



# Power Inductors – DR0810 Series



- Small footprint power inductors designed for maximum efficiency and low cost.
- Ideal for noise filtering in power amplifiers, power supplies and speaker crossover networks.
- Inductance values from 3.3 to 1000  $\mu$ H, most at 10% tolerance
- Current ratings up to 7.5 Amps with only 0.010 Ohms DCR
- Industry-standard pin spacings; protective PVC sleeve

**Core material** Ferrite

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

**Weight:** 2.0 – 2.7 g

**Ambient temperature** –40°C to +85°C with  $I_{rms}$  current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +125°C.

Tray packaging: –40°C to +80°C

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

**Packaging** 150 parts per tray; 800 parts in optional fan-fold tape

**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>( $\mu$ H) | DCR max<br>(Ohms) | SRF typ <sup>3</sup><br>(MHz) | Isat (A) <sup>4</sup> |          |          | Irms (A) <sup>5</sup> |           |
|--------------------------|---------------------------------------|-------------------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
|                          |                                       |                   |                               | 10% drop              | 20% drop | 30% drop | 20°C rise             | 40°C rise |
| DR0810-332L              | 3.3 $\pm$ 20%                         | 0.010             | 47                            | 8.9                   | 10.2     | 11.0     | 7.0                   | 9.5       |
| DR0810-472L              | 4.7 $\pm$ 20%                         | 0.012             | 33                            | 7.4                   | 8.5      | 9.3      | 6.4                   | 8.8       |
| DR0810-562L              | 5.6 $\pm$ 20%                         | 0.017             | 28                            | 6.2                   | 7.4      | 8.2      | 5.8                   | 8.1       |
| DR0810-682L              | 6.8 $\pm$ 20%                         | 0.018             | 26                            | 5.6                   | 6.7      | 7.4      | 5.2                   | 7.4       |
| DR0810-822L              | 8.2 $\pm$ 20%                         | 0.019             | 25                            | 5.2                   | 6.2      | 6.8      | 4.6                   | 6.7       |
| DR0810-103L              | 10 $\pm$ 10%                          | 0.026             | 23                            | 5.1                   | 6.1      | 6.6      | 4.0                   | 6.0       |
| DR0810-123L              | 12 $\pm$ 10%                          | 0.030             | 20                            | 4.0                   | 4.6      | 5.1      | 3.8                   | 5.7       |
| DR0810-153L              | 15 $\pm$ 10%                          | 0.035             | 18                            | 3.8                   | 4.5      | 5.0      | 3.5                   | 5.3       |
| DR0810-183L              | 18 $\pm$ 10%                          | 0.038             | 15                            | 3.5                   | 4.1      | 4.5      | 3.3                   | 5.0       |
| DR0810-223L              | 22 $\pm$ 10%                          | 0.046             | 14                            | 3.4                   | 4.0      | 4.4      | 3.1                   | 4.6       |
| DR0810-273L              | 27 $\pm$ 10%                          | 0.070             | 11                            | 3.1                   | 3.7      | 4.0      | 2.8                   | 4.3       |
| DR0810-333L              | 33 $\pm$ 10%                          | 0.080             | 10                            | 2.9                   | 3.4      | 3.7      | 2.6                   | 3.9       |
| DR0810-393L              | 39 $\pm$ 10%                          | 0.088             | 10                            | 2.5                   | 2.9      | 3.2      | 2.4                   | 3.6       |
| DR0810-473L              | 47 $\pm$ 10%                          | 0.10              | 9.5                           | 2.3                   | 2.7      | 3.0      | 2.1                   | 3.2       |
| DR0810-563L              | 56 $\pm$ 10%                          | 0.15              | 8.0                           | 1.9                   | 2.2      | 2.5      | 1.9                   | 2.9       |
| DR0810-683L              | 68 $\pm$ 10%                          | 0.17              | 7.0                           | 2.0                   | 2.3      | 2.5      | 1.7                   | 2.5       |
| DR0810-823L              | 82 $\pm$ 10%                          | 0.20              | 7.0                           | 1.7                   | 2.0      | 2.2      | 1.4                   | 2.2       |
| DR0810-104L              | 100 $\pm$ 10%                         | 0.22              | 6.0                           | 1.5                   | 1.8      | 2.0      | 1.2                   | 1.8       |
| DR0810-124L              | 120 $\pm$ 10%                         | 0.29              | 5.0                           | 1.2                   | 1.5      | 1.6      | 1.1                   | 1.7       |
| DR0810-154L              | 150 $\pm$ 10%                         | 0.34              | 4.5                           | 1.1                   | 1.4      | 1.5      | 1.1                   | 1.6       |
| DR0810-184L              | 180 $\pm$ 10%                         | 0.38              | 4.0                           | 1.1                   | 1.3      | 1.4      | 1.0                   | 1.5       |
| DR0810-224L              | 220 $\pm$ 10%                         | 0.44              | 4.0                           | 1.0                   | 1.2      | 1.3      | 0.93                  | 1.40      |
| DR0810-274L              | 270 $\pm$ 10%                         | 0.62              | 3.8                           | 0.90                  | 1.1      | 1.2      | 0.86                  | 1.28      |
| DR0810-334L              | 330 $\pm$ 10%                         | 0.70              | 3.6                           | 0.88                  | 1.0      | 1.1      | 0.80                  | 1.20      |
| DR0810-394L              | 390 $\pm$ 10%                         | 0.88              | 3.0                           | 0.86                  | 0.98     | 1.0      | 0.73                  | 1.10      |
| DR0810-474L              | 470 $\pm$ 10%                         | 1.00              | 2.7                           | 0.78                  | 0.90     | 0.99     | 0.66                  | 0.97      |
| DR0810-564L              | 560 $\pm$ 10%                         | 1.11              | 2.5                           | 0.72                  | 0.85     | 0.93     | 0.60                  | 0.86      |
| DR0810-684L              | 680 $\pm$ 10%                         | 1.45              | 2.5                           | 0.62                  | 0.72     | 0.79     | 0.53                  | 0.76      |
| DR0810-824L              | 820 $\pm$ 10%                         | 1.70              | 2.1                           | 0.54                  | 0.67     | 0.72     | 0.46                  | 0.66      |
| DR0810-105L              | 1000 $\pm$ 10%                        | 2.20              | 2.1                           | 0.50                  | 0.63     | 0.69     | 0.40                  | 0.55      |

