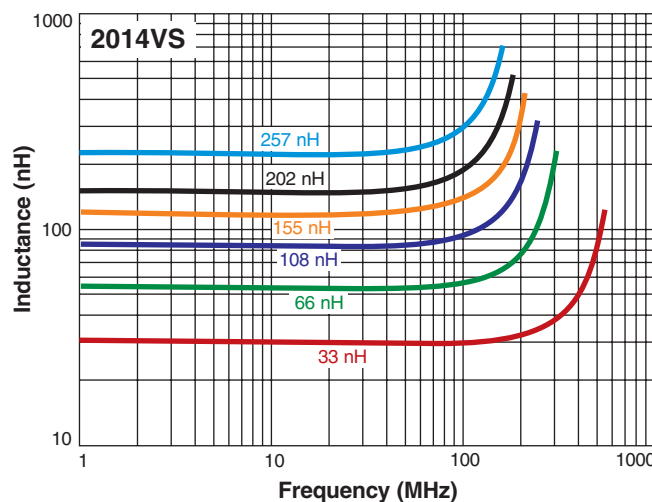
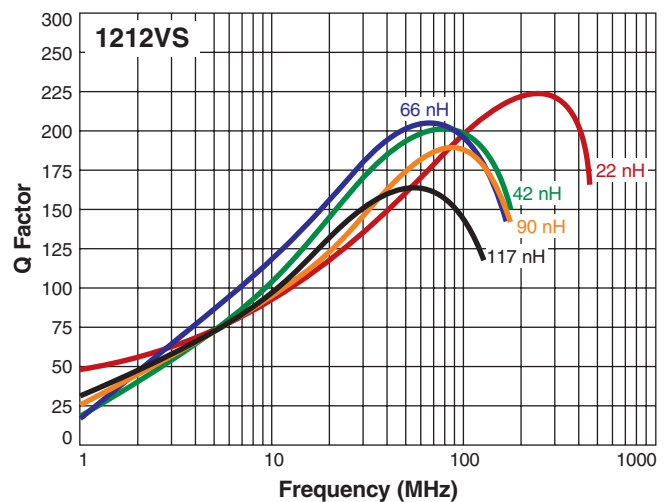
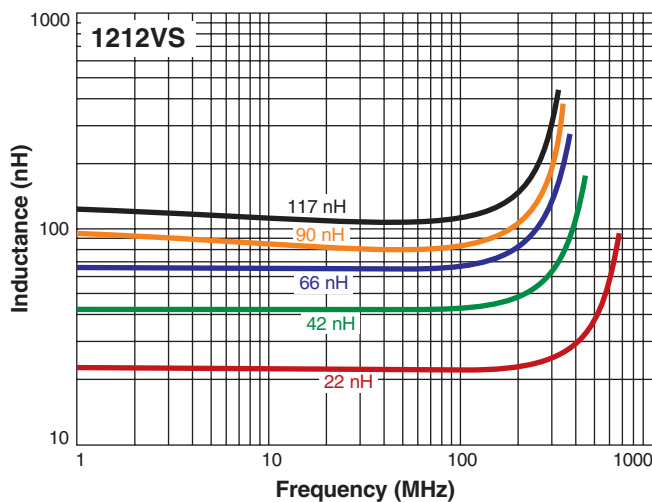
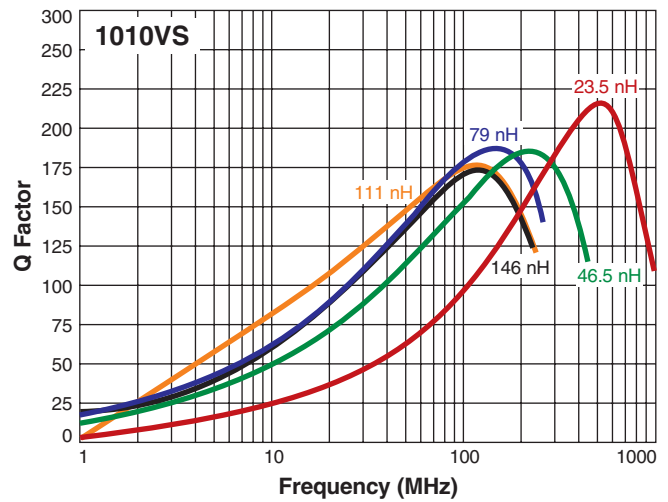


High Frequency, High Current Power Inductors – 1010VS, 1212VS, 2014VS

L vs Frequency



Q vs Frequency



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Document 893-2 Revised 10/05/17

