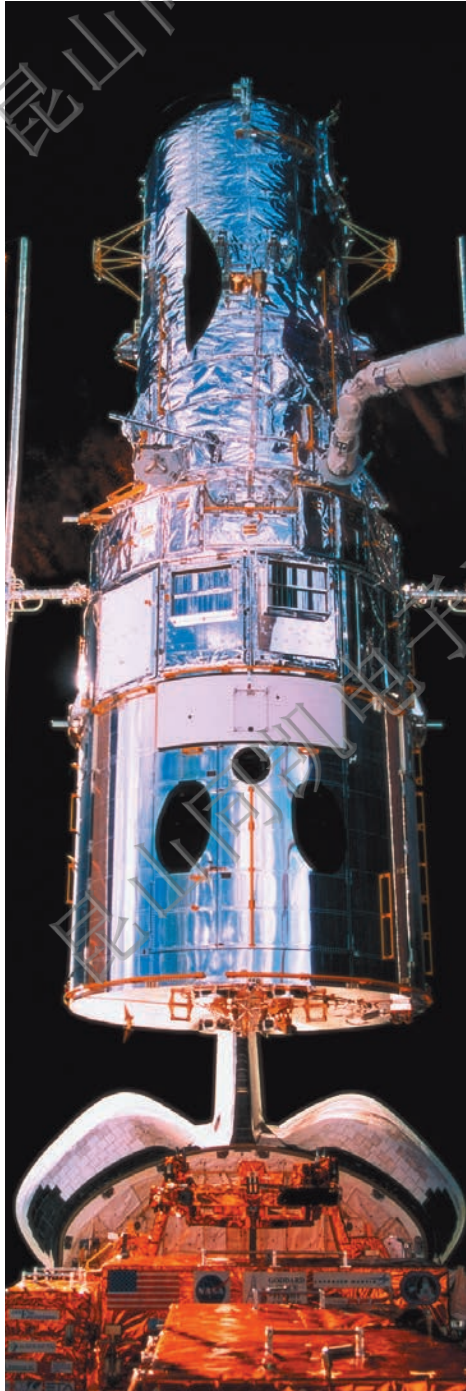
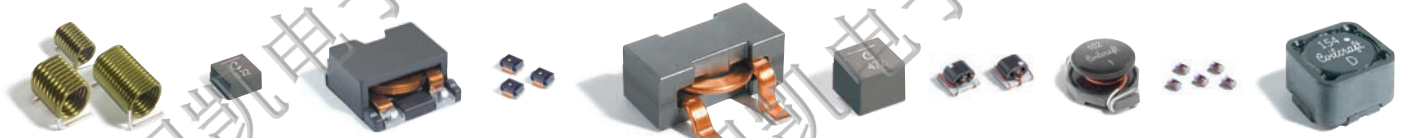


RF and Power Magnetics for Critical Applications



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Coilcraft CPS is a division of Coilcraft, Inc., a world leader in the design and manufacture of magnetic components for a wide range of applications, including signal generation and processing, RF, power, impedance matching, LED drivers, timing and much more.

Coilcraft CPS has developed and built magnetic-inductive components for use in applications that require the highest degree of robustness and longevity for almost a decade. These parts are designed, manufactured and tested to ensure their suitability for mission-critical applications, and for use in adverse environmental conditions, including extreme temperatures. They are delivered directly from the factory, without the need for third party services. In addition, components can be built and certified to meet specific customer requirements.

All of Coilcraft's engineering and production facilities have received ISO/TS 16949 (Automotive) and ISO 9001 (Quality Management System) certification for the "Design, manufacture, and distribution of inductive components including SMT and leaded inductors, transformers and assemblies for telecom, computer, automotive, industrial and other international markets." This certification demonstrates that Coilcraft has operational quality systems in place that satisfy the rigorous demands of the automotive industry for their suppliers.



AE MS
ML ST **319RAD (0604) High Q**

| Part number | Inductance (nH) | Percent tolerance | SRF min (GHz) | DCR max (Ohms) | I _{max} (mA) | 1.7 GHz | |
|----------------|-----------------|-------------------|---------------|----------------|-----------------------|---------|-------|
| | | | | | | L typ | Q typ |
| xx319RAD1N1JSZ | 1.15 @ 500 MHz | 5 | 1.2 | 136 | >5.0 | 0.021 | 3.0 |
| xx319RAD2N6JSZ | 2.6 @ 500 MHz | 5 | 2.6 | 163 | >5.0 | 0.026 | 2.0 |
| xx319RAD4N5JSZ | 4.5 @ 500 MHz | 5 | 4.7 | 155 | >5.0 | 0.032 | 1.8 |
| xx319RAD5N0JSZ | 5.0 @ 500 MHz | 5 | 5.2 | 178 | >5.0 | 0.032 | 1.6 |
| xx319RAD6N8JSZ | 6.8 @ 500 MHz | 5 | 7.4 | 172 | 4.7 | 0.035 | 1.8 |
| xx319RAD7N6JSZ | 7.6 @ 500 MHz | 5 | 7.9 | 137 | 4.4 | 0.035 | 1.5 |
| xx319RAD10NJSZ | 10.4 @ 500 MHz | 5 | 11.5 | 160 | 4.1 | 0.037 | 1.5 |

AE MS
ML ST **336RAA (0805)**

| Part number | Inductance (nH) | Percent tolerance* | Q min | SRF min (MHz) | DCR max (Ohms) | I _{max} (mA) |
|----------------|-----------------|--------------------|---------------|---------------|----------------|-----------------------|
| | | | | | | |
| xx336RAA3N0JSZ | 3.0 @ 250 MHz | 5 | 61 @ 1000 MHz | 5000 | 0.06 | 800 |
| xx336RAA030JSZ | 3.3 @ 250 MHz | 5 | 48 @ 1000 MHz | 5000 | 0.08 | 600 |
| xx336RAA050JSZ | 5.6 @ 250 MHz | 5 | 75 @ 1000 MHz | 4760 | 0.08 | 600 |
| xx336RAA060JSZ | 6.8 @ 250 MHz | 5 | 54 @ 1000 MHz | 4440 | 0.11 | 600 |
| xx336RAA070JSZ | 7.5 @ 250 MHz | 5 | 56 @ 1000 MHz | 3840 | 0.14 | 600 |
| xx336RAA080_SZ | 8.2 @ 250 MHz | 5.2 | 63 @ 1000 MHz | 3560 | 0.12 | 600 |
| xx336RAA100_SZ | 10 @ 250 MHz | 5.2 | 57 @ 500 MHz | 3460 | 0.10 | 600 |
| xx336RAA120_SZ | 12 @ 250 MHz | 5.2 | 46 @ 500 MHz | 3180 | 0.15 | 600 |
| xx336RAA150_SZ | 15 @ 250 MHz | 5.2 | 41 @ 500 MHz | 2560 | 0.17 | 600 |
| xx336RAA180_SZ | 18 @ 250 MHz | 5.2 | 48 @ 500 MHz | 2480 | 0.20 | 600 |
| xx336RAA220_SZ | 22 @ 250 MHz | 5.2 | 59 @ 500 MHz | 2080 | 0.22 | 500 |
| xx336RAA240_SZ | 24 @ 250 MHz | 5.2 | 59 @ 500 MHz | 1920 | 0.22 | 500 |
| xx336RAA270_SZ | 27 @ 250 MHz | 5.2 | 56 @ 500 MHz | 2060 | 0.25 | 500 |
| xx336RAA330_SZ | 33 @ 250 MHz | 5.2,1 | 64 @ 500 MHz | 1720 | 0.27 | 500 |
| xx336RAA360_SZ | 36 @ 250 MHz | 5.2,1 | 57 @ 500 MHz | 1520 | 0.27 | 500 |
| xx336RAA390_SZ | 39 @ 250 MHz | 5.2,1 | 44 @ 250 MHz | 1600 | 0.29 | 500 |
| xx336RAA430_SZ | 43 @ 200 MHz | 5.2,1 | 45 @ 250 MHz | 1440 | 0.34 | 500 |
| xx336RAA470_SZ | 47 @ 200 MHz | 5.2,1 | 44 @ 250 MHz | 1360 | 0.31 | 470 |
| xx336RAA560_SZ | 56 @ 200 MHz | 5.2,1 | 49 @ 250 MHz | 1280 | 0.34 | 460 |
| xx336RAA680_SZ | 68 @ 200 MHz | 5.2,1 | 52 @ 250 MHz | 1200 | 0.38 | 440 |
| xx336RAA820_SZ | 82 @ 150 MHz | 5.2,1 | 51 @ 250 MHz | 1060 | 0.42 | 400 |
| xx336RAA910_SZ | 91 @ 150 MHz | 5.2,1 | 49 @ 250 MHz | 1060 | 0.48 | 390 |
| xx336RAA101_SZ | 100 @ 150 MHz | 5.2,1 | 54 @ 250 MHz | 1000 | 0.46 | 390 |
| xx336RAA111_SZ | 110 @ 150 MHz | 5.2 | 38 @ 250 MHz | 880 | 0.48 | 390 |
| xx336RAA121_SZ | 120 @ 150 MHz | 5.2,1 | 52 @ 250 MHz | 880 | 0.51 | 380 |
| xx336RAA151_SZ | 150 @ 100 MHz | 5.2,1 | 33 @ 100 MHz | 730 | 0.56 | 340 |
| xx336RAA181_SZ | 180 @ 100 MHz | 5.2,1 | 37 @ 100 MHz | 730 | 0.64 | 340 |
| xx336RAA221_SZ | 220 @ 100 MHz | 5.2 | 36 @ 100 MHz | 650 | 0.70 | 330 |
| xx336RAA241_SZ | 240 @ 100 MHz | 5.2 | 36 @ 100 MHz | 610 | 1.00 | 270 |
| xx336RAA271_SZ | 270 @ 100 MHz | 5.2 | 36 @ 100 MHz | 580 | 1.00 | 260 |
| xx336RAA331_SZ | 330 @ 100 MHz | 5.2 | 36 @ 100 MHz | 520 | 1.40 | 230 |
| xx336RAA391_SZ | 390 @ 100 MHz | 5.2 | 34 @ 100 MHz | 480 | 1.50 | 210 |

AE MS
ML ST **336RAD (0805)**

| Part number | Inductance (nH) | Percent tolerance* | Q min | SRF min (MHz) | DCR max (Ohms) | I _{max} (mA) |
|----------------|-----------------|--------------------|---------------|---------------|----------------|-----------------------|
| | | | | | | |
| xx336RAD5N6JSZ | 5.6 @ 250 MHz | 5 | 83 @ 1000 MHz | 4.88 | 0.035 | 1.9 |
| xx336RAD6N2JSZ | 6.2 @ 250 MHz | 5 | 80 @ 1000 MHz | 4.55 | 0.035 | 1.8 |
| xx336RAD12NJSZ | 12 @ 250 MHz | 5 | 52 @ 500 MHz | 2.80 | 0.045 | 1.6 |
| xx336RAD16N_SZ | 16 @ 250 MHz | 5.2 | 72 @ 500 MHz | 2.40 | 0.060 | 1.4 |
| xx336RAD18N_SZ | 18 @ 250 MHz | 5.2 | 70 @ 500 MHz | 2.20 | 0.060 | 1.4 |
| xx336RAD20N_SZ | 20 @ 250 MHz | 5.2 | 54 @ 250 MHz | 2.05 | 0.060 | 1.4 |
| xx336RAD27N_SZ | 27 @ 250 MHz | 5.2 | 58 @ 250 MHz | 2.00 | 0.070 | 1.3 |
| xx336RAD30N_SZ | 30 @ 250 MHz | 5.2 | 50 @ 250 MHz | 1.74 | 0.095 | 1.1 |
| xx336RAD39N_SZ | 39 @ 250 MHz | 5.2 | 53 @ 250 MHz | 1.60 | 0.110 | 1.0 |
| xx336RAD48N_SZ | 48 @ 200 MHz | 5.2 | 44 @ 150 MHz | 1.40 | 0.095 | 1.1 |
| xx336RAD51N_SZ | 51 @ 200 MHz | 5.2 | 36 @ 150 MHz | 1.28 | 0.120 | 0.9 |

Which version of these parts should you use?

| | |
|-----------|---|
| AE | Passes NASA low outgassing specifications Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| MS | Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| ML | Extended temperature applications: -55 to 155°C Ambient |
| ST | Low temperature applications: -55 to 140°C Ambient Extended qualification |

AE MS
ML ST **336RAM (0805)**

| Part number | Inductance ±5% (nH) | Q min | Impedance typ (Ohms) | SRF min (MHz) | DCR max (Ohms) | I _{max} (mA) |
|----------------|---------------------|--------------|----------------------|---------------|----------------|-----------------------|
| | | | | | | |
| xx336RAM681JRZ | 0.68 @ 7.9 MHz | 15 @ 7.9 MHz | 430 @ 100 MHz | 340 | 0.30 | 410 |
| xx336RAM102JRZ | 1.0 @ 7.9 MHz | 13 @ 7.9 MHz | 670 @ 100 MHz | 280 | 0.39 | 360 |
| xx336RAM122JRZ | 1.2 @ 7.9 MHz | 15 @ 7.9 MHz | 860 @ 100 MHz | 300 | 0.64 | 260 |
| xx336RAM152JRZ | 1.5 @ 7.9 MHz | 16 @ 7.9 MHz | 1000 @ 100 MHz | 225 | 0.74 | 250 |
| xx336RAM182JRZ | 1.8 @ 7.9 MHz | 16 @ 7.9 MHz | 1360 @ 100 MHz | 240 | 0.98 | 210 |
| xx336RAM222JRZ | 2.2 @ 7.9 MHz | 15 @ 7.9 MHz | 840 @ 50 MHz | 90 | 0.98 | 190 |
| xx336RAM272JRZ | 2.7 @ 7.9 MHz | 15 @ 7.9 MHz | 1050 @ 50MHz | 80 | 1.16 | 190 |
| xx336RAM332JRZ | 3.3 @ 7.9 MHz | 15 @ 7.9 MHz | 1670 @ 50 MHz | 65 | 1.20 | 190 |
| xx336RAM472JRZ | 4.7 @ 7.9 MHz | 14 @ 7.9 MHz | 950 @ 25 MHz | 40 | 1.50 | 170 |
| xx336RAM682JRZ | 6.8 @ 7.9 MHz | 14 @ 7.9 MHz | 450 @ 10MHz | 28 | 1.90 | 150 |
| xx336RAM103JRZ | 10 @ 2.5 MHz | 14 @ 2.5 MHz | 740 @ 10 MHz | 18 | 2.20 | 130 |
| xx336RAM153JRZ | 15 @ 2.5 MHz | 13 @ 2.5 MHz | 1300 @ 10MHz | 15 | 4.25 | 90 |
| xx336RAM223JRZ | 22 @ 2.5 MHz | 13 @ 2.5 MHz | 1620 @ 10 MHz | 15 | 6.70 | 75 |

