

MINIATURE SMD CHIP INDUCTORS / DL4 TYPE

FEATURES

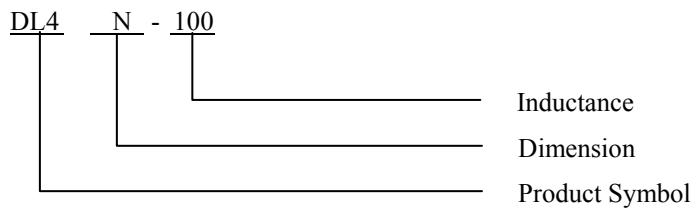
- ◆ Winding on a special ferrite core.
- ◆ Low DC resistance, high current capacity, and high impedance characteristics.
- ◆ Excellent for use as choke coil in DC power supply circuits.
- ◆ Excellent solder heat resistance. Both flow and reflow soldering methods can be employed.



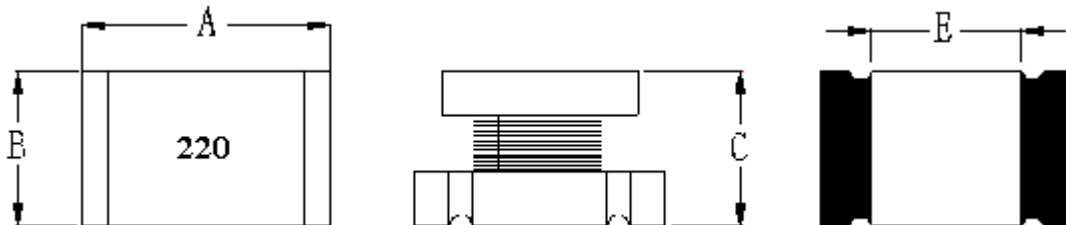
APPLICATIONS

- ◆ Notebook and PDAs
- ◆ Flash Memory programs
- ◆ Step-up and step-down converters

ORDERING CODE



SHAPES



DIMENSIONS (UNIT: mm/inch)

| Part No. | A | B | C | E (Ref.) |
|----------|-----------|-----------|-----------|----------|
| DL4J | 2.0 ± 0.2 | 1.5 ± 0.2 | 1.7 ± 0.2 | 0.7 |
| DL4K | 2.5 ± 0.2 | 2.0 ± 0.2 | 1.8 ± 0.2 | 0.8 |
| DL4L | 3.2 ± 0.3 | 1.6 ± 0.3 | 1.8 ± 0.3 | 0.8 |
| DL4M | 3.2 ± 0.3 | 2.5 ± 0.3 | 2.0 ± 0.3 | 0.8 |
| DL4N | 4.5 ± 0.3 | 3.2 ± 0.3 | 2.8 ± 0.3 | 1.4 |
| DL4O | 5.7 ± 0.3 | 5.0 ± 0.3 | 4.7 ± 0.3 | 1.7 |

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ELECTRICAL CHARACTERISTICS FOR DL4J

| Part No. | Inductance (μ H) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) Max |
|----------|--------------------------|-------------------------|-------------------------|-----------------|
| DL4J-1 | 1.00 \pm 10% | 7.96 | 0.208 | 700 |
| DL4J-2.2 | 2.20 \pm 10% | 7.96 | 0.299 | 620 |
| DL4J-4.7 | 4.70 \pm 10% | 7.96 | 0.520 | 430 |
| DL4J-10 | 10.0 \pm 10% | 2.52 | 0.910 | 300 |
| DL4J-22 | 22.0 \pm 10% | 2.52 | 2.210 | 220 |

ELECTRICAL CHARACTERISTICS FOR DL4K

| Part No. | Inductance (μ H) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) Max |
|----------|--------------------------|-------------------------|-------------------------|-----------------|
| DL4K-1 | 1.0 \pm 20% | 7.96 | 0.442 | 475 |
| DL4K-1.5 | 1.5 \pm 20% | 7.96 | 0.546 | 435 |
| DL4K-2.2 | 2.2 \pm 20% | 7.96 | 0.650 | 390 |
| DL4K-3.3 | 3.3 \pm 20% | 7.96 | 0.845 | 340 |
| DL4K-4.7 | 4.7 \pm 20% | 7.96 | 1.040 | 285 |
| DL4K-6.8 | 6.8 \pm 20% | 7.96 | 1.300 | 275 |
| DL4K-10 | 10 \pm 10% | 2.52 | 2.197 | 210 |
| DL4K-15 | 15 \pm 10% | 2.52 | 2.860 | 175 |
| DL4K-22 | 22 \pm 10% | 2.52 | 3.640 | 160 |
| DL4K-33 | 33 \pm 10% | 2.52 | 5.460 | 120 |