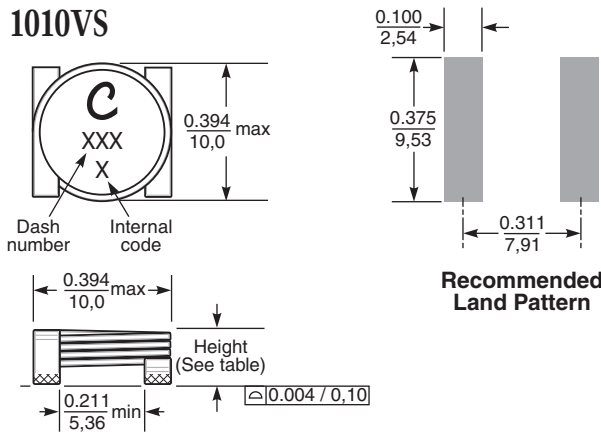
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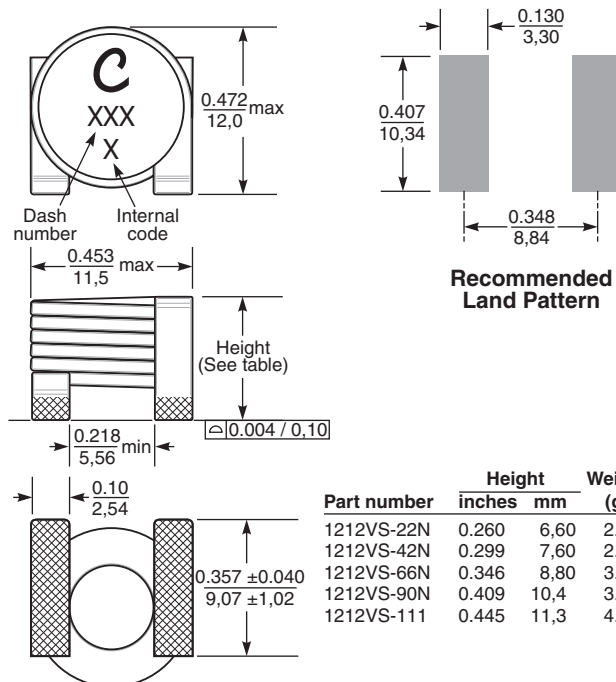
High Frequency, High Current Power Inductors – 1010VS, 1212VS, 2014VS

1010VS



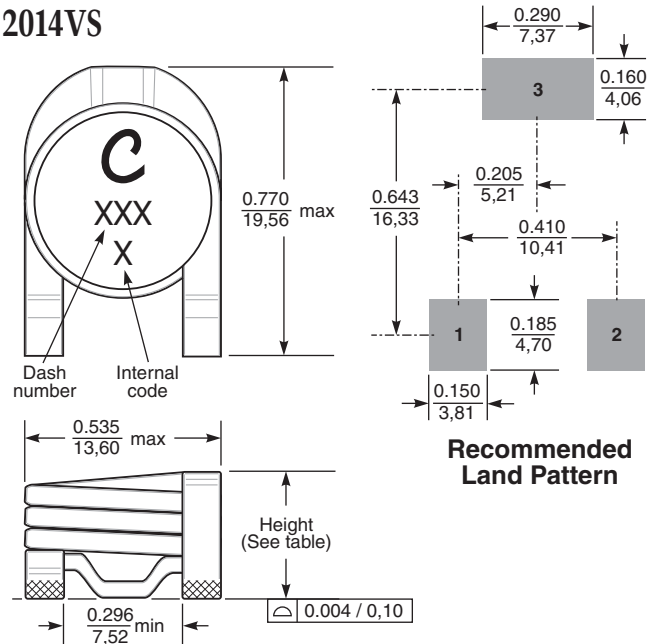
Part number	Height		Weight (g)
	inches	mm	
1010VS-23N	0.142	3.60	0.49
1010VS-46N	0.161	4.10	0.65
1010VS-79N	0.189	4.80	0.82
1010VS-111	0.220	5.60	0.98
1010VS-141	0.240	6.10	1.23

1212VS

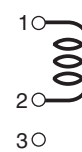


Part number	Height		Weight (g)
	inches	mm	
1212VS-22N	0.260	6.60	2.2
1212VS-42N	0.299	7.60	2.7
1212VS-66N	0.346	8.80	3.2
1212VS-90N	0.409	10.4	3.7
1212VS-111	0.445	11.3	4.2

2014VS



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



Caution:
Terminal 3 is provided for mounting stability only. This terminal is connected to the winding of the inductor and must not be connected to ground or any circuitry.

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-201 300/13" 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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