AE MS
ML ST **336RAB (0805) High L**

| Part number | Inductance (µH) | Percent tolerance* | Q min | SRF min (MHz) | DCR max (Ohms) | I _{max} (A) |
|----------------|-----------------|--------------------|--------------|---------------|----------------|----------------------|
| | | | | | | |
| ST336RAB111_LZ | 0.110 @ 7.9 MHz | 5.2 | 19 @ 7.9 MHz | 1200 | 0.05 | 2.0 |
| ST336RAB471_LZ | 0.470 @ 7.9 MHz | 5.2 | 19 @ 7.9 MHz | 500 | 0.31 | 0.720 |
| ST336RAB681_LZ | 0.680 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 400 | 0.46 | 0.590 |
| ST336RAB102_LZ | 1.0 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 340 | 0.69 | 0.500 |
| ST336RAB122_LZ | 1.2 @ 7.9 MHz | 5.2 | 15 @ 7.9 MHz | 280 | 1.20 | 0.400 |
| ST336RAB152_LZ | 1.5 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 275 | 1.03 | 0.490 |
| ST336RAB182_LZ | 1.8 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 246 | 1.15 | 0.410 |
| ST336RAB222_LZ | 2.2 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 106 | 1.28 | 0.365 |
| ST336RAB272_LZ | 2.7 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 105 | 1.48 | 0.350 |
| ST336RAB332_LZ | 3.3 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 83 | 1.57 | 0.330 |
| ST336RAB392_LZ | 3.9 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 52 | 1.70 | 0.300 |
| ST336RAB472_LZ | 4.7 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 50 | 1.87 | 0.280 |
| ST336RAB682_LZ | 6.8 @ 7.9 MHz | 5.2 | 20 @ 7.9 MHz | 35 | 2.25 | 0.260 |
| ST336RAB822_LZ | 8.2 @ 2.5 MHz | 5.2 | 18 @ 2.5 MHz | 27 | 2.55 | 0.250 |
| ST336RAB103_LZ | 10 @ 2.5 MHz | 5.2 | 18 @ 2.5 MHz | 21 | 3.45 | 0.200 |
| ST336RAB153_LZ | 15 @ 2.5 MHz | 5.2 | 18 @ 2.5 MHz | 17 | 5.03 | 0.180 |
| ST336RAB223_LZ | 22 @ 2.5 MHz | 5.2 | 18 @ 2.5 MHz | 13 | 6.18 | 0.150 |
| ST336RAB273_LZ | 27 @ 2.5 MHz | 5.2 | 15 @ 2.5 MHz | 11 | 11.04 | 0.120 |

* When ordering, please replace underscore in part number with the proper tolerance code:
F = 1%, G = 2%, J = 5%. Specify the version desired (e.g. AE336RAA101GSZ for an outgassing compliant part with a 2% tolerance.)

AE MS ML ST 376RAA (1206)

| Part number | Inductance (nH) | Percent tolerance* | Q min | SRF min (MHz) | DCR max (Ohms) | I _{max} (mA) |
|----------------|-----------------|--------------------|--------------|---------------|----------------|-----------------------|
| xx376RAA030JSZ | 3.3 @ 100 MHz | 5 | 29 @ 300 MHz | >5000 | 0.050 | 900 |
| xx376RAA060JSZ | 6.8 @ 100 MHz | 5 | 24 @ 300 MHz | 4380 | 0.070 | 900 |
| xx376RAA100JSZ | 10 @ 100 MHz | 5 | 31 @ 300 MHz | 3440 | 0.080 | 900 |
| xx376RAA120_SZ | 12 @ 100 MHz | 5.2 | 40 @ 300 MHz | 2560 | 0.100 | 900 |
| xx376RAA150_SZ | 15 @ 100 MHz | 5.2 | 38 @ 300 MHz | 2520 | 0.100 | 900 |
| xx376RAA180_SZ | 18 @ 100 MHz | 5.2 | 50 @ 300 MHz | 2260 | 0.100 | 900 |
| xx376RAA220_SZ | 22 @ 100 MHz | 5.2 | 50 @ 300 MHz | 2120 | 0.100 | 900 |
| xx376RAA270_SZ | 27 @ 100 MHz | 5.2 | 50 @ 300 MHz | 1800 | 0.110 | 900 |
| xx376RAA330_SZ | 33 @ 100 MHz | 5.2 | 55 @ 300 MHz | 1800 | 0.110 | 900 |
| xx376RAA390_SZ | 39 @ 100 MHz | 5.2 | 55 @ 300 MHz | 1800 | 0.120 | 900 |
| xx376RAA470_SZ | 47 @ 100 MHz | 5.2 | 55 @ 300 MHz | 1500 | 0.130 | 900 |
| xx376RAA560_SZ | 56 @ 100 MHz | 5.2,1 | 55 @ 300 MHz | 1400 | 0.140 | 900 |
| xx376RAA680_SZ | 68 @ 100 MHz | 5.2,1 | 48 @ 150 MHz | 1180 | 0.260 | 600 |
| xx376RAA820_SZ | 82 @ 100 MHz | 5.2,1 | 52 @ 150 MHz | 1120 | 0.210 | 700 |
| xx376RAA101_SZ | 100 @ 100 MHz | 5.2,1 | 55 @ 150 MHz | 1040 | 0.260 | 650 |
| xx376RAA121_SZ | 120 @ 100 MHz | 5.2,1 | 53 @ 150 MHz | 1040 | 0.260 | 620 |
| xx376RAA151_SZ | 150 @ 100 MHz | 5.2,1 | 53 @ 150 MHz | 920 | 0.310 | 720 |
| xx376RAA181_SZ | 180 @ 50 MHz | 5.2,1 | 53 @ 150 MHz | 780 | 0.430 | 580 |
| xx376RAA221_SZ | 220 @ 50 MHz | 5.2,1 | 51 @ 150 MHz | 700 | 0.500 | 550 |
| xx376RAA271_SZ | 270 @ 50 MHz | 5.2,1 | 53 @ 150 MHz | 630 | 0.560 | 470 |
| xx376RAA331_SZ | 330 @ 50 MHz | 5.2,1 | 30 @ 35 MHz | 570 | 0.620 | 370 |
| xx376RAA391_SZ | 390 @ 50 MHz | 5.2,1 | 31 @ 35 MHz | 540 | 0.750 | 370 |
| xx376RAA471_SZ | 470 @ 50 MHz | 5.2,1 | 31 @ 35 MHz | 500 | 1.30 | 320 |
| xx376RAA561_SZ | 560 @ 35 MHz | 5.2,1 | 31 @ 35 MHz | 440 | 1.34 | 300 |
| xx376RAA621_SZ | 620 @ 35 MHz | 5.2,1 | 32 @ 35 MHz | 440 | 1.60 | 270 |
| xx376RAA681_SZ | 680 @ 35 MHz | 5.2,1 | 32 @ 35 MHz | 410 | 1.58 | 260 |
| xx376RAA751_SZ | 750 @ 35 MHz | 5.2,1 | 32 @ 35 MHz | 400 | 2.20 | 220 |
| xx376RAA821_SZ | 820 @ 35 MHz | 5.2,1 | 31 @ 35 MHz | 370 | 1.82 | 240 |
| xx376RAA911_SZ | 910 @ 35 MHz | 5.2,1 | 31 @ 35 MHz | 350 | 2.85 | 190 |
| xx376RAA102_SZ | 1000 @ 35 MHz | 5.2,1 | 32 @ 35 MHz | 360 | 2.80 | 190 |
| xx376RAA122_SZ | 1200 @ 35 MHz | 5.2,1 | 32 @ 35 MHz | 320 | 3.20 | 170 |

AE MS ML ST 450RAA (1812)

| Part number | Inductance (µH) | Percent tolerance* | Q min | SRF min (MHz) | DCR max (Ohms) | I _{max} (mA) |
|----------------|-----------------|--------------------|-------------|---------------|----------------|-----------------------|
| xx450RAA102JSZ | 1.0 @ 7.9 MHz | 5 | 59 @ 50 MHz | 260 | 1.1 | 530 |
| xx450RAA122JSZ | 1.2 @ 7.9 MHz | 5 | 54 @ 50 MHz | 230 | 1.2 | 480 |
| xx450RAA152_SZ | 1.5 @ 7.9 MHz | 5.2 | 57 @ 50 MHz | 210 | 1.6 | 430 |
| xx450RAA182JSZ | 1.8 @ 7.9 MHz | 5 | 57 @ 50 MHz | 190 | 2.0 | 380 |
| xx450RAA222JSZ | 2.2 @ 7.9 MHz | 5 | 52 @ 50 MHz | 170 | 2.2 | 340 |
| xx450RAA272JSZ | 2.7 @ 7.9 MHz | 5 | 53 @ 50 MHz | 160 | 3.2 | 300 |
| xx450RAA332JSZ | 3.3 @ 7.9 MHz | 5 | 53 @ 50 MHz | 145 | 3.8 | 270 |
| xx450RAA392_SZ | 3.9 @ 7.9 MHz | 5.2 | 53 @ 50 MHz | 130 | 5.0 | 240 |
| xx450RAA472JSZ | 4.7 @ 7.9 MHz | 5 | 32 @ 10 MHz | 115 | 5.4 | 230 |

* When ordering, please replace underscore in part number with the proper tolerance code: F = 1%, G = 2%, J = 5%. Specify the version desired (e.g. AE376RAA101GSZ for an outgassing compliant part with a 2% tolerance.)

Which version of these parts should you use?

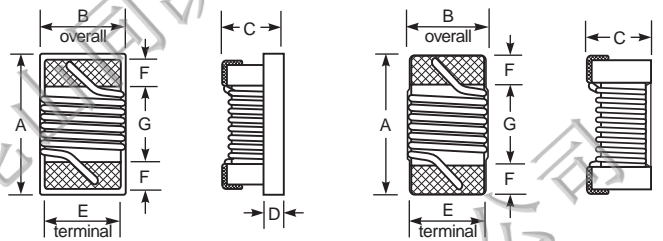
- AE** Passes NASA low outgassing specifications
Extended temperature applications: -55 to 155°C Ambient
Leach resistant tin-lead terminations
- MS** Extended temperature applications: -55 to 155°C Ambient
Leach resistant tin-lead terminations
- ML** Extended temperature applications: -55 to 155°C Ambient
- ST** Low temperature applications: -55 to 140°C Ambient
Extended qualification

AE MS ML ST 450RAB (1812) High L

| Part number | Inductance (µH) | Q min | SRF min (MHz) | DCR max (Ohms) | I _{max} (mA) |
|-----------------|-----------------|---------------|---------------|----------------|-----------------------|
| xx450RAB-123JSZ | 12 @ 2.5 MHz | 22 @ 0.79 MHz | 55 | 2.0 | 280 |
| xx450RAB-153JSZ | 15 @ 2.5 MHz | 22 @ 0.79 MHz | 45 | 2.5 | 260 |
| xx450RAB-183JSZ | 18 @ 2.5 MHz | 24 @ 0.79 MHz | 37 | 2.8 | 240 |
| xx450RAB-223JSZ | 22 @ 2.5 MHz | 20 @ 0.79 MHz | 32 | 3.2 | 210 |
| xx450RAB-273JSZ | 27 @ 2.5 MHz | 24 @ 0.79 MHz | 27 | 3.6 | 200 |
| xx450RAB-333JSZ | 33 @ 2.5 MHz | 22 @ 0.79 MHz | 23 | 4.0 | 190 |
| xx450RAB-393JSZ | 39 @ 2.5 MHz | 20 @ 0.79 MHz | 19 | 4.5 | 185 |
| xx450RAB-473JSZ | 47 @ 2.5 MHz | 24 @ 0.79 MHz | 16 | 5.0 | 180 |
| xx450RAB-563JSZ | 56 @ 2.5 MHz | 22 @ 0.79 MHz | 13 | 5.5 | 170 |
| xx450RAB-683JSZ | 68 @ 2.5 MHz | 24 @ 0.79 MHz | 10 | 6.0 | 150 |
| xx450RAB-823JSZ | 82 @ 2.5 MHz | 24 @ 0.79 MHz | 9.0 | 7.0 | 135 |
| xx450RAB-104JSZ | 100 @ 2.5 MHz | 24 @ 0.79 MHz | 8.5 | 8.0 | 135 |
| xx450RAB-124JSZ | 120 @ 0.79 MHz | 25 @ 0.79 MHz | 8.5 | 11.5 | 110 |
| xx450RAB-154JSZ | 150 @ 0.79 MHz | 23 @ 0.79 MHz | 8.5 | 13.0 | 100 |
| xx450RAB-184JSZ | 180 @ 0.79 MHz | 24 @ 0.79 MHz | 8.0 | 14.2 | 85 |
| xx450RAB-224JSZ | 220 @ 0.79 MHz | 23 @ 0.79 MHz | 6.0 | 16.2 | 80 |
| xx450RAB-274JSZ | 270 @ 0.79 MHz | 23 @ 0.79 MHz | 5.0 | 20.5 | 75 |
| xx450RAB-334JSZ | 330 @ 0.79 MHz | 24 @ 0.79 MHz | 4.5 | 22.5 | 70 |
| xx450RAB-394JSZ | 390 @ 0.79 MHz | 14 @ 0.25 MHz | 3.5 | 24.5 | 65 |
| xx450RAB-474JSZ | 470 @ 0.79 MHz | 15 @ 0.25 MHz | 3.0 | 26.5 | 65 |
| xx450RAB-564JSZ | 560 @ 0.79 MHz | 13 @ 0.25 MHz | 2.0 | 28.5 | 65 |
| xx450RAB-684JSZ | 680 @ 0.79 MHz | 13 @ 0.25 MHz | 1.9 | 38.5 | 60 |
| xx450RAB-824JSZ | 820 @ 0.79 MHz | 13 @ 0.25 MHz | 1.6 | 41.0 | 50 |
| xx450RAB-105JSZ | 1000 @ 0.79 MHz | 15 @ 0.25 MHz | 1.5 | 44.0 | 50 |