1. To order parts packaged in optional fanfold tape (800 parts per box), add the letter "F" at the end of the part number, e.g. DR0810-824LF
2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
3. SRF measured using an Agilent/HP 4191A or equivalent.

4. DC current at which the inductance drops the specified amount from its value without current
5. Current that causes the specified temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.



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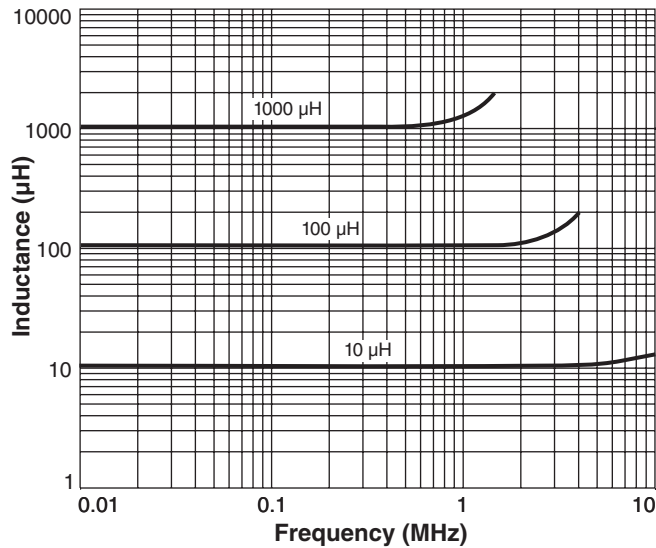
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## Typical L vs Frequency



## Typical L vs Current

