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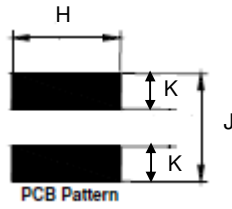
# SPECIFICATIONS

SMD Power Inductor

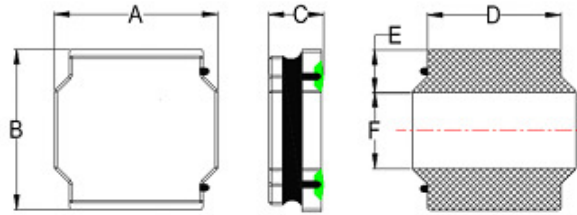
**SDIA-Serie**

Version February 2022

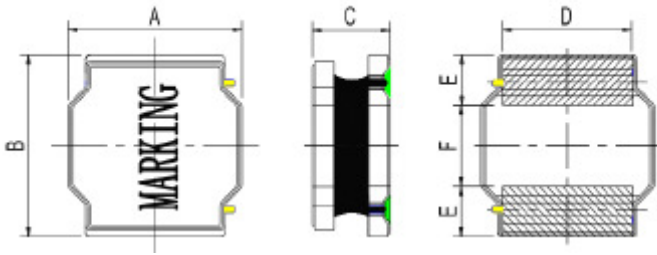
**SMD Power Inductor**



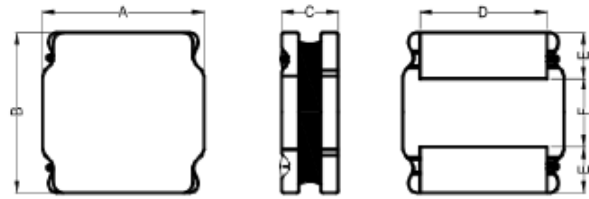
SDIA0310



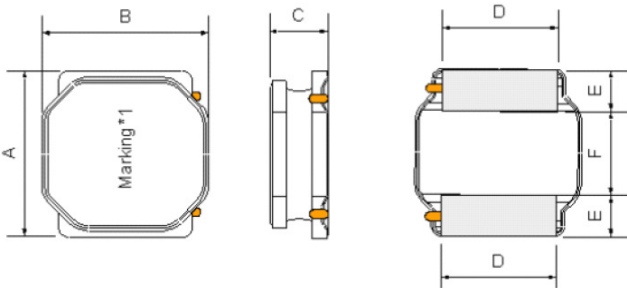
SDIA0418 / 0420 / 0520



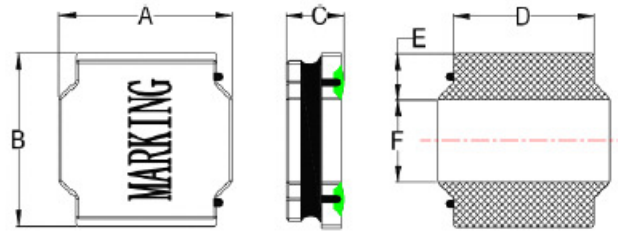
SDIA0312 / 0315



SDIA0410 / 0415 / 0528 / 0540 / 0645



SDIA0412 / 0430 / 0620 / 0628 / 0840



**Dimensions**

Unit: mm

| Type     | A       | B       | C        | D       | E        | F       | H   | J   | K   |
|----------|---------|---------|----------|---------|----------|---------|-----|-----|-----|
| SDIA0310 | 3.0±0.2 | 3.0±0.2 | 1.0 max  | 2.5±0.2 | 0.75±0.2 | 1.5±0.2 | 2.7 | 3.0 | 0.8 |
| SDIA0312 | 3.0±0.2 | 3.0±0.2 | 1.2 max  | 2.5±0.2 | 0.75±0.2 | 1.5±0.2 | 2.7 | 3.0 | 0.8 |
| SDIA0315 | 3.0±0.2 | 3.0±0.2 | 1.5 max  | 2.5±0.2 | 0.75±0.2 | 1.5±0.2 | 2.7 | 3.0 | 0.8 |
| SDIA0410 | 4.0±0.2 | 4.0±0.2 | 1.0 max  | 3.3±0.2 | 0.95±0.2 | 2.1±0.2 | 3.7 | 4.0 | 1.2 |
| SDIA0412 | 4.0±0.2 | 4.0±0.2 | 1.2 max  | 3.3±0.2 | 0.95±0.2 | 2.1±0.2 | 3.7 | 4.0 | 1.2 |
| SDIA0415 | 4.0±0.2 | 4.0±0.2 | 1.65 max | 3.3±0.2 | 0.95±0.2 | 2.1±0.2 | 3.7 | 4.0 | 1.2 |
| SDIA0418 | 4.0±0.2 | 4.0±0.2 | 1.85 max | 3.3±0.2 | 0.95±0.2 | 2.1±0.2 | 3.7 | 4.0 | 1.2 |
| SDIA0420 | 4.0±0.2 | 4.0±0.2 | 2.0 max  | 3.3±0.2 | 0.95±0.2 | 2.1±0.2 | 3.7 | 4.0 | 1.2 |
| SDIA0430 | 4.0±0.2 | 4.0±0.2 | 3.0 max  | 3.3±0.2 | 0.95±0.2 | 2.1±0.2 | 3.7 | 4.0 | 1.2 |
| SDIA0520 | 5.0±0.2 | 5.0±0.2 | 2.0 max  | 4.0±0.2 | 1.25±0.2 | 2.5±0.2 | 4.7 | 5.0 | 1.5 |
| SDIA0528 | 5.0±0.2 | 5.0±0.2 | 2.8 max  | 4.0±0.2 | 1.25±0.2 | 2.5±0.2 | 4.7 | 5.0 | 1.5 |
| SDIA0540 | 5.0±0.2 | 5.0±0.2 | 4.0 max  | 4.0±0.2 | 1.25±0.2 | 2.5±0.2 | 4.7 | 5.0 | 1.5 |
| SDIA0620 | 6.0±0.3 | 6.0±0.3 | 2.0 max  | 4.9±0.2 | 1.55±0.3 | 2.9±0.3 | 5.7 | 6.3 | 1.6 |
| SDIA0628 | 6.0±0.3 | 6.0±0.3 | 2.8 max  | 4.9±0.2 | 1.7±0.3  | 2.9±0.3 | 5.7 | 6.3 | 1.6 |
| SDIA0645 | 6.0±0.3 | 6.0±0.3 | 4.5 max  | 4.9±0.2 | 1.55±0.2 | 2.9±0.3 | 5.7 | 6.3 | 1.6 |