312RAA, 312RAG, 312RAM, 319RAD, 336RAA, 336RAB, 336RAD, 376RAA, 413RAA, 413RAB, 413RAM, 450RAA, 450RAB, 450RAB

312RAP



Dimensions

| Series | A max | B max | C max | D ref | E | F | G |
|--------|------------|------------|------------|------------|------------|------------|------------|
| 312RAA | 0.071 1.80 | 0.044 1.12 | 0.040 1.02 | 0.015 0.38 | 0.030 0.76 | 0.013 0.33 | 0.034 1.22 |
| 312RAG | 0.069 1.75 | 0.043 1.09 | 0.037 0.94 | 0.015 0.38 | 0.029 0.74 | 0.011 0.28 | 0.048 0.86 |
| 312RAM | 0.071 1.80 | 0.044 1.12 | 0.036 0.91 | 0.015 0.38 | 0.030 0.76 | 0.013 0.33 | 0.034 0.86 |
| 312RAP | 0.071 1.80 | 0.047 1.19 | 0.037 0.94 | 0.010 0.25 | 0.030 0.76 | 0.011 0.28 | 0.038 0.97 |
| 319RAD | 0.073 1.85 | 0.054 1.37 | 0.047 1.19 | 0.025 0.64 | 0.040 1.02 | 0.013 0.33 | 0.034 0.86 |
| 336RAA | 0.090 2.29 | 0.068 1.73 | 0.060 1.52 | 0.020 0.51 | 0.050 1.27 | 0.020 0.51 | 0.040 1.02 |
| 336RAB | 0.090 2.29 | 0.075 1.91 | 0.063 1.60 | 0.020 0.51 | 0.050 1.27 | 0.020 0.51 | 0.040 1.02 |
| 336RAD | 0.090 2.29 | 0.068 1.73 | 0.060 1.52 | 0.020 0.51 | 0.050 1.27 | 0.020 0.51 | 0.040 1.02 |
| 376RAA | 0.140 3.56 | 0.085 2.16 | 0.060 1.52 | 0.020 0.51 | 0.056 1.42 | 0.020 0.51 | 0.080 2.03 |
| 413RAA | 0.115 2.92 | 0.110 2.79 | 0.080 2.03 | 0.020 0.51 | 0.080 2.03 | 0.020 0.51 | 0.060 1.52 |
| 413RAB | 0.115 2.92 | 0.110 2.79 | 0.080 2.03 | 0.020 0.51 | 0.080 2.03 | 0.020 0.51 | 0.060 1.52 |
| 413RAD | 0.115 2.92 | 0.110 2.79 | 0.080 2.03 | 0.020 0.51 | 0.080 2.03 | 0.020 0.51 | 0.060 1.52 |
| 413RAM | 0.115 2.92 | 0.110 2.79 | 0.075 1.91 | 0.020 0.51 | 0.080 2.03 | 0.020 0.51 | 0.060 1.52 |
| 450RAA | 0.195 4.95 | 0.150 3.81 | 0.135 3.43 | 0.070 1.78 | 0.100 2.54 | 0.025 0.64 | 0.128 3.25 |
| 450RAB | 0.195 4.95 | 0.150 3.81 | 0.135 3.43 | 0.070 1.78 | 0.100 2.54 | 0.025 0.64 | 0.128 3.25 |

"Spring" Air Core Inductors

S-parameters & T-Line models
Available on our web site.

These tight tolerance surface mount "spring" inductors combine the exceptionally high Q of an air wound coil with the convenience of surface mounting. Their flat top makes them suitable for automatic placement and reflow or vapor phase processing. Solder coated leads ensure reliable soldering.

AT AE MS ML ST 350/394RAT

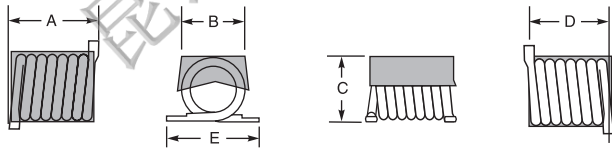
| Part number | Turns | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | Imax (A) |
|----------------|-------|--------|--------------------|-------|-----------------|---------------|----------------|----------|
| xx350RAT1N7KSZ | 2 | 1.65 | 10 | 100 | 800 | 10.0 | 4.0 | 1.6 |
| xx350RAT2N6JSZ | 3 | 2.55 | 5 | 100 | 800 | 8.2 | 5.0 | 1.6 |
| xx350RAT3N9_SZ | 4 | 3.85 | 5.2 | 100 | 800 | 7.5 | 6.0 | 1.6 |
| xx350RAT5N4_SZ | 5 | 5.40 | 5.2 | 100 | 800 | 7.0 | 8.0 | 1.6 |
| xx394RAT5N6_SZ | 6 | 5.60 | 5.2 | 100 | 800 | 6.5 | 9.0 | 1.6 |
| xx394RAT7N2_SZ | 7 | 7.15 | 5.2 | 100 | 800 | 6.0 | 10 | 1.6 |
| xx394RAT8N8_SZ | 8 | 8.80 | 5.2 | 100 | 800 | 6.0 | 12 | 1.6 |
| xx394RAT9N9_SZ | 9 | 9.85 | 5.2 | 100 | 800 | 5.2 | 13 | 1.6 |
| xx394RAT13N_SZ | 10 | 12.55 | 5.2 | 100 | 800 | 4.6 | 14 | 1.6 |

AT AE MS ML ST 439/470RAT

| Part number | Turns | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | Imax (A) |
|----------------|-------|--------|--------------------|-------|-----------------|---------------|----------------|----------|
| xx439RAT2N5KSZ | 1 | 2.5 | 10 | 145 | 150 | 12.5 | 1.1 | 4.0 |
| xx439RAT5N0_SZ | 2 | 5.0 | 5.2 | 140 | 150 | 6.5 | 1.8 | 4.0 |
| xx439RAT8N0_SZ | 3 | 8.0 | 5.2 | 140 | 150 | 5.0 | 2.6 | 4.0 |
| xx439RAT13N_SZ | 4 | 12.5 | 5.2 | 137 | 150 | 3.3 | 3.4 | 4.0 |
| xx439RAT19N_SZ | 5 | 18.5 | 5.2 | 132 | 150 | 2.5 | 3.9 | 4.0 |
| xx470RAT18N_SZ | 6 | 17.5 | 5.2 | 100 | 150 | 2.2 | 4.5 | 4.0 |
| xx470RAT22N_SZ | 7 | 22.0 | 5.2 | 102 | 150 | 2.1 | 5.2 | 4.0 |
| xx470RAT28N_SZ | 8 | 28.0 | 5.2 | 105 | 150 | 1.8 | 6.0 | 4.0 |
| xx470RAT36N_SZ | 9 | 35.5 | 5.2 | 112 | 150 | 1.5 | 6.8 | 4.0 |
| xx470RAT43N_SZ | 10 | 43.0 | 5.2 | 106 | 150 | 1.2 | 7.9 | 4.0 |

AT AE MS ML ST 426/446RAT Low Profile

| Part number | Turns | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | Imax (A) |
|----------------|-------|--------|--------------------|-------|-----------------|---------------|----------------|----------|
| xx426RAT5N5_SZ | 3 | 5.5 | 5.2 | 115 | 250 | 5.0 | 2.6 | 4.0 |
| xx426RAT9N0_SZ | 4 | 9.0 | 5.2 | 120 | 250 | 4.0 | 3.4 | 4.0 |
| xx426RAT13N_SZ | 5 | 13.0 | 5.2 | 100 | 250 | 3.0 | 3.9 | 4.0 |
| xx446RAT16N_SZ | 7 | 16.0 | 5.2 | 110 | 250 | 3.0 | 5.2 | 4.0 |
| xx446RAT18N_SZ | 8 | 18.0 | 5.2 | 110 | 250 | 2.9 | 6.0 | 4.0 |
| xx446RAT23N_SZ | 9 | 23.0 | 5.2 | 110 | 250 | 2.6 | 6.8 | 4.0 |
| xx446RAT27N_SZ | 10 | 27.0 | 5.2 | 110 | 250 | 2.3 | 7.9 | 4.0 |



Dimensions

| Series | A max | B | C max | D | E max |
|--------|-------------|-------------------------|------------|-------------------------|------------|
| 350RAT | 0.095 2,41 | 0.055 ±0.010 1,40 ±0.25 | 0.060 1,52 | 0.072 ±0.010 1,83 ±0.25 | 0.135 3,43 |
| 394RAT | 0.165 4,19 | 0.055 ±0.010 1,40 ±0.25 | 0.062 1,58 | 0.144 ±0.012 3,66 ±0.30 | 0.135 3,43 |
| 426RAT | 0.155 3,94 | 0.135 3,43 | 0.079 2,01 | 0.115 ±0.010 2,92 ±0.25 | 0.165 4,19 |
| 446RAT | 0.270 6,86 | 0.135 3,43 | 0.079 2,01 | 0.230 ±0.015 5,84 ±0.25 | 0.165 4,19 |
| 475RAT | 0.195 4,95 | 0.140 ±0.010 3,56 ±0.25 | 0.165 4,20 | 0.170 ±0.015 4,32 ±0.39 | 0.250 6,35 |
| 536RAT | 0.415 10,55 | 0.240 ±0.015 6,10 ±0.38 | 0.235 5,97 | 0.314 ±0.020 7,98 ±0.51 | 0.260 6,60 |
| 439RAT | 0.155 3,94 | 0.110 ±0.010 2,80 ±0.25 | 0.124 3,15 | 0.115 ±0.010 2,92 ±0.25 | 0.175 4,45 |
| 470RAT | 0.270 6,86 | 0.110 ±0.010 2,80 ±0.25 | 0.124 3,15 | 0.230 ±0.015 5,84 ±0.25 | 0.175 4,45 |

Which version of these parts should you use?

| | |
|-----------|---|
| AT | Passes NASA low outgassing specifications Ultra-extended temperature applications: -60 to 200°C Ambient Leach resistant tin-lead terminations |
| AE | Passes NASA low outgassing specifications Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| MS | Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| ML | Extended temperature applications: -55 to 155°C Ambient |
| ST | Low temperature applications: -55 to 140°C Ambient Extended qualification |

AT AE MS ML ST 475RAT

| Part number | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | Imax (A) |
|----------------|--------|--------------------|-------|-----------------|---------------|----------------|----------|
| xx475RAT22N_SZ | 22 | 5.2 | 100 | 150 | 3.2 | 4.2 | 3.0 |
| xx475RAT27N_SZ | 27 | 5.2 | 100 | 150 | 2.7 | 4.0 | 3.5 |
| xx475RAT33N_SZ | 33 | 5.2 | 100 | 150 | 2.5 | 4.8 | 3.0 |
| xx475RAT39N_SZ | 39 | 5.2 | 100 | 150 | 2.1 | 4.4 | 3.0 |
| xx475RAT47N_SZ | 47 | 5.2 | 100 | 150 | 2.1 | 5.6 | 3.0 |
| xx475RAT56N_SZ | 56 | 5.2 | 100 | 150 | 1.5 | 6.2 | 3.0 |
| xx475RAT68N_SZ | 68 | 5.2 | 100 | 150 | 1.5 | 8.2 | 2.5 |
| xx475RAT82N_SZ | 82 | 5.2 | 100 | 150 | 1.3 | 9.4 | 2.5 |
| xx475RATR10_SZ | 100 | 5.2 | 100 | 150 | 1.2 | 12.3 | 1.7 |
| xx475RATR12_SZ | 120 | 5.2 | 100 | 150 | 1.1 | 17.3 | 1.5 |
| xx475RATR15_SZ | 150 | 5.2 | 100 | 150 | 0.75 | 33.0 | 1.2 |

AT AE MS ML ST 536RAT

| Part number | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | Imax (A) |
|----------------|--------|--------------------|-------|-----------------|---------------|----------------|----------|
| AT536RAT90N_SZ | 90 | 5.2 | 95 | 50 | 1.140 | 15 | 3.5 |
| AT536RATR11_SZ | 111 | 5.2 | 87 | 50 | 1.020 | 15 | 3.5 |
| AT536RATR13_SZ | 130 | 5.2 | 87 | 50 | 0.900 | 20 | 3.0 |
| AT536RATR17_SZ | 169 | 5.2 | 95 | 50 | 0.875 | 25 | 3.0 |
| AT536RATR21_SZ | 206 | 5.2 | 95 | 50 | 0.800 | 30 | 3.0 |
| AT536RATR22_SZ | 222 | 5.2 | 92 | 50 | 0.730 | 35 | 3.0 |
| AT536RATR25_SZ | 246 | 5.2 | 95 | 50 | 0.685 | 35 | 3.0 |
| AT536RATR31_SZ | 307 | 5.2 | 95 | 50 | 0.660 | 35 | 3.0 |
| AT536RATR38_SZ | 380 | 5.2 | 95 | 50 | 0.590 | 50 | 2.5 |
| AT536RATR42_SZ | 422 | 5.2 | 95 | 50 | 0.540 | 60 | 2.5 |
| AT536RATR49_SZ | 491 | 5.2 | 95 | 50 | 0.535 | 65 | 2.0 |
| AT536RATR54_SZ | 538 | 5.2 | 87 | 50 | 0.490 | 90 | 2.0 |

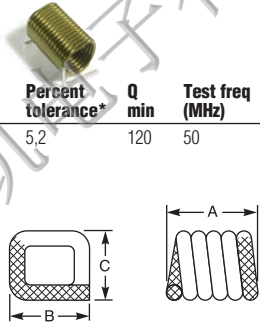
* When ordering, please replace underscore in part number with the proper tolerance code: G = 2%, J = 5%. Specify the version desired (e.g. AT446RAT27NGSZ for an ultra high-temperature part with a 2% tolerance.)

