



POWER INDUCTORS

P/N: DSxxxx series

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Feature

- High energy storage and low resistance
- Ideal for DC-DC buck or boost conversion
- Reliable surface mounting
- Drop-in replacements for industry prevalent competitor series
- Robust temperature deflection to help prevent damage during solder reflow
- Operating temperature range -40°C to +85°C
- Lead free and RoHS compliant



Electrical Specifications @ 25°C

| Part Number | L μH | DCR Ω | ISAT A | IRMS A | Tolerance Suffix |
|-------------|---------|----------|-----------|-----------|---------------------|
| DS2-5R0M | 5.0 | 0.080 | 1.70 | 1.70 | M |
| DS2-7R5M | 7.5 | 0.100 | 1.40 | 1.40 | M |
| DS2-100M | 10 | 0.165 | 1.20 | 1.20 | M |
| DS2-120M | 12 | 0.172 | 1.10 | 1.10 | M |
| DS2-150M | 15 | 0.181 | 1.00 | 1.00 | M |
| DS2-180M | 18 | 0.190 | 0.90 | 0.90 | M |
| DS2-220M | 22 | 0.250 | 0.80 | 0.80 | M |
| DS2-270M | 27 | 0.270 | 0.70 | 0.70 | M |
| DS2-330M | 33 | 0.300 | 0.65 | 0.65 | M |
| DS2-390M | 39 | 0.380 | 0.60 | 0.60 | M |
| DS2-470M | 47 | 0.580 | 0.55 | 0.55 | M |
| DS2-560M | 56 | 0.620 | 0.50 | 0.50 | M |
| DS2-680M | 68 | 0.920 | 0.45 | 0.45 | M |
| DS2-820M | 82 | 0.980 | 0.40 | 0.40 | M |



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|-------------|--------------|-----------------|-----------|-----------|---------------------|
| DS3-2R2M | 2.2 | 0.040 | 2.50 | 2.50 | M |
| DS3-3R9M | 3.9 | 0.055 | 2.10 | 2.10 | M |
| DS3-5R6M | 5.6 | 0.065 | 1.95 | 1.95 | M |
| DS3-8R2M | 8.2 | 0.080 | 1.75 | 1.75 | M |
| DS3-100M | 10 | 0.100 | 1.50 | 1.50 | M |
| DS3-120M | 12 | 0.120 | 1.40 | 1.40 | M |
| DS3-150M | 15 | 0.140 | 1.30 | 1.30 | M |
| DS3-180M | 18 | 0.160 | 1.20 | 1.20 | M |
| DS3-220M | 22 | 0.180 | 1.10 | 1.10 | M |
| DS3-270M | 27 | 0.200 | 1.00 | 1.00 | M |
| DS3-330M | 33 | 0.240 | 0.92 | 0.92 | M |
| DS3-390M | 39 | 0.350 | 0.84 | 0.84 | M |
| DS3-470M | 47 | 0.425 | 0.75 | 0.75 | M |
| DS3-560M | 56 | 0.530 | 0.68 | 0.68 | M |
| DS3-680M | 68 | 0.668 | 0.60 | 0.60 | M |
| DS3-820M | 82 | 0.730 | 0.54 | 0.54 | M |
| DS3-101M | 100 | 1.050 | 0.50 | 0.50 | M |
| DS3-121M | 120 | 1.120 | 0.45 | 0.45 | M |

| Part Number | L μ H | DCR Ω | ISAT A | IRMS A | Tolerance Suffix |
|-------------|--------------|-----------------|-----------|-----------|---------------------|
| DS4-1R0M | 1.0 | 0.021 | 5.8 | 5.00 | M |
| DS4-1R5M | 1.5 | 0.022 | 5.2 | 4.50 | M |
| DS4-2R2M | 2.2 | 0.032 | 5.0 | 3.80 | M |
| DS4-3R3M | 3.3 | 0.039 | 3.9 | 3.30 | M |
| DS4-4R7M | 4.7 | 0.054 | 2.8 | 2.70 | M |
| DS4-6R8M | 6.8 | 0.075 | 2.8 | 2.20 | M |
| DS4-100M | 10 | 0.101 | 2.4 | 2.00 | M |
| DS4-150M | 15 | 0.150 | 2.0 | 1.50 | M |
| DS4-220M | 22 | 0.207 | 1.5 | 1.30 | M |
| DS4-330M | 33 | 0.334 | 1.4 | 1.10 | M |
| DS4-470M | 47 | 0.472 | 1.0 | 0.80 | M |
| DS4-101M | 100 | 1.000 | 0.9 | 0.70 | M |
| DS4-151M | 150 | 1.680 | 0.5 | 0.39 | M |
| DS4-221M | 220 | 2.550 | 0.4 | 0.30 | M |
| DS4-391M | 390 | 4.510 | 0.3 | 0.23 | M |



