

MSCDRI-DB318 SERIES

SMD Power Inductors

CUTTING-EDGE TECHNOLOGIES OF EMI/EMC SOLUTIONS

FEATURES

- 1.8mm Max. height and 4.0mm Max. square.
- Magnetically shielded and low DC resistance.
- Ideal for DC-DC converter choke coil for portable equipments

APPLICATIONS

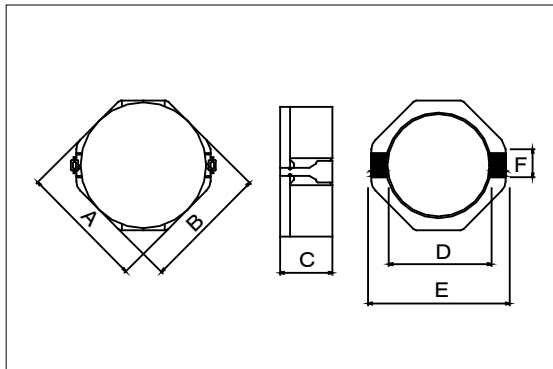
- Power supply for VTRs.
- OA equipment.
- LCD televisions.
- Notebook PCs.
- Portable communication equipment.
- DC / DC converters, etc.

PRODUCT IDENTIFICATION

1 2 3 4 5
 MSCDRI - DB318 - 100M □ □

- ① Product Code
- ② Dimensions Code
- ③ Inductance Code
- ④ Tolerance Code
- ⑤ Pattern Code

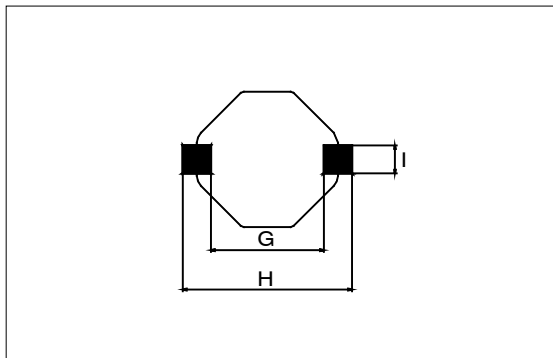
PRODUCT SERIES



NOTES: DIMENSION IN mm

| Part No. | A | B | C | D | E | F |
|--------------|---------|---------|---------|-----|-----|-----|
| MSCDRI-DB318 | 3.8±0.2 | 3.8±0.2 | 1.8Max. | 2.7 | 4.5 | 1.0 |

LAND PATTERN



NOTES: DIMENSION IN mm

| Part No. | G | H | I |
|--------------|-----|-----|-----|
| MSCDRI-DB318 | 2.2 | 5.1 | 1.5 |

SMD Power Inductors

■ PRODUCT SPECIFICATIONS

| Part No. | Inductance (μ H) | DC Resistance(Ω) | Permissible DC Current(A)Max. | | |
|----------|--------------------------|---------------------------|-------------------------------|------|------|
| | | Max. | 10% | 30% | 40°C |
| 3R3 | 3.3 | 0.07 | 0.94 | 1.20 | 1.64 |
| 3R9 | 3.9 | 0.09 | 0.86 | 1.10 | 1.37 |
| 4R7 | 4.7 | 0.10 | 0.85 | 1.07 | 1.29 |
| 5R6 | 5.6 | 0.12 | 0.81 | 1.02 | 1.23 |
| 6R8 | 6.8 | 0.13 | 0.69 | 0.89 | 1.10 |
| 8R2 | 8.2 | 0.16 | 0.59 | 0.75 | 1.05 |
| 100 | 10 | 0.18 | 0.58 | 0.74 | 0.99 |
| 120 | 12 | 0.23 | 0.55 | 0.70 | 0.78 |
| 150 | 15 | 0.26 | 0.48 | 0.61 | 0.74 |
| 180 | 18 | 0.33 | 0.42 | 0.53 | 0.63 |
| 220 | 22 | 0.44 | 0.39 | 0.51 | 0.53 |

1. TEST FREQ. (L): @100KHz/250mV
2. TOLERANCE OF INDUCTANCE: 1~8.2 μ H \pm 30%(N) 10~22 μ H \pm 20%(M)
3. The max. permissible DC current is the DC current applied which causes 10% or 30% reduction of its initial inductance value, or the coil temperature to rise by 40°C, whichever is lower.