AT AE MS **392RAS**
ML ST

| Part number | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | I _{max} (A) |
|----------------|--------|--------------------|-------|-----------------|---------------|----------------|----------------------|
| xx392RAS8N1_SZ | 8.1 | 5.2 | 100 | 400 | 4.0 | 6.0 | 4.0 |
| xx392RAS12N_SZ | 12.1 | 5.2 | 100 | 400 | 3.4 | 7.0 | 4.0 |
| xx392RAS17N_SZ | 16.6 | 5.2 | 100 | 400 | 2.9 | 8.0 | 4.0 |
| xx392RAS22N_SZ | 21.5 | 5.2 | 100 | 400 | 2.6 | 9.0 | 4.0 |
| xx392RAS27N_SZ | 27.3 | 5.2 | 100 | 400 | 2.3 | 10.0 | 4.0 |

AT AE MS **573RAS**
ML ST

| Part number | L (nH) | Percent tolerance* | Q min | Test freq (MHz) | SRF min (GHz) | DCR max (mOhm) | I _{max} (A) |
|----------------|--------|--------------------|-------|-----------------|---------------|----------------|----------------------|
| xx573RAS501_LZ | 500 | 5.2 | 120 | 50 | 0.485 | 16.5 | 3.5 |

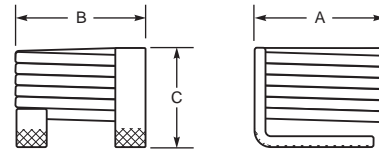


Dimensions

| Series | A | B | C |
|--------|---------------|---------------|-------------|
| 392RAS | 0.058 - 0.117 | 1,473 - 2,972 | 0.084 2,134 |
| 573RAS | 0.550 14,10 | | 0.295 7,49 |

AT AE MS **561/615/643RAU**
ML ST

| Part number | Inductance ±20% (nH) | Q typ | SRF min (GHz) | DCR max (mOhm) | I _{max} (A) 20° rise |
|----------------|----------------------|---------------|---------------|----------------|-------------------------------|
| xx561RAU23NMSZ | 23.5 | 75 @ 100 MHz | 923 | 1.20 | 26.0 |
| xx561RAU46NMSZ | 46.5 | 142 @ 100 MHz | 526 | 1.62 | 25.5 |
| xx561RAU79NMSZ | 79.0 | 179 @ 100 MHz | 386 | 2.11 | 25.0 |
| xx561RAU111MSZ | 111 | 165 @ 100 MHz | 382 | 2.73 | 22.0 |
| xx561RAU141MSZ | 146 | 145 @ 100 MHz | 433 | 3.33 | 19.3 |
| xx615RAU22NMSZ | 22.0 | 91 @ 100 MHz | 918 | 0.55 | 57.0 |
| xx615RAU42NMSZ | 42.0 | 194 @ 100 MHz | 557 | 0.77 | 52.0 |
| xx615RAU66NMSZ | 66.0 | 187 @ 100 MHz | 480 | 0.99 | 48.0 |
| xx615RAU90NMSZ | 90.0 | 76 @ 100 MHz | 444 | 1.21 | 45.0 |
| xx615RAU111MSZ | 117 | 67 @ 100 MHz | 399 | 1.43 | 44.0 |
| xx643RAU33NMSZ | 33 | 190 @ 100 MHz | 620 | 0.74 | 43.0 |
| xx643RAU66NMSZ | 66 | 132 @ 100 MHz | 413 | 1.00 | 42.5 |
| xx643RAU111MSZ | 108 | 167 @ 100 MHz | 320 | 1.34 | 42.0 |
| xx643RAU151MSZ | 155 | 163 @ 100 MHz | 296 | 1.60 | 39.7 |
| xx643RAU201MSZ | 202 | 120 @ 100 MHz | 262 | 1.82 | 35.8 |
| xx643RAU251MSZ | 257 | 120 @ 100 MHz | 230 | 2.15 | 34.5 |



Dimensions

| Series | A | B | C |
|--------|-------------|-------------|---------------------------|
| 561RAU | 0.394 10,0 | 0.394 10,0 | 0.142 - 0.240 3,60 - 6,10 |
| 615RAU | 0.472 12,0 | 0.453 11,5 | 0.260 - 0.445 6,60 - 11,3 |
| 643RAU | 0.770 19,56 | 0.535 13,60 | 0.236 - 0.449 5,99 - 11,4 |

SM Wideband RF Transformers

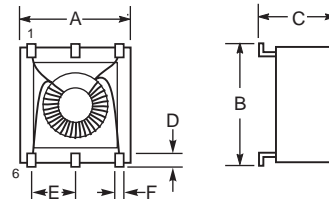
These miniature surface mount wideband transformers for critical product applications are available in untapped and tapped configurations. They feature: 300 V interwinding isolation, 1/4 Watt input RF power rating, and 250 mA current rating. Typical applications are as impedance or isolation transformer. They can also be used for balanced to unbalanced (balun) conversion.

Which version of these parts should you use?

| | |
|-----------|---|
| AE | Passes NASA low outgassing specifications Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| MS | Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| ML | Extended temperature applications: -55 to 155°C Ambient |
| ST | Low temperature applications: -55 to 140°C Ambient Extended qualification |

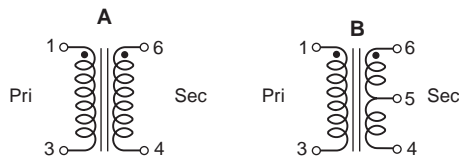
AE MS ML ST **520RFA**

| Part number | Schematic | Imp ratio | Bandwidth (MHz) | Insertion loss (dB) | Pins 1-3 | | Pins 6-4 | |
|----------------|-----------|-----------|-----------------|---------------------|------------|----------------|------------|----------------|
| | | | | | L min (μH) | DCR max (Ohms) | L min (μH) | DCR max (Ohms) |
| xx520RFA01A1SZ | A | 1:1 | 0.045-365 | 0.25 | 60 | 130 | 60 | 130 |
| xx520RFA01B1SZ | B | 1:1 | 0.045-365 | 0.25 | 60 | 130 | 60 | 130 |
| xx520RFA02B1SZ | B | 1:2 | 0.045-495 | 0.25 | 60 | 130 | 140 | 180 |
| xx520RFA03B1SZ | B | 1:3 | 0.075-425 | 0.35 | 40 | 120 | 140 | 180 |
| xx520RFA04B1SZ | B | 1:4 | 0.120-440 | 0.60 | 25 | 90 | 100 | 160 |
| xx520RFA08B1SZ | B | 1:8 | 0.105-300 | 0.60 | 25 | 90 | 200 | 180 |
| xx520RFA09B1SZ | B | 1:9 | 0.075-200 | 0.30 | 40 | 120 | 500 | 250 |
| xx520RFA16B1SZ | B | 1:16 | 0.105-135 | 0.60 | 25 | 90 | 500 | 250 |



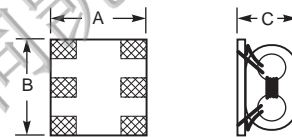
Dimensions

| | | | | | |
|------------|-----------|------------|-----------|-----------|----------|
| A | B | C | D | E | F |
| 0.256 6,48 | 0.283 7,2 | 0.175 4,45 | 0.04 1,00 | 0.10 2,54 | 0.02 0,5 |



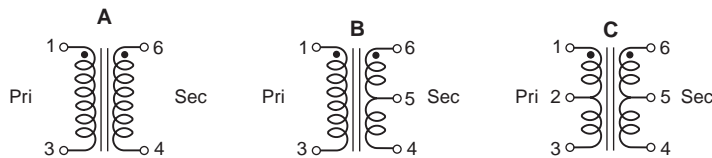
AE MS ML ST **458RFW**

| Part number | Schematic | Imp ratio | Bandwidth (MHz) | Insertion loss (dB) | Pins 1-3 | | Pins 6-4 | | DC imb max (mA) |
|----------------|-----------|-----------|-----------------|---------------------|------------|----------------|------------|----------------|-----------------|
| | | | | | L min (μH) | DCR max (Ohms) | L min (μH) | DCR max (Ohms) | |
| xx458RFW01A1SZ | A | 1:1 | 0.400-600 | 0.40 | 10 | 120 | 10 | 120 | — |
| xx458RFW01B1SZ | B | 1:1 | 0.250-750 | 0.58 | 9.5 | 75 | 9.5 | 75 | 36 |
| xx458RFW02B1SZ | B | 1:2 | 0.200-500 | 0.50 | 10 | 120 | 20 | 150 | 8.5 |
| xx458RFW03B1SZ | B | 1:3 | 0.300-900 | 0.60 | 9.0 | 100 | 27 | 150 | 8.5 |
| xx458RFW04B1SZ | B | 1:4 | 0.250-750 | 1.0 | 9.0 | 55 | 36 | 120 | 30 |
| xx458RFW04B2SZ | B | 1:4 | 1.500-1200 | 2.0 | 2.0 | 50 | 8.0 | 100 | 15 |
| xx458RFW04B3SZ | B | 1:4 | 0.500-1000 | 0.90 | 5.0 | 80 | 20 | 120 | 10 |
| xx458RFW04B4SZ | B | 1:4 | 0.300-700 | 0.65 | 9.0 | 80 | 36 | 200 | 7.5 |
| xx458RFW08B1SZ | B | 1:8 | 0.150-600 | 0.60 | 22 | 120 | 176 | 310 | 17 |
| xx458RFW09B1SZ | B | 1:9 | 0.300-500 | 0.54 | 9.0 | 80 | 81 | 230 | 5.0 |
| xx458RFW16B1SZ | B | 1:16 | 0.600-300 | 0.80 | 5.0 | 80 | 80 | 230 | 5.0 |
| xx458RFW04C1SZ | C | 1:4 | 0.250-800 | 1.0 | 9.0 | 60 | 36 | 120 | 30 |



Dimensions

| | | |
|------------|------------|------------|
| A max | B max | C max |
| 0.175 4,45 | 0.165 4,19 | 0.120 3,05 |



AT AE MS ML ST 433PYA Shielded

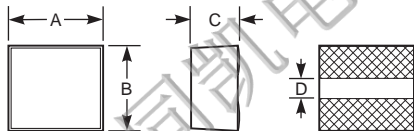
| Part number | Inductance ±20% (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) | | |
|----------------|-------------------------|-------------|-------|-----------|-----|----------|-----------|-----------|
| | | nom | max | min | typ | 30% drop | 20°C rise | 40°C rise |
| xx433PYA221MSZ | 0.22 | 5.81 | 6.40 | 153 | 191 | 18.7 | 12.0 | 16.8 |
| xx433PYA401MSZ | 0.40 | 7.55 | 8.30 | 116 | 145 | 12.5 | 10.0 | 14.0 |
| xx433PYA601MSZ | 0.60 | 9.50 | 10.45 | 85 | 106 | 10.4 | 7.9 | 11.7 |
| xx433PYA102MSZ | 1.0 | 13.25 | 14.60 | 63 | 79 | 8.7 | 6.7 | 9.6 |
| xx433PYA152MSZ | 1.5 | 21.45 | 23.60 | 51 | 64 | 7.1 | 5.2 | 7.5 |
| xx433PYA222MSZ | 2.2 | 35.20 | 38.70 | 42 | 52 | 5.6 | 4.0 | 5.5 |

AT AE MS ML ST 449PYA Shielded

| Part number | Inductance ±20% (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) | | |
|----------------|-------------------------|-------------|------|-----------|-----|----------|-----------|-----------|
| | | nom | max | min | typ | 30% drop | 20°C rise | 40°C rise |
| xx449PYA221MSZ | 0.22 | 2.96 | 3.26 | 169 | 211 | 21.0 | 14.0 | 17.2 |
| xx449PYA361MSZ | 0.36 | 3.86 | 4.25 | 148 | 185 | 15.8 | 12.7 | 16.8 |
| xx449PYA501MSZ | 0.50 | 4.77 | 5.25 | 96 | 120 | 13.4 | 11.1 | 15.4 |
| xx449PYA681MSZ | 0.68 | 6.39 | 7.03 | 91 | 114 | 12.4 | 9.9 | 14.0 |
| xx449PYA102MSZ | 1.0 | 8.89 | 9.78 | 72 | 90 | 9.7 | 7.4 | 9.9 |
| xx449PYA152MSZ | 1.5 | 15.1 | 16.6 | 49 | 61 | 7.4 | 6.8 | 8.8 |
| xx449PYA222MSZ | 2.2 | 20.1 | 22.1 | 42 | 53 | 6.1 | 5.8 | 7.8 |
| xx449PYA332MSZ | 3.3 | 26.0 | 28.6 | 34 | 43 | 5.9 | 5.0 | 6.6 |
| xx449PYA472MSZ | 4.7 | 40.1 | 44.1 | 29 | 36 | 4.6 | 3.9 | 5.1 |
| xx449PYA682MSZ | 6.8 | 67.4 | 74.1 | 23 | 29 | 3.6 | 3.0 | 3.9 |

AT AE MS ML ST 465PYA Shielded

| Part number | Inductance ±20% (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) | | |
|----------------|-------------------------|-------------|------|-----------|-----|----------|-----------|-----------|
| | | nom | max | min | typ | 30% drop | 20°C rise | 40°C rise |
| xx465PYA521MSZ | 0.52 | 4.83 | 5.31 | 104 | 130 | 13.1 | 10 | 12.0 |
| xx465PYA681MSZ | 0.68 | 5.74 | 6.31 | 80 | 100 | 11.6 | 9.2 | 11.3 |
| xx465PYA821MSZ | 0.82 | 6.65 | 7.32 | 76 | 95 | 11.0 | 8.1 | 10.2 |
| xx465PYA102MSZ | 1.0 | 7.54 | 8.29 | 62 | 78 | 10.3 | 7.8 | 10.2 |
| xx465PYA152MSZ | 1.5 | 10.3 | 11.3 | 55 | 69 | 9.4 | 6.1 | 8.5 |
| xx465PYA222MSZ | 2.2 | 15.2 | 16.7 | 43 | 54 | 7.4 | 4.9 | 6.8 |
| xx465PYA332MSZ | 3.3 | 26.5 | 29.2 | 32 | 41 | 5.4 | 3.7 | 5.1 |
| xx465PYA472MSZ | 4.7 | 33.7 | 37.1 | 26 | 33 | 4.9 | 3.0 | 4.3 |
| xx465PYA682MSZ | 6.8 | 44.9 | 49.4 | 24 | 30 | 4.8 | 2.7 | 3.5 |
| xx465PYA822MSZ | 8.2 | 60.8 | 66.9 | 21 | 27 | 4.0 | 2.8 | 3.0 |
| xx465PYA103MSZ | 10 | 84.0 | 92.4 | 19 | 24 | 3.0 | 2.0 | 2.7 |
| xx465PYA153MSZ | 15 | 109 | 120 | 16 | 20 | 2.8 | 1.7 | 2.3 |



Dimensions

| Series | A max | B max | C max | D |
|--------|-----------|-----------|------------|-----------|
| 433PYA | 0.169 4.3 | 0.169 4.3 | 0.083 2.10 | 0.063 1.6 |
| 449PYA | 0.169 4.3 | 0.169 4.3 | 0.122 3.10 | 0.063 1.6 |
| 465PYA | 0.169 4.3 | 0.169 4.3 | 0.161 4.10 | 0.063 1.6 |

Which version of these parts should you use?

| | |
|-----------|---|
| AT | Passes NASA low outgassing specifications Ultra-extended temperature applications: -60 to 200°C Ambient Leach resistant tin-lead terminations |
| AE | Passes NASA low outgassing specifications Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| MS | Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| ML | Extended temperature applications: -55 to 155°C Ambient |
| ST | Low temperature applications: -55 to 140°C Ambient Extended qualification |