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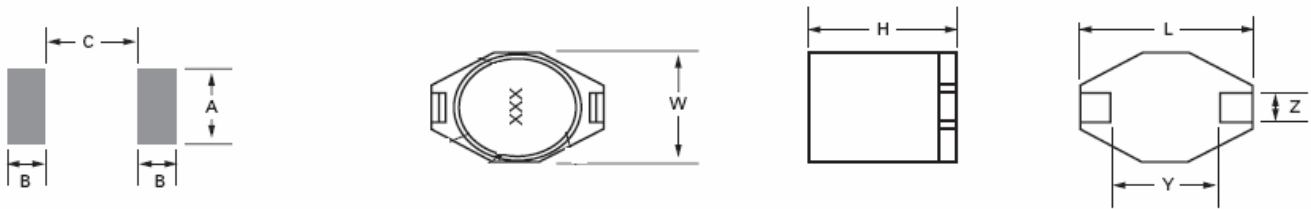
P/N: DSxxxx series

| Part Number | L μH | DCR Ω | ISAT A | IRMS A | Tolerance Suffix |
|-------------|---------|----------|-----------|-----------|---------------------|
| DS5-1R2M | 1.2 | 0.0045 | 20.0 | 10.0 | M |
| DS5-100M | 10 | 0.040 | 7.00 | 3.60 | M |
| DS5-150M | 15 | 0.048 | 5.60 | 3.20 | M |
| DS5-220M | 22 | 0.059 | 5.00 | 2.80 | M |
| DS5-330M | 33 | 0.075 | 4.50 | 2.60 | M |
| DS5-470M | 47 | 0.097 | 4.00 | 2.40 | M |
| DS5-680M | 68 | 0.138 | 3.00 | 2.00 | M |
| DS5-101M | 100 | 0.207 | 2.40 | 1.70 | M |
| DS5-151M | 150 | 0.293 | 2.10 | 1.30 | M |
| DS5-221M | 220 | 0.470 | 1.90 | 1.10 | M |
| DS5-331M | 330 | 0.780 | 1.10 | 0.86 | M |
| DS5-471M | 470 | 1.080 | 1.10 | 0.73 | M |
| DS5-681M | 680 | 1.400 | 0.96 | 0.64 | M |
| DS5-102M | 1000 | 2.010 | 0.80 | 0.53 | M |

Note:

- Inductance measured at 100kHz and 100mV
- DCR is a maximum @20°C
- ISAT current applied to produce a typical 10% drop in nominal inductance
- IRMS current applied to produce a typical 40°C temperature rise
- Suffix of M = ±20%

Mechanical



suggest pad layout

| Number | Units | Maximum Dimensions | | | Reference Dimensions | | | | |
|--------|--------|--------------------|---------|--------|----------------------|--------|--------|--------|---------|
| | | L | W | H | Y | Z | A | B | C |
| MGDS2 | inches | 0.421 | 0.323 | 0.146 | 0.236 | 0.079 | 0.087 | 0.094 | 0.224 |
| | (mm) | (10.70) | (8.20) | (3.70) | (6.00) | (2.00) | (2.20) | (2.40) | (5.70) |
| MGDS3 | inches | 0.421 | 0.323 | 0.177 | 0.236 | 0.079 | 0.087 | 0.094 | 0.224 |
| | (mm) | (10.70) | (8.20) | (4.50) | (6.00) | (2.00) | (2.20) | (2.40) | (5.70) |
| MGDS4 | inches | 0.510 | 0.398 | 0.201 | 0.300 | 0.100 | 0.110 | 0.118 | 0.290 |
| | (mm) | (12.95) | (10.10) | (5.10) | (7.62) | (2.54) | (2.80) | (3.00) | (7.37) |
| MGDS5 | inches | 0.730 | 0.600 | 0.300 | 0.500 | 0.100 | 0.110 | 0.115 | 0.490 |
| | (mm) | (18.54) | (15.25) | (7.62) | (12.70) | (2.54) | (2.79) | (2.92) | (12.45) |

Tolerance: ±0.25 (0.010) unless specified otherwise