FEATURES

- Compact and thin.
- Large permissible D.C. current and low D.C. resistance

APPLICATIONS

- Digital Still Cameras, Portable DVD players, and PDAs
- GPS systems

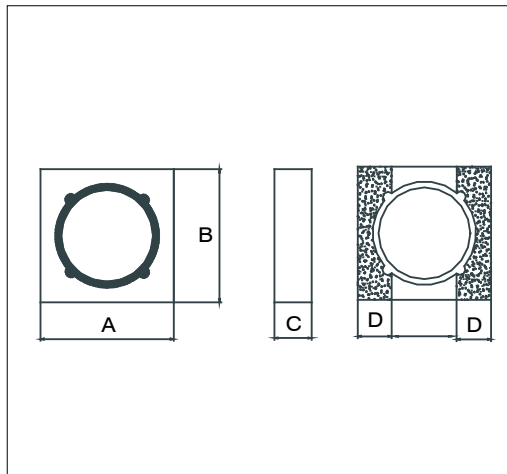
PRODUCT IDENTIFICATION

① ② ③ ④ ⑤

MSCDRI - SD10 - 100M □ □

- ① Product Code
- ② Dimensions Code
- ③ Inductance Code
- ④ Tolerance Code
- ⑤ Pattern Code

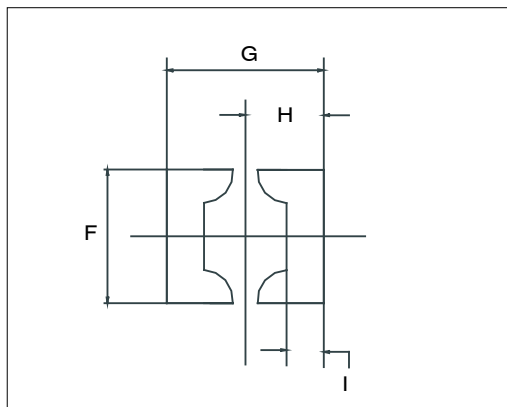
PRODUCT SERIES



NOTES: DIMENSION IN mm

| PART NO. | A | B | C | D | E |
|-------------|----------|----------|----------|----------|----------|
| MSCDRI-SD10 | 5.2 Max. | 5.2 Max. | 1.0 Max. | 1.5 Typ. | 2.0 Typ. |
| MSCDRI-SD12 | 5.2 Max. | 5.2 Max. | 1.2 Max. | 1.5 Typ. | 2.0 Typ. |
| MSCDRI-SD18 | 5.2 Max. | 5.2 Max. | 1.8 Max. | 1.5 Typ. | 2.0 Typ. |
| MSCDRI-SD20 | 5.2 Max. | 5.2 Max. | 2.0 Max. | 1.5 Typ. | 2.0 Typ. |
| MSCDRI-SD25 | 5.2 Max. | 5.2 Max. | 2.5 Max. | 1.5 Typ. | 2.0 Typ. |

LAND PATTERN



NOTES: DIMENSION IN mm

| PART NO. | F | G | H | I |
|-------------|------|------|-------|------|
| MSCDRI-SD10 | 5.15 | 5.95 | 2.975 | 1.00 |
| MSCDRI-SD12 | 5.15 | 5.95 | 2.975 | 1.00 |
| MSCDRI-SD18 | 5.15 | 5.95 | 2.975 | 1.00 |
| MSCDRI-SD20 | 5.15 | 5.95 | 2.975 | 1.00 |
| MSCDRI-SD25 | 5.15 | 5.95 | 2.975 | 1.00 |

FEATURES

To be high saturation for surface mounting. Low DC resistance for large currents.
 High magnetic shield construction should actualize high resolution for EMC protection.
 The products do not contain lead and support lead-free soldering.