| SDIA0840 | 8.0±0.3 | 8.0±0.3 | 4.2 max  | 6.3±0.3 | 2.0±0.3  | 4.0±0.3 | 7.5 | 8.2 | 2.2 |

**SMD Power Inductor**

**■ Features**

- Small and Low profile inductor
- It corresponds to high current
- Shield structure magnetically
- Strong structure against a shock-proof

**■ Applications**

- LCD Display etc.
- For Small DC to DC Converters
- PDA.

**■ Characteristics**

- Rated DC Current : The current when the inductance becomes 30% lower than its initial value.
- Operating temperature range: -40~125°C

**■ Inductance and rated current ranges**

|           |           |             |
|-----------|-----------|-------------|
| -SDIA0310 | 1.0~47μH  | 1.40~0.22A  |
| -SDIA0312 | 1.0~47μH  | 1.87~0.27A  |
| -SDIA0315 | 1.0~47μH  | 2.10~0.32A  |
| -SDIA0410 | 1.0~22μH  | 2.00~0.45A  |
| -SDIA0412 | 1.0~47μH  | 2.61~0.30A  |
| -SDIA0415 | 1.0~22μH  | 2.50~0.68A  |
| -SDIA0418 | 1.0~100μH | 4.00~0.40A  |
| -SDIA0420 | 1.0~47μH  | 4.78~0.74A  |
| -SDIA0430 | 1.0~100μH | 5.26~0.60A  |
| -SDIA0520 | 1.0~47μH  | 4.33~0.81A  |
| -SDIA0528 | 2.2~47μH  | 5.50~1.00A  |
| -SDIA0540 | 1.0~100μH | 7.35~0.75A  |
| -SDIA0620 | 1.0~47μH  | 4.30~1.00A  |
| -SDIA0628 | 1.0~100μH | 6.70~0.65A  |
| -SDIA0645 | 2.2~220μH | 6.00~0.80A  |
| -SDIA0840 | 1.4~680μH | 10.00~0.30A |

- Test equipment:  
 L: HP4284A LCR meter  
 DCR: Milli-ohm meter  
 - Electrical specifications at 25°C

**■ Product Identification**

| SDIA         | 0312   | M                  | T                | 470                                   |
|--------------|--|--------------------|------------------|---------------------------------------|
| Product Type | Dimensions (AxC)   | Inductor Tolerance | Packaging Style  | Inductance                            |
|              | 0310: 3.0x1.0<br>0312: 3.0x1.2<br>0315: 3.0x1.5<br>0410: 4.0x1.0<br>0412: 4.0x1.2<br>0415: 4.0x1.65<br>0418: 4.0x1.85<br>0420: 4.0x2.0<br>0430: 4.0x3.0<br>0520: 5.0x2.0<br>0528: 5.0x2.8<br>0540: 5.0x4.0<br>0620: 6.0x2.0<br>0628: 6.0x2.8<br>0645: 6.0x4.5<br>0840: 8.0x4.2 | M: ±20%<br>N: ±30% | T: Tape and Reel | 1R0: 1.0μH<br>470: 47μH<br>101: 100μH |