ELECTRICAL CHARACTERISTICS FOR DL4L

| Part No. | Inductance (μ H) | RDC (Ω) Max | IDC (mA) Max |
|-----------|--------------------------|----------------------------|--------------------|
| DL4L-0.22 | 0.22 \pm 20% | 0.14 | 850 |
| DL4L-0.47 | 0.47 \pm 20% | 0.21 | 700 |
| DL4L-1 | 1.0 \pm 20% | 0.364 | 510 |
| DL4L-2.2 | 2.2 \pm 10% | 0.533 | 430 |
| DL4L-4.7 | 4.7 \pm 10% | 0.845 | 340 |
| DL4L-10 | 10 \pm 10% | 1.69 | 230 |
| DL4L-22 | 22 \pm 10% | 3.90 | 160 |
| DL4L-47 | 47 \pm 10% | 10.40 | 100 |
| DL4L-100 | 100 \pm 10% | 15.6 | 80 |

★ Test Frequency: 1.0MHZ

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ELECTRICAL CHARACTERISTICS FOR DL4M

| Part No. | Inductance (uH) | RDC (Ω) Max | IDC (mA) Max |
|----------|--------------------|-------------------|--------------------|
| DL4M-1 | 1.0 ± 20% | 0.117 | 800 |
| DL4M-2.2 | 2.2 ± 20% | 0.169 | 600 |
| DL4M-4.7 | 4.7 ± 20% | 0.260 | 450 |
| DL4M-10 | 10 ± 10% | 0.572 | 300 |
| DL4M-22 | 22 ± 10% | 0.923 | 250 |
| DL4M-47 | 47 ± 10% | 1.690 | 170 |
| DL4M-100 | 100 ± 10% | 4.550 | 100 |
| DL4M-220 | 220 ± 10% | 10.92 | 70 |
| DL4M-330 | 330 ± 10% | 13.00 | 60 |
| DL4M-390 | 390 ± 10% | 22.00 | 60 |
| DL4M-470 | 470 ± 10% | 24.70 | 60 |
| DL4M-560 | 560 ± 10% | 28.60 | 60 |

★ Test Frequency: 1.0MHZ

ELECTRICAL CHARACTERISTICS FOR DL4N

| Part No. | Inductance (uH) | RDC (Ω) Max | IDC (mA) Max |
|----------|--------------------|-------------------|--------------------|
| DL4N-4.7 | 4.7 ± 20% | 0.15 | 750 |
| DL4N-6.8 | 6.8 ± 20% | 0.20 | 720 |
| DL4N-10 | 10 ± 10% | 0.24 | 650 |
| DL4N-15 | 15 ± 10% | 0.32 | 570 |
| DL4N-22 | 22 ± 10% | 0.60 | 420 |
| DL4N-33 | 33 ± 10% | 1.00 | 310 |
| DL4N-47 | 47 ± 10% | 1.10 | 280 |
| DL4N-68 | 68 ± 10% | 1.70 | 220 |
| DL4N-100 | 100 ± 10% | 2.20 | 190 |
| DL4N-150 | 150 ± 10% | 3.50 | 130 |
| DL4N-220 | 220 ± 10% | 4.00 | 110 |
| DL4N-330 | 330 ± 10% | 6.80 | 100 |
| DL4N-470 | 470 ± 10% | 11.80 | 80 |

★ Test Frequency: 1.0MHZ

ELECTRICAL CHARACTERISTICS FOR DL4O

| Part No. | Inductance (uH) | Test Frequency | RDC (Ω) Max | IDC (A) Max |
|----------|--------------------|-------------------|-------------------|-------------------|
| DL4O-1 | 1.0 ± 20% | 1.0 MHZ | 0.020 | 9.00 |
| DL4O-1.5 | 1.5 ± 20% | 1.0 MHZ | 0.028 | 7.80 |
| DL4O-2.2 | 2.2 ± 20% | 1.0 MHZ | 0.035 | 6.54 |
| DL4O-3.3 | 3.3 ± 20% | 1.0 MHZ | 0.054 | 5.48 |

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|-----------------|-----------|---------|-------|------|
| DL40-4.7 | 4.7 ± 20% | 1.0 MHZ | 0.080 | 4.48 |
| DL40-6.8 | 6.8 ± 20% | 1.0 MHZ | 0.124 | 3.57 |
| DL40-10 | 10 ± 20% | 1.0 MHZ | 0.167 | 3.06 |
| DL40-15 | 15 ± 20% | 1.0 MHZ | 0.215 | 2.63 |
| DL40-22 | 22 ± 20% | 1.0 MHZ | 0.322 | 2.21 |
| DL40-33 | 33 ± 20% | 1.0 MHZ | 0.448 | 1.78 |
| DL40-47 | 47 ± 20% | 1.0 MHZ | 0.586 | 1.50 |
| DL40-68 | 68 ± 20% | 1.0 MHZ | 0.806 | 1.30 |
| DL40-100 | 100 ± 10% | 1.0 MHZ | 1.10 | 1.05 |
| DL40-150 | 150 ± 10% | 1.0 MHZ | 1.575 | 0.94 |
| DL40-220 | 220 ± 10% | 1.0 MHZ | 2.550 | 0.72 |
| DL40-330 | 330 ± 10% | 1.0 MHZ | 3.600 | 0.60 |
| DL40-390 | 390 ± 10% | 1.0 KHZ | 4.000 | 0.55 |