AT AE MS ML ST 369PJB Shielded

| Part number | Inductance ±20% (µH) | DCR (Ohms) | | SRF (MHz) | | Isat (A) | | |
|----------------|-------------------------|------------|-------|-----------|-----|----------|-----------|-----------|
| | | nom | max | min | typ | 30% drop | 20°C rise | 40°C rise |
| xx369PJB561MSZ | 0.56 | 0.065 | 0.072 | 231 | 330 | 2.1 | 1.1 | 1.6 |
| xx369PJB801MSZ | 0.80 | 0.083 | 0.092 | 178 | 255 | 1.8 | 0.88 | 1.3 |
| xx369PJB102MSZ | 1.0 | 0.113 | 0.125 | 154 | 220 | 1.5 | 0.72 | 1.0 |
| xx369PJB152MSZ | 1.5 | 0.121 | 0.134 | 119 | 170 | 1.3 | 0.70 | 0.96 |
| xx369PJB222MSZ | 2.2 | 0.158 | 0.175 | 105 | 150 | 1.1 | 0.68 | 0.88 |
| xx369PJB332MSZ | 3.3 | 0.257 | 0.285 | 79.8 | 114 | 0.88 | 0.59 | 0.76 |
| xx369PJB472MSZ | 4.7 | 0.315 | 0.350 | 60.9 | 87 | 0.74 | 0.54 | 0.64 |
| xx369PJB562MSZ | 5.6 | 0.405 | 0.450 | 54.6 | 78 | 0.70 | 0.46 | 0.58 |
| xx369PJB682MSZ | 6.8 | 0.450 | 0.500 | 52.5 | 75 | 0.63 | 0.40 | 0.54 |
| xx369PJB822MSZ | 8.2 | 0.540 | 0.600 | 42.7 | 61 | 0.58 | 0.36 | 0.48 |
| xx369PJB103MSZ | 10 | 0.585 | 0.650 | 39.2 | 56 | 0.52 | 0.34 | 0.45 |
| xx369PJB123MSZ | 12 | 0.711 | 0.790 | 34.3 | 49 | 0.50 | 0.30 | 0.40 |
| xx369PJB183MSZ | 18 | 1.13 | 1.25 | 26.6 | 38 | 0.40 | 0.26 | 0.35 |
| xx369PJB223MSZ | 22 | 1.35 | 1.50 | 24.5 | 35 | 0.34 | 0.23 | 0.30 |
| xx369PJB333MSZ | 33 | 2.07 | 2.30 | 16.1 | 23 | 0.31 | 0.20 | 0.26 |
| xx369PJB473MSZ | 47 | 2.70 | 3.00 | 14.7 | 21 | 0.24 | 0.17 | 0.22 |
| xx369PJB683MSZ | 68 | 4.28 | 4.75 | 12.6 | 18 | 0.20 | 0.14 | 0.18 |
| xx369PJB104MSZ | 100 | 6.17 | 6.85 | 9.8 | 14 | 0.16 | 0.13 | 0.17 |
| xx369PJB124MSZ | 120 | 6.30 | 7.00 | 9.1 | 13 | 0.10 | 0.11 | 0.15 |
| xx369PJB154MSZ | 150 | 7.20 | 8.00 | 7.7 | 11 | 0.092 | 0.10 | 0.14 |
| xx369PJB184MSZ | 180 | 8.10 | 9.00 | 7.0 | 10 | 0.082 | 0.10 | 0.13 |
| xx369PJB224MSZ | 220 | 10.3 | 11.5 | 6.3 | 9 | 0.076 | 0.080 | 0.12 |
| xx369PJB334MSZ | 330 | 16.2 | 18.0 | 4.9 | 7 | 0.066 | 0.070 | 0.10 |

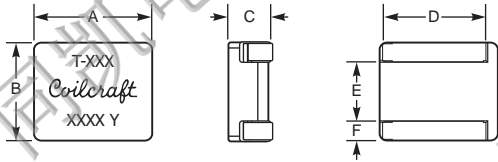
AT AE MS ML ST 378PJB Shielded

| Part number | Inductance ±20% (µH) | DCR (Ohms) | | SRF (MHz) | | Isat (A) | | |
|----------------|-------------------------|------------|-------|-----------|-----|----------|-----------|-----------|
| | | nom | max | min | typ | 30% drop | 20°C rise | 40°C rise |
| xx378PJB471MSZ | 0.47 | 0.063 | 0.070 | 259 | 370 | 2.4 | 1.4 | 1.8 |
| xx378PJB681MSZ | 0.68 | 0.072 | 0.080 | 189 | 270 | 1.9 | 1.2 | 1.6 |
| xx378PJB102MSZ | 1.0 | 0.0765 | 0.085 | 161 | 230 | 1.7 | 1.0 | 1.4 |
| xx378PJB152MSZ | 1.5 | 0.108 | 0.120 | 115 | 165 | 1.4 | 0.96 | 1.3 |
| xx378PJB182MSZ | 1.8 | 0.135 | 0.150 | 105 | 150 | 1.3 | 0.80 | 1.1 |
| xx378PJB222MSZ | 2.2 | 0.198 | 0.220 | 91.0 | 130 | 1.4 | 0.72 | 0.88 |
| xx378PJB332MSZ | 3.3 | 0.198 | 0.220 | 77.0 | 110 | 0.90 | 0.68 | 0.88 |
| xx378PJB472MSZ | 4.7 | 0.27 | 0.300 | 64.4 | 92 | 0.77 | 0.56 | 0.76 |
| xx378PJB562MSZ | 5.6 | 0.36 | 0.400 | 56.0 | 80 | 0.71 | 0.48 | 0.62 |
| xx378PJB682MSZ | 6.8 | 0.405 | 0.450 | 49.0 | 70 | 0.64 | 0.45 | 0.59 |
| xx378PJB822MSZ | 8.2 | 0.45 | 0.500 | 43.4 | 62 | 0.60 | 0.42 | 0.57 |
| xx378PJB103MSZ | 10 | 0.486 | 0.540 | 40.6 | 58 | 0.55 | 0.38 | 0.51 |
| xx378PJB123MSZ | 12 | 0.63 | 0.700 | 32.9 | 47 | 0.50 | 0.35 | 0.46 |
| xx378PJB153MSZ | 15 | 0.855 | 0.950 | 30.1 | 43 | 0.44 | 0.30 | 0.42 |
| xx378PJB183MSZ | 18 | 0.9 | 1.00 | 27.0 | 40 | 0.41 | 0.26 | 0.38 |
| xx378PJB223MSZ | 22 | 1.08 | 1.20 | 25.2 | 36 | 0.36 | 0.24 | 0.33 |
| xx378PJB333MSZ | 33 | 1.8 | 2.00 | 18.9 | 27 | 0.28 | 0.21 | 0.28 |
| xx378PJB473MSZ | 47 | 2.88 | 3.20 | 14.7 | 21 | 0.25 | 0.18 | 0.25 |
| xx378PJB683MSZ | 68 | 3.15 | 3.50 | 14.7 | 21 | 0.22 | 0.16 | 0.22 |
| xx378PJB104MSZ | 100 | 4.725 | 5.25 | 9.8 | 14 | 0.17 | 0.14 | 0.19 |
| xx378PJB124MSZ | 120 | 5.49 | 6.10 | 8.4 | 12 | 0.15 | 0.12 | 0.16 |
| xx378PJB154MSZ | 150 | 8.235 | 9.15 | 7.7 | 11 | 0.14 | 0.10 | 0.14 |
| xx378PJB184MSZ | 180 | 9.09 | 10.1 | 6.3 | 9 | 0.13 | 0.090 | 0.12 |
| xx378PJB224MSZ | 220 | 11.25 | 12.5 | 5.6 | 8 | 0.12 | 0.080 | 0.10 |
| xx378PJB334MSZ | 330 | 16.65 | 18.5 | 4.9 | 7 | 0.115 | 0.070 | 0.090 |

AT AE MS
ML ST **550PRT/563PRC Shielded**



| Part number | Inductance ±20% (µH) | DCR ±8% (mOhm) | SRF (MHz) | Isat (A) | Irms (A) | Height max (mm) |
|------------------------|-------------------------|-------------------|--------------|-------------|-------------|--------------------|
| Low core loss | | | | | | |
| xx550PRT251MLZ | 0.25 | 0.925 | 160 | 35 | 25 | 5.1 |
| xx550PRT361MLZ | 0.36 | 0.925 | 140 | 24 | 24 | 5.1 |
| xx550PRT561MLZ | 0.56 | 0.925 | 110 | 13 | 25 | 5.1 |
| Soft saturation | | | | | | |
| xx563PRC361MLZ | 0.36 | 0.925 | 120 | 36 | 24 | 4.7 |
| xx563PRC651MLZ | 0.65 | 1.50 | 115 | 24 | 19 | 5.5 |
| xx563PRC112MLZ | 1.10 | 1.95 | 95 | 20 | 20 | 6.1 |
| xx563PRC162MLZ | 1.65 | 2.53 | 55 | 17 | 20 | 7.1 |
| xx563PRC232MLZ | 2.30 | 3.08 | 50 | 16 | 17 | 7.8 |



Dimensions

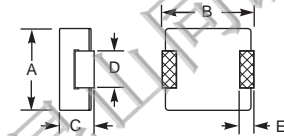
| Series | Amax | Bmax | Cmax | D | E | F |
|-----------|-------------|------------|------------|------------|------------|------------|
| 563PRC361 | 0.453 11,50 | 0.384 9,75 | 0.185 4,70 | 0.360 9,14 | 0.223 5,67 | 0.069 1,75 |
| 550PRT | 0.453 11,50 | 0.384 9,75 | 0.200 5,10 | 0.360 9,14 | 0.223 5,67 | 0.069 1,75 |
| 563PRC651 | 0.453 11,50 | 0.384 9,75 | 0.217 5,50 | 0.360 9,14 | 0.223 5,67 | 0.069 1,75 |
| 563PRC112 | 0.453 11,50 | 0.384 9,75 | 0.240 6,10 | 0.360 9,14 | 0.223 5,67 | 0.069 1,75 |
| 563PRC162 | 0.453 11,50 | 0.384 9,75 | 0.280 7,10 | 0.360 9,14 | 0.223 5,67 | 0.069 1,75 |
| 563PRC232 | 0.453 11,50 | 0.384 9,75 | 0.307 7,80 | 0.360 9,14 | 0.223 5,67 | 0.069 1,75 |

AT AE MS
ML ST **515PMM/515PMN Shielded**

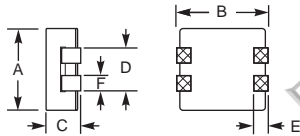


| Part number | Inductance ±20% (µH) | DCR ±5% (mOhms) | SRF typ (MHz) | Isat (A) | Irms (A) |
|-----------------------------------|-------------------------|--------------------|------------------|-------------|-------------|
| Single conductor | | | | | |
| xx515PMM500MLZ | 0.050 | 0.123 | 3800 | 50 | 40 |
| xx515PMM640MLZ | 0.064 | 0.123 | 3650 | 32 | 40 |
| xx515PMM820MLZ | 0.082 | 0.123 | 3750 | 22 | 40 |
| xx515PMM101MLZ | 0.100 | 0.123 | 3750 | 20 | 40 |
| Dual conductor in parallel | | | | | |
| xx515PMN500MLZ | 0.050 | 0.209 | 3750 | 50 | 38 |
| xx515PMN640MLZ | 0.064 | 0.209 | 3650 | 32 | 38 |
| xx515PMN820MLZ | 0.082 | 0.209 | 3750 | 22 | 38 |
| xx515PMN101MLZ | 0.100 | 0.209 | 3750 | 20 | 38 |
| Dual conductor in series | | | | | |
| xx515PMM500MLZ | 0.188 | 1.00 | 1500 | 21 | 17 |
| xx515PMM640MLZ | 0.272 | 1.00 | 1300 | 14 | 17 |
| xx515PMM820MLZ | 0.350 | 1.00 | 1200 | 11 | 17 |
| xx515PMN101MLZ | 0.400 | 1.00 | 950 | 8 | 17 |

515PMM (Single conductor)



515PMN (Dual conductor)



Dimensions

| Series | Amax | Bmax | Cmax | D | E | F |
|------------|------------|------------|------------|------------|-----------|------------|
| 515PMM/PMN | 0.264 6,70 | 0.295 7,50 | 0.118 3,00 | 0.139 3,53 | 0.039 1,0 | 0.050 1,27 |

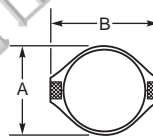
Which version of these parts should you use?

- AT** Passes NASA low outgassing specifications
Ultra-extended temperature applications: -60 to 200°C Ambient
Leach resistant tin-lead terminations
- AE** Passes NASA low outgassing specifications
Extended temperature applications: -55 to 155°C Ambient
Leach resistant tin-lead terminations
- MS** Extended temperature applications: -55 to 155°C Ambient
Leach resistant tin-lead terminations
- ML** Extended temperature applications: -55 to 155°C Ambient
- ST** Low temperature applications: -55 to 140°C Ambient
Extended qualification

AT AE MS
ML ST **563PKA Unshielded**



| Part number | Inductance (µH) | DCR (mOhms) nom max | SRF (MHz) min typ | Isat (A) 30% drop | Irms (A) 20°C rise | Irms (A) 40°C rise |
|----------------|--------------------|------------------------|----------------------|----------------------|-----------------------|-----------------------|
| xx563PKA301MSZ | 0.3 | 2.6 3.0 | 200 238 | 17.0 | 8.0 | 12.0 |
| xx563PKA901MSZ | 0.9 | 5.1 6.0 | 122 153 | 10.9 | 6.1 | 8.8 |
| xx563PKA122MSZ | 1.2 | 5.1 6.0 | 100 125 | 9.3 | 3.4 | 5.6 |
| xx563PKA182MSZ | 1.8 | 7.7 9.0 | 86 108 | 8.1 | 3.2 | 5.0 |
| xx563PKA222MSZ | 2.2 | 6.8 10 | 74 92 | 7.2 | 2.9 | 4.5 |
| xx563PKA272MSZ | 2.7 | 9.4 11 | 63 79 | 6.4 | 2.7 | 4.2 |
| xx563PKA332MSZ | 3.3 | 11.1 13 | 57 71 | 6.0 | 2.4 | 4.0 |
| xx563PKA392MSZ | 3.9 | 15.3 18 | 54 68 | 5.5 | 2.4 | 4.0 |
| xx563PKA472MSZ | 4.7 | 20.4 24 | 46 57 | 4.8 | 2.4 | 3.7 |
| xx563PKA562MSZ | 5.6 | 21.3 25 | 43 53 | 4.4 | 2.2 | 3.3 |
| xx563PKA682MSZ | 6.8 | 25.5 30 | 38 48 | 4.0 | 2.2 | 3.3 |
| xx563PKA822MSZ | 8.2 | 29.8 35 | 35 44 | 3.7 | 2.2 | 3.2 |
| xx563PKA103MSZ | 10 | 32.3 38 | 30 38 | 3.4 | 2.1 | 3.1 |
| xx563PKA123MSZ | 12 | 40.8 48 | 26 33 | 3.1 | 1.7 | 2.7 |
| xx563PKA153MSZ | 15 | 49.3 58 | 25 31 | 2.8 | 1.9 | 2.6 |
| xx563PKA183MSZ | 18 | 59.5 70 | 21 27 | 2.6 | 1.9 | 2.5 |
| xx563PKA223MSZ | 22 | 72.3 85 | 20 25 | 2.3 | 1.8 | 2.4 |
| xx563PKA273MSZ | 27 | 85 100 | 19 24 | 2.1 | 1.3 | 1.9 |
| xx563PKA333MSZ | 33 | 109 128 | 16 20 | 1.9 | 1.3 | 1.8 |
| xx563PKA393MSZ | 39 | 116 136 | 14 18 | 1.7 | 1.3 | 1.8 |
| xx563PKA473MSZ | 47 | 146 172 | 12 15 | 1.5 | 1.1 | 1.5 |
| xx563PKA563MSZ | 56 | 170 200 | 11 14 | 1.4 | 0.9 | 1.3 |
| xx563PKA683MSZ | 68 | 221 260 | 10 13 | 1.3 | 0.82 | 1.2 |
| xx563PKA823MSZ | 82 | 264 310 | 9.5 12 | 1.2 | 0.81 | 1.2 |
| xx563PKA104MSZ | 100 | 306 360 | 8.3 10 | 1.1 | 0.80 | 1.1 |
| xx563PKA124MSZ | 120 | 384 452 | 8.3 10 | 0.98 | 0.68 | 0.90 |
| xx563PKA154MSZ | 150 | 432 508 | 7.0 8.7 | 0.86 | 0.63 | 0.87 |
| xx563PKA184MSZ | 180 | 525 618 | 6.0 7.5 | 0.80 | 0.54 | 0.76 |
| xx563PKA224MSZ | 220 | 618 727 | 5.3 6.6 | 0.65 | 0.53 | 0.73 |
| xx563PKA274MSZ | 270 | 819 963 | 4.6 5.8 | 0.62 | 0.43 | 0.62 |
| xx563PKA334MSZ | 330 | 935 1100 | 4.4 5.5 | 0.58 | 0.41 | 0.57 |
| xx563PKA394MSZ | 390 | 1105 1300 | 3.9 4.8 | 0.53 | 0.38 | 0.53 |
| xx563PKA474MSZ | 470 | 1360 1600 | 3.6 4.3 | 0.48 | 0.34 | 0.47 |