APPLICATIONS

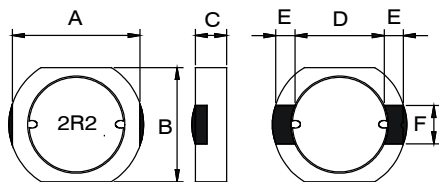
Ideal for a variety of DC/DC converter inductor applications.
 Portable communication equipment.
 Computer Peripherals
 Cable / ADSL Moderns

PRODUCT IDENTIFICATION

① ② ③ ④ ⑤
 MSCDRI - 7030AB - 100M □□

- ① Product Code
- ② Dimensions Code
- ③ Inductance Code
- ④ Tolerance Code
- ⑤ Pattern Code

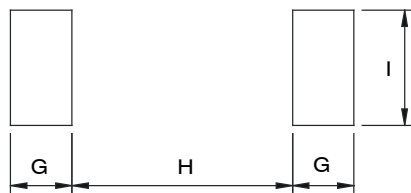
PRODUCT SERIES



Dimension in mm

| Part No. | A | B | C | D | E | F |
|---------------|---------|----------|---------|---------|---------|---------|
| MSCDRI-7030AB | 7.2±0.5 | 7.2±0.5 | 3.0Max. | 5.4Typ. | 1.0Typ. | 2.5Typ. |
| MSCDRI-7035AB | 7.2±0.5 | 7.20±0.5 | 3.5Max. | 5.4Typ. | 1.0Typ. | 2.5Typ. |
| MSCDRI-7040AB | 7.2±0.5 | 7.20±0.5 | 4.0Max. | 5.4Typ. | 1.0Typ. | 2.5Typ. |
| MSCDRI-7045AB | 7.2±0.5 | 7.20±0.5 | 4.5Max. | 5.4Typ. | 1.0Typ. | 2.5Typ. |
| MSCDRI-7050AB | 7.2±0.5 | 7.20±0.5 | 5.0Max. | 5.4Typ. | 1.0Typ. | 2.5Typ. |
| MSCDRI-7060AB | 7.2±0.5 | 7.20±0.5 | 6.0Max. | 5.4Typ. | 1.0Typ. | 2.5Typ. |

LAND PATTERNS



Dimension in mm

| Part No. | G | H | I |
|---------------|-----|-----|-----|
| MSCDRI-7030AB | 1.5 | 5.4 | 2.8 |
| MSCDRI-7035AB | 1.5 | 5.4 | 2.8 |
| MSCDRI-7040AB | 1.5 | 5.4 | 2.8 |
| MSCDRI-7045AB | 1.5 | 5.4 | 2.8 |
| MSCDRI-7050AB | 1.5 | 5.4 | 2.8 |
| MSCDRI-7060AB | 1.5 | 5.4 | 2.8 |