Dimensions

| Series | A max | B max | C | D | E | F | G |
|--------|------------|-------------|------------|------------|------------|-------------|------------|
| 563PKA | 0.390 9,91 | 0.510 12,95 | 0.250 6,35 | 0.330 8,38 | 0.160 4,06 | 0.400 10,16 | 0.060 1,52 |

AT AE MS **567PYA Shielded**
ML ST



| Part number | Inductance ±20% (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) 30% drop | Irms (A) | |
|----------------|-------------------------|-------------|-------|-----------|-----|-------------------------|--------------|--------------|
| | | nom | max | min | typ | | 20°C rise | 40°C rise |
| xx567PYA181MSZ | 0.18 | 0.50 | 0.55 | 54 | 68 | >100 | 28.8 | 46.0 |
| xx567PYA401MSZ | 0.40 | 0.80 | 0.88 | 48 | 60 | 82 | 25.9 | 36.8 |
| xx567PYA681MSZ | 0.68 | 1.35 | 1.50 | 41 | 51 | 62 | 22.4 | 33.9 |
| xx567PYA122MSZ | 1.2 | 2.50 | 2.75 | 35 | 44 | 43 | 17.9 | 26.3 |
| xx567PYA152MSZ | 1.5 | 3.00 | 3.30 | 29 | 36 | 36 | 16.0 | 24.4 |
| xx567PYA222MSZ | 2.2 | 4.50 | 4.95 | 20 | 25 | 32 | 13.9 | 20.0 |
| xx567PYA332MSZ | 3.3 | 7.20 | 7.92 | 15 | 19 | 26 | 11.2 | 16.8 |
| xx567PYA472MSZ | 4.7 | 9.75 | 10.72 | 13 | 16 | 25 | 8.5 | 14.0 |

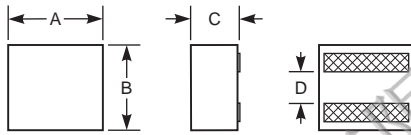
Which version of these parts should you use?

| | |
|-----------|---|
| AT | Passes NASA low outgassing specifications Ultra-extended temperature applications: -60 to 200°C Ambient Leach resistant tin-lead terminations |
| AE | Passes NASA low outgassing specifications Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| MS | Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| ML | Extended temperature applications: -55 to 155°C Ambient |
| ST | Low temperature applications: -55 to 140°C Ambient Extended qualification |

AT AE MS **611PYA Shielded**
ML ST



| Part number | Inductance ±20% (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) 30% drop | Irms (A) | |
|----------------|-------------------------|-------------|-------|-----------|-----|-------------------------|--------------|--------------|
| | | nom | max | min | typ | | 20°C rise | 40°C rise |
| xx611PYA221MSZ | 0.22 | 0.33 | 0.37 | 92 | 115 | 98.8 | 41.0 | 55.5 |
| xx611PYA451MSZ | 0.45 | 0.60 | 0.66 | 53 | 66 | 70.5 | 40.0 | 53.0 |
| xx611PYA102MSZ | 1.0 | 1.00 | 1.10 | 34 | 42 | 55.0 | 32.0 | 43.5 |
| xx611PYA152MSZ | 1.5 | 1.60 | 1.76 | 26 | 33 | 36.6 | 31.0 | 40.5 |
| xx611PYA222MSZ | 2.2 | 2.55 | 2.80 | 18 | 22 | 34.0 | 24.5 | 32.0 |
| xx611PYA332MSZ | 3.3 | 3.70 | 4.10 | 17 | 21 | 27.4 | 18.2 | 25.0 |
| xx611PYA472MSZ | 4.7 | 5.20 | 5.70 | 15 | 19 | 25.4 | 17.5 | 24.0 |
| xx611PYA562MSZ | 5.6 | 6.30 | 6.93 | 13 | 16 | 23.6 | 15.7 | 21.2 |
| xx611PYA682MSZ | 6.8 | 8.10 | 8.90 | 11 | 14 | 21.8 | 14.0 | 18.5 |
| xx611PYA822MSZ | 8.2 | 11.70 | 12.90 | 9 | 12 | 18.3 | 12.9 | 17.1 |
| xx611PYA103MSZ | 10 | 13.40 | 14.75 | 8 | 11 | 17.5 | 11.5 | 15.5 |
| xx611PYA153MSZ | 15 | 16.90 | 18.60 | 7 | 9 | 15.5 | 9.9 | 13.8 |



Dimensions

| Series | A max | B max | C max | D |
|--------|------------|------------|------------|------------|
| 433PYA | 0.169 4,30 | 0.169 4,30 | 0.083 2,1 | 0.055 1,39 |
| 449PYA | 0.169 4,30 | 0.169 4,30 | 0.122 3,1 | 0.055 1,39 |
| 465PYA | 0.169 4,30 | 0.169 4,30 | 0.161 4,1 | 0.055 1,39 |
| 483PYA | 0.258 6,76 | 0.258 6,76 | 0.093 2,1 | 0.103 2,61 |
| 486PYA | 0.216 5,30 | 0.216 5,30 | 0.122 3,1 | 0.091 2,31 |
| 512PYA | 0.266 6,68 | 2.58 6,38 | 0.122 3,1 | 0.103 2,61 |
| 513PYA | 0.315 8,00 | 0.315 8,0 | 0.079 2,0 | 0.116 2,94 |
| 514PYA | 0.315 8,00 | 0.315 8,0 | 0.122 3,1 | 0.116 2,94 |
| 515PYA | 0.216 5,30 | 0.216 5,30 | 0.201 5,1 | 0.091 2,31 |
| 524PYA | 0.266 6,68 | 2.58 6,38 | 0.242 6,1 | 0.166 2,95 |
| 541PYA | 0.303 7,70 | 0.315 8,00 | 0.276 7,0 | 0.123 3,12 |
| 567PYA | 0.465 11,8 | 0.414 10,5 | 0.236 6,0 | 0.163 4,26 |
| 611PYA | 0.465 11,8 | 0.414 10,5 | 0.394 10,0 | 0.185 4,7 |

AT AE MS 558PTA Shielded
ML ST

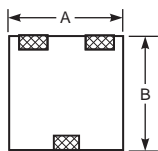


| Part number | Inductance (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) 30% drop | Irms (A) | |
|----------------|-----------------|-------------|-----|-----------|------|-------------------|-----------|-----------|
| | | nom | max | min | typ | | 20°C rise | 40°C rise |
| xx558PTA331MSZ | 0.33 | 3.6 | 4.0 | 119 | 170 | 30.5 | 12.5 | 16.3 |
| xx558PTA801MSZ | 0.80 | 3.6 | 4.0 | 70.0 | 100 | 25.6 | 12.5 | 16.3 |
| xx558PTA102MSZ | 1.0 | 3.6 | 4.0 | 66.5 | 95.0 | 17.5 | 12.5 | 16.3 |
| xx558PTA122MSZ | 1.2 | 5.4 | 6.0 | 63.7 | 91.0 | 21.3 | 11.0 | 15.0 |
| xx558PTA132MSZ | 1.3 | 3.6 | 4.0 | 56.7 | 81.0 | 17.2 | 12.5 | 16.3 |
| xx558PTA152MSZ | 1.5 | 5.4 | 6.0 | 52.5 | 75.0 | 14.5 | 11.0 | 15.0 |
| xx558PTA182MSZ | 1.8 | 5.4 | 6.0 | 49.0 | 70.0 | 14.3 | 11.0 | 15.0 |
| xx558PTA202MSZ | 2.0 | 8.1 | 9.0 | 45.6 | 65.0 | 16.2 | 8.5 | 11.5 |
| xx558PTA222MSZ | 2.2 | 3.6 | 4.0 | 40.6 | 58.0 | 10.0 | 12.5 | 16.3 |
| xx558PTA252MSZ | 2.5 | 6.8 | 7.5 | 38.5 | 55.0 | 12.1 | 9.0 | 12.0 |
| xx558PTA322MSZ | 3.2 | 5.4 | 6.0 | 37.1 | 53.0 | 8.5 | 11.0 | 15.0 |
| xx558PTA402MSZ | 4.0 | 8.1 | 9.0 | 32.9 | 47.0 | 8.8 | 8.5 | 11.5 |
| xx558PTA432MSZ | 4.3 | 6.8 | 7.5 | 30.8 | 44.0 | 7.0 | 9.0 | 12.0 |
| xx558PTA572MSZ | 5.7 | 8.1 | 9.0 | 24.5 | 35.0 | 6.0 | 8.5 | 11.5 |

AT AE MS 598PTA Shielded
ML ST



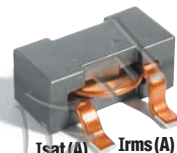
| Part number | Inductance (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) 30% drop | Irms (A) | |
|----------------|-----------------|-------------|-------|-----------|------|-------------------|-----------|-----------|
| | | nom | max | min | typ | | 20°C rise | 40°C rise |
| xx598PTA331KSZ | 0.33 | 0.77 | 0.85 | 140 | 200 | 43 | 13.0 | 16.9 |
| xx598PTA651KSZ | 0.65 | 0.77 | 0.85 | 112 | 160 | 28 | 13.0 | 16.9 |
| xx598PTA102KSZ | 1.0 | 2.36 | 2.60 | 52.5 | 75.0 | 33.5 | 9.5 | 13.0 |
| xx598PTA182KSZ | 1.8 | 2.36 | 2.60 | 35.0 | 50.0 | 20 | 9.5 | 13.0 |
| xx598PTA272KSZ | 2.7 | 2.36 | 2.60 | 29.4 | 42.0 | 14 | 9.5 | 13.0 |
| xx598PTA402KSZ | 4.0 | 5.50 | 6.05 | 23.8 | 34.0 | 13 | 7.1 | 9.4 |
| xx598PTA472KSZ | 4.7 | 5.50 | 6.05 | 22.4 | 32.0 | 12 | 7.1 | 9.4 |
| xx598PTA602KSZ | 6.0 | 5.50 | 6.05 | 19.6 | 28.0 | 9.5 | 7.1 | 9.4 |
| xx598PTA802KSZ | 8.0 | 9.83 | 10.81 | 18.2 | 26.0 | 9.0 | 5.5 | 7.6 |
| xx598PTA103KSZ | 10 | 9.83 | 10.81 | 16.8 | 24.0 | 7.5 | 4.4 | 7.2 |



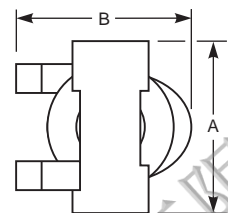
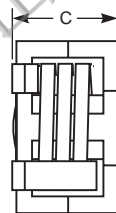
Dimensions

| Series | Amax | Bmax | Cmax |
|--------|------------|------------|-----------|
| 558PTA | 0.402 10.2 | 0.433 11.0 | 0.205 5.2 |
| 598PTA | 0.508 12.9 | 0.512 13.0 | 0.228 5.8 |

AT AE MS 63x/64xPTA Shielded
ML ST



| Part number | Inductance (µH) | DCR (mOhms) | | SRF (MHz) | | Isat (A) 30% drop | Irms (A) | |
|----------------|-----------------|-------------|-------|-----------|-----|-------------------|-----------|-----------|
| | | nom | max | min | typ | | 20°C rise | 40°C rise |
| xx630PTA301MSZ | 0.30 | 0.740 | 0.630 | 385 | 550 | 100 | 41 | 54 |
| xx632PTA301MSZ | 0.30 | 1.00 | 0.900 | 127 | 182 | 100 | 36 | 45 |
| xx630PTA501MSZ | 0.50 | 0.740 | 0.630 | 380 | 544 | 60 | 41 | 54 |
| xx632PTA501MSZ | 0.50 | 1.00 | 0.900 | 104 | 148 | 81 | 36 | 45 |
| xx637PTA501MSZ | 0.50 | 1.34 | 1.20 | 113 | 161 | 100 | 30 | 40 |
| xx630PTA601MSZ | 0.60 | 0.740 | 0.630 | 454 | 648 | 49 | 41 | 54 |
| xx632PTA601MSZ | 0.60 | 1.00 | 0.900 | 80 | 115 | 70 | 36 | 45 |
| xx637PTA601MSZ | 0.60 | 1.34 | 1.20 | 87 | 124 | 90 | 30 | 40 |
| xx641PTA601MSZ | 0.60 | 1.60 | 1.44 | 80 | 115 | 97 | 25 | 35 |
| xx630PTA681MSZ | 0.68 | 0.740 | 0.630 | 318 | 454 | 45 | 41 | 54 |
| xx632PTA681MSZ | 0.68 | 1.00 | 0.900 | 95 | 136 | 62 | 36 | 45 |
| xx637PTA681MSZ | 0.68 | 1.34 | 1.20 | 95 | 135 | 78 | 30 | 40 |
| xx641PTA681MSZ | 0.68 | 1.60 | 1.44 | 72 | 103 | 85 | 25 | 35 |
| xx645PTA681MSZ | 0.68 | 1.82 | 1.70 | 73 | 104 | 98 | 23 | 30 |
| xx630PTA801MSZ | 0.80 | 0.740 | 0.630 | 397 | 567 | 38 | 41 | 54 |
| xx632PTA801MSZ | 0.80 | 1.00 | 0.900 | 64 | 92 | 53 | 36 | 45 |
| xx637PTA801MSZ | 0.80 | 1.34 | 1.20 | 79 | 113 | 70 | 30 | 40 |
| xx641PTA801MSZ | 0.80 | 1.60 | 1.44 | 64 | 91 | 75 | 25 | 35 |
| xx645PTA801MSZ | 0.80 | 1.82 | 1.70 | 65 | 93 | 85 | 23 | 30 |
| xx648PTA801MSZ | 0.80 | 2.15 | 1.94 | 73 | 104 | 98 | 21 | 27 |
| xx630PTA901MSZ | 0.90 | 0.740 | 0.630 | 390 | 557 | 33 | 41 | 54 |
| xx632PTA901MSZ | 0.90 | 1.00 | 0.900 | 67 | 96 | 48 | 36 | 45 |
| xx637PTA901MSZ | 0.90 | 1.34 | 1.20 | 73 | 104 | 62 | 30 | 40 |
| xx641PTA901MSZ | 0.90 | 1.60 | 1.44 | 60 | 85 | 69 | 25 | 35 |
| xx645PTA901MSZ | 0.90 | 1.82 | 1.70 | 69 | 98 | 73 | 23 | 30 |
| xx648PTA901MSZ | 0.90 | 2.15 | 1.94 | 71 | 102 | 87 | 21 | 27 |
| xx630PTA102MSZ | 1.0 | 0.740 | 0.630 | 342 | 488 | 29 | 41 | 54 |
| xx632PTA102MSZ | 1.0 | 1.00 | 0.900 | 57 | 81 | 42 | 36 | 45 |
| xx637PTA102MSZ | 1.0 | 1.34 | 1.20 | 68 | 97 | 56 | 30 | 40 |
| xx641PTA102MSZ | 1.0 | 1.60 | 1.44 | 53 | 75 | 64 | 25 | 35 |
| xx645PTA102MSZ | 1.0 | 1.82 | 1.70 | 69 | 98 | 68 | 23 | 30 |
| xx648PTA102MSZ | 1.0 | 2.15 | 1.94 | 62 | 88 | 70 | 21 | 27 |
| xx630PTA122MSZ | 1.2 | 0.740 | 0.630 | 57 | 81 | 28 | 41 | 54 |
| xx632PTA122MSZ | 1.2 | 1.00 | 0.900 | 48 | 69 | 37 | 36 | 45 |
| xx637PTA122MSZ | 1.2 | 1.34 | 1.20 | 57 | 81 | 49 | 30 | 40 |
| xx641PTA122MSZ | 1.2 | 1.60 | 1.44 | 51 | 73 | 54 | 25 | 35 |
| xx645PTA122MSZ | 1.2 | 1.82 | 1.70 | 57 | 82 | 58 | 23 | 30 |
| xx648PTA122MSZ | 1.2 | 2.15 | 1.94 | 55 | 78 | 63 | 21 | 27 |
| xx630PTA202MSZ | 2.0 | 0.740 | 0.630 | 28 | 40 | 16 | 41 | 54 |
| xx632PTA202MSZ | 2.0 | 1.00 | 0.900 | 34 | 48 | 27 | 36 | 45 |
| xx637PTA202MSZ | 2.0 | 1.34 | 1.20 | 39 | 56 | 37 | 30 | 40 |
| xx641PTA202MSZ | 2.0 | 1.60 | 1.44 | 36 | 51 | 35 | 25 | 35 |
| xx645PTA202MSZ | 2.0 | 1.82 | 1.70 | 43 | 61 | 40 | 23 | 30 |
| xx648PTA202MSZ | 2.0 | 2.15 | 1.94 | 43 | 62 | 45 | 21 | 27 |
| xx645PTA362MSZ | 3.6 | 1.82 | 1.70 | 27 | 38 | 25 | 23 | 30 |
| xx645PTA402MSZ | 4.0 | 1.82 | 1.70 | 25 | 35 | 20 | 23 | 30 |
| xx648PTA402MSZ | 4.0 | 2.15 | 1.94 | 25 | 36 | 25 | 21 | 27 |
| xx645PTA472MSZ | 4.7 | 1.82 | 1.70 | 21 | 30 | 18 | 23 | 30 |



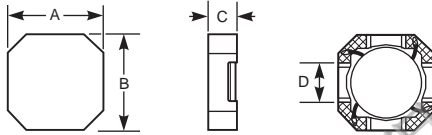
Dimensions

| Series | Amax | Bmax | Cmax |
|--------|------------|------------|------------|
| 626PTA | 0.62 15.75 | 0.64 16.26 | 0.40 10.16 |
| 630PTA | 0.79 20.07 | 0.77 19.56 | 0.34 8.64 |
| 632PTA | 0.79 20.07 | 0.77 19.56 | 0.37 9.40 |
| 637PTA | 0.79 20.07 | 0.77 19.56 | 0.42 10.67 |
| 641PTA | 0.79 20.07 | 0.77 19.56 | 0.47 11.94 |
| 645PTA | 0.79 20.07 | 0.77 19.56 | 0.51 12.95 |
| 648PTA | 0.79 20.07 | 0.77 19.56 | 0.55 13.97 |

Coupled Inductors / Transformers

AE MS ML ST 466PJD Coupled

| Partnumber | Inductance (µH) | DCR max (Ohms) | SRF typ (MHz) | Leakage L (µH) | Isat (A) 30% drop | Irms (A) | |
|----------------|-----------------|----------------|---------------|----------------|-------------------|---------------|-------------|
| | | | | | | both windings | one winding |
| xx466PJD102NLZ | 1.0±30% | 0.042 | 156 | 0.09 | 5.0 | 2.60 | 3.68 |
| xx466PJD152MLZ | 1.5±20% | 0.048 | 123 | 0.09 | 4.3 | 2.20 | 3.11 |
| xx466PJD222MLZ | 2.2±20% | 0.067 | 78.0 | 0.10 | 3.4 | 2.15 | 3.04 |
| xx466PJD332MLZ | 3.3±20% | 0.077 | 65.0 | 0.10 | 2.8 | 1.85 | 2.62 |
| xx466PJD472MLZ | 4.7±20% | 0.111 | 53.0 | 0.11 | 2.2 | 1.45 | 2.05 |
| xx466PJD562MLZ | 5.6±20% | 0.125 | 48.0 | 0.11 | 2.1 | 1.35 | 1.91 |
| xx466PJD682MLZ | 6.8±20% | 0.159 | 43.0 | 0.12 | 1.9 | 1.20 | 1.70 |
| xx466PJD103MLZ | 10±20% | 0.210 | 31.0 | 0.13 | 1.3 | 1.05 | 1.48 |
| xx466PJD153MLZ | 15±20% | 0.298 | 25.0 | 0.15 | 1.4 | 0.85 | 1.20 |
| xx466PJD223MLZ | 22±20% | 0.452 | 19.0 | 0.17 | 1.1 | 0.70 | 0.99 |
| xx466PJD333MLZ | 33±20% | 0.565 | 15.0 | 0.20 | 0.85 | 0.60 | 0.85 |
| xx466PJD473MLZ | 47±20% | 0.806 | 12.6 | 0.24 | 0.72 | 0.50 | 0.71 |
| xx466PJD683MLZ | 68±20% | 1.13 | 10.0 | 0.29 | 0.55 | 0.46 | 0.64 |
| xx466PJD104MLZ | 100±20% | 1.79 | 8.32 | 0.37 | 0.56 | 0.35 | 0.49 |
| xx466PJD154MLZ | 150±20% | 2.43 | 6.80 | 0.46 | 0.45 | 0.31 | 0.43 |
| xx466PJD224MLZ | 220±20% | 3.30 | 5.55 | .54 | 0.36 | 0.26 | 0.37 |
| xx466PJD334MLZ | 330±20% | 5.36 | 4.05 | 0.65 | 0.32 | 0.20 | 0.28 |
| xx466PJD474MLZ | 470±20% | 7.51 | 3.35 | 0.76 | 0.26 | 0.17 | 0.23 |
| xx466PJD684MLZ | 680±20% | 10.8 | 2.78 | 0.89 | 0.21 | 0.14 | 0.19 |
| xx466PJD105MLZ | 1000±20% | 16.5 | 2.24 | 1.20 | 0.17 | 0.11 | 0.15 |



Dimensions

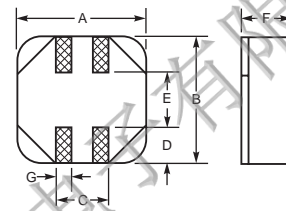
| Series | A max | B max | C | D |
|--------|------------|------------|-----------|------------|
| 466PJD | 0.189 4,80 | 0.189 4,80 | 0.035 0,9 | 0.114 2,90 |

Which version of these parts should you use?

- AE** Passes NASA low outgassing specifications
Extended temperature applications: -55 to 155°C Ambient
Leach resistant tin-lead terminations
- MS** Extended temperature applications: -55 to 155°C Ambient
Leach resistant tin-lead terminations
- ML** Extended temperature applications: -55 to 155°C Ambient
- ST** Low temperature applications: -55 to 140°C Ambient
Extended qualification

AE MS ML ST 526PND Coupled

| Partnumber | Inductance (µH) | DCR max (Ohms) | SRF typ (MHz) | Leakage L (µH) | Isat (A) 30% drop | Irms (A) | |
|----------------|-----------------|----------------|---------------|----------------|-------------------|---------------|-------------|
| | | | | | | both windings | one winding |
| xx526PND252MLZ | 2.5 | 0.033 | 55 | 0.14 | 6.3 | 2.17 | 3.06 |
| xx526PND332MLZ | 3.3 | 0.037 | 43 | 0.09 | 5.4 | 2.05 | 2.89 |
| xx526PND472MLZ | 4.7 | 0.051 | 35 | 0.11 | 4.6 | 1.74 | 2.46 |
| xx526PND562MLZ | 5.6 | 0.063 | 32 | 0.09 | 4.2 | 1.57 | 2.22 |
| xx526PND682MLZ | 6.8 | 0.070 | 30 | 0.14 | 3.9 | 1.49 | 2.10 |
| xx526PND822MLZ | 8.2 | 0.075 | 27 | 0.25 | 3.5 | 1.44 | 2.03 |
| xx526PND103MLZ | 10 | 0.100 | 22 | 0.30 | 3.0 | 1.24 | 1.76 |
| xx526PND123MLZ | 12 | 0.120 | 20 | 0.36 | 2.7 | 1.14 | 1.61 |
| xx526PND153MLZ | 15 | 0.130 | 18 | 0.49 | 2.4 | 1.09 | 1.54 |
| xx526PND183MLZ | 18 | 0.170 | 15 | 0.16 | 2.3 | 0.95 | 1.35 |
| xx526PND223MLZ | 22 | 0.220 | 13.5 | 0.20 | 2.1 | 0.84 | 1.19 |
| xx526PND273MLZ | 27 | 0.250 | 12.0 | 0.20 | 1.9 | 0.79 | 1.11 |
| xx526PND333MLZ | 33 | 0.270 | 11.0 | 0.15 | 1.7 | 0.76 | 1.07 |
| xx526PND393MLZ | 39 | 0.380 | 10.0 | 0.70 | 1.6 | 0.64 | 0.90 |
| xx526PND473MLZ | 47 | 0.420 | 9.5 | 0.30 | 1.4 | 0.61 | 0.86 |
| xx526PND563MLZ | 56 | 0.460 | 8.7 | 0.51 | 1.3 | 0.58 | 0.82 |
| xx526PND683MLZ | 68 | 0.600 | 7.3 | 0.51 | 1.2 | 0.51 | 0.72 |
| xx526PND823MLZ | 82 | 0.680 | 6.2 | 1.17 | 1.1 | 0.48 | 0.67 |
| xx526PND104MLZ | 100 | 0.770 | 5.5 | 0.96 | 0.98 | 0.45 | 0.63 |
| xx526PND124MLZ | 120 | 1.03 | 4.5 | 0.61 | 0.90 | 0.39 | 0.55 |
| xx526PND154MLZ | 150 | 1.35 | 4.0 | 0.54 | 0.80 | 0.34 | 0.48 |
| xx526PND184MLZ | 180 | 1.62 | 3.8 | 0.75 | 0.73 | 0.32 | 0.45 |
| xx526PND224MLZ | 220 | 1.72 | 3.5 | 1.43 | 0.66 | 0.30 | 0.42 |
| xx526PND274MLZ | 270 | 2.41 | 3.3 | 1.56 | 0.60 | 0.25 | 0.36 |
| xx526PND334MLZ | 330 | 2.70 | 3.0 | 1.65 | 0.54 | 0.24 | 0.34 |
| xx526PND394MLZ | 390 | 3.05 | 2.8 | 4.73 | 0.50 | 0.23 | 0.32 |
| xx526PND474MLZ | 470 | 4.00 | 2.6 | 5.50 | 0.46 | 0.20 | 0.28 |
| xx526PND564MLZ | 560 | 4.43 | 2.5 | 4.85 | 0.42 | 0.19 | 0.26 |
| xx526PND684MLZ | 680 | 5.00 | 2.3 | 7.59 | 0.38 | 0.18 | 0.25 |
| xx526PND824MLZ | 820 | 6.80 | 2.2 | 8.01 | 0.35 | 0.15 | 0.21 |
| xx526PND105MLZ | 1000 | 7.80 | 2.0 | 8.69 | 0.31 | 0.14 | 0.20 |



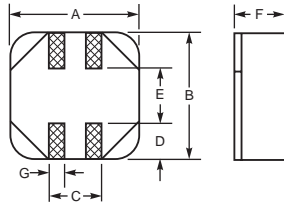
Dimensions

| Series | A max | B max | C | D | E | F | G |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 526PND | 0.295 7,5 | 0.295 7,5 | 0.091 2,3 | 0.063 1,6 | 0.150 3,8 | 0.181 4,6 | 0.028 0,7 |