■ PRODUCT SPECIFICATIONS

| Part No. | Inductance (μ H) | DC Resistance(Ω) \pm 20% | | | | | | Permissible DC Current(A)Max. | | | | | |
|----------|--------------------------|-------------------------------------|--------|--------|--------|--------|--------|-------------------------------|--------|--------|--------|--------|--------|
| | | 7030AB | 7035AB | 7040AB | 7045AB | 7050AB | 7060AB | 7030AB | 7035AB | 7040AB | 7045AB | 7050AB | 7060AB |
| 1R0 | 1.0 | 9.27m | 6.69m | 5.35m | | | | 6.50 | 7.50 | 7.30 | | | |
| 2R0 | 2.0 | | 10.13m | 8.00m | | | 8.60m | | 5.50 | 6.50 | | | 6.60 |
| 2R2 | 2.2 | 19.2m | | 8.00m | 8.63m | 9.46m | | 4.57 | | 6.50 | 6.50 | 6.00 | |
| 2R7 | 2.7 | 20.5m | | | | | | 4.40 | | | | | |
| 3R3 | 3.3 | 22.5m | 16.52m | 11.22m | 10.24m | 12.45m | 12.2m | 4.10 | 4.80 | 5.40 | 5.50 | 5.80 | 5.35 |
| 4R0 | 4.0 | | | | | 14.73m | | | | | | 5.20 | |
| 4R7 | 4.7 | 30.0m | 26.75m | 14.1m | 14.50m | 15.10m | 16.8m | 3.30 | 3.40 | 4.60 | 5.00 | 5.00 | 4.70 |
| 5R2 | 5.2 | | | | | | 18.3m | | | | | | 4.55 |
| 5R6 | 5.6 | | | 16.0m | | | | | | 4.10 | | | |
| 6R2 | 6.2 | | 36.33m | | | 16.84m | 21.0m | | 3.20 | | | 4.70 | 4.30 |
| 6R8 | 6.8 | 40m | | 22.2m | 19.20m | | | 3.10 | | 3.50 | 4.00 | | |
| 8R0 | 8.0 | 52m | | | | | | 2.55 | | | | | |
| 8R2 | 8.2 | | | 30.0m | | | | | | 3.00 | | | |
| 100 | 10 | 70m | 48.10m | 34.6m | 28.94m | 31.04m | 26.9m | 2.00 | 2.60 | 2.80 | 3.50 | 3.40 | 3.70 |
| 150 | 15 | | 75.13m | 47.0m | 37.47m | 50.30m | 32.6m | | 2.00 | 2.30 | 2.90 | 2.70 | 3.30 |
| 180 | 18 | | | 57.5m | | | | | | 2.25 | | | |
| 220 | 22 | | 0.101 | 58.0m | 54.32m | 66.76m | 50.8m | | 1.65 | 2.20 | 2.40 | 2.20 | 2.60 |
| 330 | 33 | | 0.140 | 95.0m | 82.48m | 87.60m | 92.5m | | 1.35 | 1.80 | 2.00 | 2.00 | 2.00 |
| 470 | 47 | | 0.180 | 0.165 | 0.110 | 0.132 | 0.15 | | 1.15 | 1.30 | 1.60 | 1.65 | 1.45 |
| 680 | 68 | | 0.292 | | 0.165 | 0.202 | 0.29 | | 0.90 | | 1.40 | 1.30 | 1.00 |
| 820 | 82 | | 0.450 | 0.312 | 0.203 | 0.262 | 0.41 | | 0.80 | 0.85 | 1.20 | 1.05 | 0.85 |
| 101 | 100 | | 0.500 | 0.400 | 0.241 | 0.295 | 0.51 | | 0.75 | 0.82 | 1.05 | 1.00 | 0.80 |
| 121 | 120 | | 0.570 | 0.469 | 0.324 | 0.349 | 0.56 | | 0.65 | 0.75 | 0.95 | 0.95 | 0.75 |
| 151 | 150 | | 0.710 | 0.665 | 0.399 | 0.399 | 0.65 | | 0.60 | 0.65 | 0.85 | 0.90 | 0.72 |
| 181 | 180 | | 0.760 | | 0.514 | 0.488 | 0.71 | | 0.58 | | 0.72 | 0.80 | 0.68 |
| 221 | 220 | | 0.880 | | 0.576 | 0.556 | 0.77 | | 0.55 | | 0.70 | 0.75 | 0.55 |

1. TEST FREQ.(L) : @100KHz/100mV
2. TOLERANCE OF INDUCTANCE: 1.2~8.2 μ H \pm 30%(N), 10~220 μ H \pm 20%(M)
3. The max. permissible DC current is the DC current applied which causes 30% reduction of its initial inductance value, or the coil temperature to rise by 40°C, whichever is lower.