AE MS ML ST 590PND Coupled



| Part number | Inductance (µH) | DCR (Ohms) | | SRF (MHz) | | Isat (A) | | Irms (A) | |
|----------------|-----------------|------------|-------|-----------|------|----------|--------------|-------------|-------------|
| | | nom | max | min | typ | 30% drop | both winding | one winding | one winding |
| xx590PND472MSZ | 4.7±20% | 0.032 | 0.036 | 30.0 | 38.0 | 11.08 | 3.16 | 4.47 | |
| xx590PND562MSZ | 5.6±20% | 0.036 | 0.040 | 24.0 | 30.0 | 9.84 | 3.00 | 4.24 | |
| xx590PND682MSZ | 6.8±20% | 0.043 | 0.048 | 22.0 | 27.0 | 8.64 | 2.75 | 3.88 | |
| xx590PND822MSZ | 8.2±20% | 0.047 | 0.052 | 21.0 | 26.0 | 7.98 | 2.63 | 3.72 | |
| xx590PND103MSZ | 10±20% | 0.054 | 0.060 | 18.0 | 22.0 | 6.88 | 2.45 | 3.46 | |
| xx590PND123MSZ | 12±20% | 0.067 | 0.074 | 16.0 | 20.0 | 6.70 | 2.21 | 3.12 | |
| xx590PND153MSZ | 15±20% | 0.077 | 0.085 | 14.4 | 18.0 | 5.80 | 2.06 | 2.92 | |
| xx590PND183MSZ | 18±20% | 0.087 | 0.097 | 13.0 | 16.0 | 5.68 | 1.93 | 2.73 | |
| xx590PND223MSZ | 22±20% | 0.104 | 0.116 | 12.0 | 15.0 | 5.02 | 1.76 | 2.49 | |
| xx590PND273MSZ | 27±20% | 0.112 | 0.124 | 10.0 | 13.0 | 4.50 | 1.70 | 2.41 | |
| xx590PND333MSZ | 33±20% | 0.121 | 0.134 | 10.0 | 12.4 | 4.14 | 1.64 | 2.32 | |
| xx590PND393MSZ | 39±20% | 0.128 | 0.142 | 9.6 | 12.0 | 3.82 | 1.59 | 2.25 | |
| xx590PND473MSZ | 47±20% | 0.157 | 0.174 | 9.3 | 11.6 | 3.40 | 1.44 | 2.03 | |
| xx590PND563MSZ | 56±20% | 0.178 | 0.198 | 8.4 | 10.5 | 3.14 | 1.35 | 1.91 | |
| xx590PND683MSZ | 68±20% | 0.194 | 0.216 | 8.0 | 10.0 | 2.88 | 1.29 | 1.83 | |
| xx590PND823MSZ | 82±20% | 0.247 | 0.274 | 6.9 | 8.6 | 2.60 | 1.15 | 1.62 | |
| xx590PND104MSZ | 100±20% | 0.290 | 0.322 | 6.2 | 7.8 | 2.38 | 1.06 | 1.50 | |
| xx590PND124KSZ | 120±10% | 0.376 | 0.418 | 5.5 | 6.8 | 2.04 | 0.93 | 1.31 | |
| xx590PND154KSZ | 150±10% | 0.428 | 0.476 | 5.1 | 6.4 | 1.92 | 0.87 | 1.23 | |
| xx590PND184KSZ | 180±10% | 0.482 | 0.536 | 4.9 | 6.1 | 1.78 | 0.82 | 1.16 | |
| xx590PND224KSZ | 220±10% | 0.622 | 0.691 | 4.4 | 5.5 | 1.60 | 0.72 | 1.02 | |
| xx590PND274KSZ | 270±10% | 0.725 | 0.806 | 3.4 | 4.3 | 1.40 | 0.67 | 0.95 | |
| xx590PND334KSZ | 330±10% | 0.981 | 1.09 | 3.2 | 4.0 | 1.26 | 0.57 | 0.81 | |
| xx590PND394KSZ | 390±10% | 1.08 | 1.20 | 2.9 | 3.6 | 1.23 | 0.55 | 0.77 | |
| xx590PND474KSZ | 470±10% | 1.43 | 1.59 | 2.4 | 3.0 | 1.09 | 0.48 | 0.67 | |
| xx590PND564KSZ | 560±10% | 1.63 | 1.81 | 2.2 | 2.8 | 0.948 | 0.45 | 0.63 | |
| xx590PND684KSZ | 680±10% | 1.85 | 2.06 | 2.1 | 2.6 | 0.874 | 0.42 | 0.59 | |
| xx590PND824KSZ | 820±10% | 2.39 | 2.65 | 2.0 | 2.5 | 0.802 | 0.37 | 0.52 | |
| xx590PND105KSZ | 1000±10% | 2.75 | 3.06 | 1.9 | 2.4 | 0.728 | 0.34 | 0.49 | |



Dimensions

| Series | A max | B max | C | D | E | F | G |
|--------|------------|------------|-----------|-----------|-----------|------------|-----------|
| 590PND | 0.484 12,3 | 0.484 12,3 | 0.197 5,0 | 0.138 3,5 | 0.197 5,0 | 0.24 6,0 | 0.059 1,5 |
| 612PND | 0.484 12,3 | 0.484 12,3 | 0.197 5,0 | 0.138 3,5 | 0.197 5,0 | 0.317 8,05 | 0.059 1,5 |

Which version of these parts should you use?

| | |
|-----------|---|
| AE | Passes NASA low outgassing specifications Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| MS | Extended temperature applications: -55 to 155°C Ambient Leach resistant tin-lead terminations |
| ML | Extended temperature applications: -55 to 155°C Ambient |
| ST | Low temperature applications: -55 to 140°C Ambient Extended qualification |

AE MS ML ST 612PND Coupled



| Part number | Inductance (µH) | DCR (Ohms) | | SRF (MHz) | | Isat (A) | | Irms (A) | |
|----------------|-----------------|------------|-------|-----------|------|----------|--------------|-------------|-------------|
| | | nom | max | min | typ | 30% drop | both winding | one winding | one winding |
| xx612PND472MSZ | 4.7±20% | 0.036 | 0.040 | 26.0 | 33.0 | 16.36 | 3.16 | 4.47 | |
| xx612PND562MSZ | 5.6±20% | 0.041 | 0.046 | 24.0 | 30.0 | 15.74 | 2.87 | 4.06 | |
| xx612PND682MSZ | 6.8±20% | 0.043 | 0.048 | 18.0 | 23.0 | 14.20 | 2.81 | 3.98 | |
| xx612PND822MSZ | 8.2±20% | 0.050 | 0.055 | 16.0 | 20.0 | 12.20 | 2.76 | 3.90 | |
| xx612PND103MSZ | 10±20% | 0.052 | 0.058 | 14.0 | 17.0 | 10.66 | 2.56 | 3.62 | |
| xx612PND123MSZ | 12±20% | 0.056 | 0.062 | 12.0 | 15.0 | 9.74 | 2.48 | 3.50 | |
| xx612PND153MSZ | 15±20% | 0.065 | 0.072 | 10.0 | 13.0 | 9.03 | 2.30 | 3.25 | |
| xx612PND183MSZ | 18±20% | 0.072 | 0.080 | 9.6 | 12.0 | 7.86 | 2.18 | 3.08 | |
| xx612PND223MSZ | 22±20% | 0.086 | 0.096 | 8.8 | 11.0 | 7.26 | 1.99 | 2.81 | |
| xx612PND273MSZ | 27±20% | 0.108 | 0.120 | 8.0 | 10.0 | 7.02 | 1.78 | 2.52 | |
| xx612PND333MSZ | 33±20% | 0.135 | 0.150 | 7.6 | 9.5 | 6.52 | 1.59 | 2.25 | |
| xx612PND393MSZ | 39±20% | 0.145 | 0.161 | 6.8 | 8.5 | 5.60 | 1.54 | 2.18 | |
| xx612PND473MSZ | 47±20% | 0.162 | 0.180 | 6.0 | 7.5 | 4.60 | 1.45 | 2.05 | |
| xx612PND563MSZ | 56±20% | 0.171 | 0.190 | 5.6 | 7.0 | 4.50 | 1.41 | 2.00 | |
| xx612PND683MSZ | 68±20% | 0.189 | 0.210 | 5.2 | 6.5 | 4.32 | 1.35 | 1.90 | |
| xx612PND823MSZ | 82±20% | 0.252 | 0.280 | 4.0 | 5.0 | 4.02 | 1.16 | 1.65 | |
| xx612PND104MSZ | 100±20% | 0.270 | 0.300 | 3.6 | 4.5 | 3.46 | 1.13 | 1.59 | |
| xx612PND124KSZ | 120±10% | 0.369 | 0.410 | 3.4 | 4.3 | 3.16 | 0.96 | 1.36 | |
| xx612PND154KSZ | 150±10% | 0.414 | 0.460 | 3.3 | 4.1 | 2.70 | 0.91 | 1.29 | |
| xx612PND184KSZ | 180±10% | 0.459 | 0.510 | 3.2 | 4.0 | 2.58 | 0.86 | 1.22 | |
| xx612PND224KSZ | 220±10% | 0.621 | 0.690 | 2.7 | 3.4 | 2.28 | 0.74 | 1.05 | |
| xx612PND274KSZ | 270±10% | 0.810 | 0.900 | 2.5 | 3.1 | 2.10 | 0.65 | 0.92 | |
| xx612PND334KSZ | 330±10% | 0.918 | 1.02 | 2.3 | 2.9 | 1.84 | 0.61 | 0.86 | |
| xx612PND394KSZ | 390±10% | 1.01 | 1.12 | 2.2 | 2.7 | 1.70 | 0.58 | 0.82 | |
| xx612PND474KSZ | 470±10% | 1.38 | 1.53 | 1.8 | 2.2 | 1.60 | 0.50 | 0.70 | |
| xx612PND564KSZ | 560±10% | 1.52 | 1.69 | 1.6 | 2.0 | 1.46 | 0.47 | 0.67 | |
| xx612PND684KSZ | 680±10% | 2.06 | 2.29 | 1.4 | 1.7 | 1.22 | 0.41 | 0.58 | |
| xx612PND824KSZ | 820±10% | 2.30 | 2.55 | 1.1 | 1.4 | 1.18 | 0.39 | 0.55 | |
| xx612PND105KSZ | 1000±10% | 2.58 | 2.87 | 1.0 | 1.3 | 1.05 | 0.37 | 0.52 | |

Testing and Validation Services

Coilcraft CPS testing facilities in North America and Asia perform comprehensive laboratory testing services of electronic components. In addition to testing the components we manufacture, Coilcraft CPS provides a wide range of services able to help you determine the reliability of assemblies you manufacture.

Most Coilcraft CPS inductors are available from the factory with value-added screening services. Expensive and time-consuming third-party testing services are a thing of the past!

The last character of the part number (code) specifies the screening level.

| Standard | Screening level | Component type | Code |
|-------------|---------------------------|------------------|------|
| CP-SA-10001 | High-reliability basic | All components | H |
| CP-SA-10003 | High-reliability Aero/Mil | RF components | N |
| CP-SA-10004 | High-reliability Aero/Mil | Power components | N |
| CP-SA-10005 | High-reliability Aero/Mil | RF Transformers | N |

CP-SA-10001 screening standard was developed for the medical industry, but has found usage in the military and space sectors as well. It is a low cost, quick and efficient way to prove reliability in a variety of applications. Based on market feedback, compiled customer requests and Coilcraft's expertise in screening and qualification, this standard comprises a robust screening procedure with optional qualification using various MIL-STDs as guidelines.

CP-SA-10003/4/5 are based on MIL-STD-981 (screening and optional qualification) for their respective component types. Coilcraft has tailored these documents to be applicable to modern-day components, while maintaining the high level of scrutiny and reliability as demanded in MIL-STD-981. Parts screened to these levels are typically used in space and military applications.

Coilcraft can also accommodate custom screening requests that may be a modification of an existing screening document, or by creating and implementing custom-built screening flow from the ground up. Whatever the requirements, Coilcraft can adapt to your needs...not the other way around.

We can perform a complete set of tests in accordance with established standards and specifications or specific tests targeted at reliability, repeatability or compliance to published electrical and physical specifications. We routinely perform qualification testing in accordance with AEC-Q200, MIL-STD-883 and MIL-STD-202, and provide all the necessary associated reports. Testing is also available for MIL-STD-981, MIL-PRF-83446, MIL-PRF-27 and many others.

Testing capabilities

Testing capabilities to support product performance verification include, but are not limited to:

- Vibration Testing
- Mechanical Shock Testing
- Complete Electrical Testing
- Elemental Analysis
- Radiographic Inspection
- Programmable Chamber Exposures
- Thermal Shock & Cycling Tests
- Independent Loads
- Resistance to Solvents
- Customized data, including: First Article Inspection data, Solderability data, Qualification data and Customized Certificates of Compliance.

Electrical Testing

- HI-POT (Vac up to 5 kV, Vdc up to 6 kV)
- Independent loads (0 to 125 Amps, 0 to 300 Volts)
- Thermal rise
- Inductance (at frequencies from 5 Hz to 40 GHz)
- Q (at frequencies from 5 Hz to 6 GHz)
- DCR
- SRF (5 Hz to 40 GHz)
- Impedance (at frequencies up to 40 GHz)
- Harmonic distortion (at frequencies from 1 kHz to 100 kHz, up to 6 Volts)
- Longitudinal balance (at frequencies from 20 kHz to 30 MHz)
- Voltage ratio
- Leakage inductance
- Insertion loss (at frequencies from 5 Hz to 40 GHz)

Simulated Environmental Performance Testing

- Humidity (ISO, 20% to 90% RH)
- Moisture resistance (-10°C to +150°C, 20% to 98% RH)
- Thermal shock (-100°C to +155°C)
- Thermal cycling (-100°C to +185°C)
- High and low temperature storage (-55°C to +250°C)
- Vibration per MIL STD 202, method 214, conditions A, B and H
- Mechanical shock per MIL STD 202, method 213, conditions A, C, D, E and F
- Steam aging

Analytical Laboratory Services

- X-ray imaging
- Sample cross-sectioning
- Scanning Electron Microscope (SEM) imaging
- Plating thickness analysis using SEM + X-Ray Fluorescence (XRF)
- Qualitative elemental analysis using Energy Dispersive Spectroscopy (EDS) and XRF

Other Services

- Resistance to solvents testing
- Solderability testing
- Resistance to solder heat testing
- Electrical characterization
- Tin whisker testing to International Electronics Manufacturing Initiative (iNEMI) standard
- Preparation of First Article Inspection data

Customized COTS Solutions

- Alternate terminations for all components
- 100% one-up electrical and environmental testing
- Testing and screening programs to customer specifications
- MIL STD packaging
- ISO 9001/2008
- Quality Management System
- ISO/TS 16949



深圳市恒大创新科技有限公司是美国线艺电感(Coilcraft)大陆地区的专业增值分销商, 我公司主营射频电感、薄片电感、功率电感、背光电感、变压器和滤波器等全系列的产品, 我们能够给您提供最优的价格, 最好的服务, 及时稳定的供货, 以及强大的技术支持。

Coilcraft(线艺)是全球领先的射频和功率电感制造商, 线艺成立于 1945 年, 是世界上最早和最大的磁性元件制造商之一。在一些调查中, 工程师均表示, 线艺是他们最喜爱的品牌, 并且会将它推荐给朋友。您会发现线艺的客户服务和产品质量在业内是无可匹敌的。在中国拥有多个制造工厂线艺于 1990 年在中国大陆设立第一间工厂。今天拥有多个生产基地, 保证为您提供源源不断且可靠的产品。销售办事处遍及亚洲, 同时还有多个货仓, 能够快速供货。富于创新的设计师和制造商, 线艺发明的许多电感设计现都已成为行业标准。线艺的工程师将继续创新, 打造更小、性能更好、成本更低的产品。线艺元件用于医疗设备、飞机、汽车和其它质量和一致性要求相当高的产品中。

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