**Electrical Characteristics**

SDIA0310 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0310□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.065         | 1.40         |
| SDIA0310□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.080         | 1.27         |
| SDIA0310□T2R2 | 2.2    | N         | 100KHz, 0.25V  | 0.110         | 1.15         |
| SDIA0310□T3R3 | 3.3    | N         | 100KHz, 0.25V  | 0.145         | 0.97         |
| SDIA0310□T4R7 | 4.7    | M, N      | 100KHz, 0.25V  | 0.225         | 0.75         |
| SDIA0310□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.305         | 0.55         |
| SDIA0310□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.400         | 0.55         |
| SDIA0310□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.610         | 0.42         |
| SDIA0310□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.930         | 0.35         |
| SDIA0310□T330 | 33     | M, N      | 1KHz, 0.25V    | 1.550         | 0.29         |
| SDIA0310□T470 | 47     | M, N      | 1KHz, 0.25V    | 1.950         | 0.22         |

SDIA0312 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0312□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.040         | 1.87         |
| SDIA0312□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.045         | 1.62         |
| SDIA0312□T2R2 | 2.2    | N         | 100KHz, 0.25V  | 0.075         | 1.20         |
| SDIA0312□T3R3 | 3.3    | M, N      | 100KHz, 0.25V  | 0.100         | 1.05         |
| SDIA0312□T4R7 | 4.7    | M, N      | 100KHz, 0.25V  | 0.120         | 0.90         |
| SDIA0312□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.190         | 0.75         |
| SDIA0312□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.265         | 0.60         |
| SDIA0312□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.360         | 0.45         |
| SDIA0312□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.645         | 0.42         |
| SDIA0312□T330 | 33     | M, N      | 1KHz, 0.25V    | 0.875         | 0.36         |
| SDIA0312□T470 | 47     | M, N      | 1KHz, 0.25V    | 1.450         | 0.27         |

SDIA0315 Type(□:Tolerance):

| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|-----------------|--------|-----------|----------------|---------------|--------------|
| SDIA0315□T1R0   | 1.0    | N         | 100KHz, 0.25V  | 0.037         | 2.10         |
| SDIA0315□T1R5   | 1.5    | N         | 100KHz, 0.25V  | 0.050         | 1.80         |
| SDIA0315□T2R2   | 2.2    | M, N      | 100KHz, 0.25V  | 0.060         | 1.60         |
| SDIA0315□T3R3   | 3.3    | M, N      | 100KHz, 0.25V  | 0.080         | 1.32         |
| SDIA0315□T4R7   | 4.7    | M, N      | 100KHz, 0.25V  | 0.125         | 1.10         |
| SDIA0315□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.200         | 0.87         |
| SDIA0315□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.250         | 0.72         |
| SDIA0315□T100-2 | 10     | M         | 100KHz, 0.25V  | 0.230         | 0.72         |
| SDIA0315□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.350         | 0.65         |
| SDIA0315□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.460         | 0.52         |
| SDIA0315□T330   | 33     | M, N      | 1KHz, 0.25V    | 0.780         | 0.42         |
| SDIA0315□T470   | 47     | M, N      | 1KHz, 0.25V    | 1.200         | 0.32         |

Note: SDIA0315□T100-2 The current when the inductance becomes 35% lower than its initial value.

**SMD Power Inductor**

**Electrical Characteristics**

SDIA0410 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30% | IDC (A) max. |
|---------------|--------|-----------|----------------|--------------|--------------|
| SDIA0410□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.056        | 2.00         |
| SDIA0410□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.070        | 1.68         |
| SDIA0410□T2R2 | 2.2    | M, N      | 100KHz, 0.25V  | 0.085        | 1.20         |
| SDIA0410□T3R3 | 3.3    | M, N      | 100KHz, 0.25V  | 0.100        | 1.10         |
| SDIA0410□T4R7 | 4.7    | M, N      | 100KHz, 0.25V  | 0.140        | 0.95         |
| SDIA0410□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.200        | 0.80         |
| SDIA0410□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.300        | 0.62         |
| SDIA0410□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.570        | 0.45         |

SDIA0412 Type(□:Tolerance):

| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30% | IDC (A) max. |
|-----------------|--------|-----------|----------------|--------------|--------------|
| SDIA0412□T1R0   | 1.0    | N         | 100KHz, 0.25V  | 0.050        | 2.61         |
| SDIA0412□T1R5   | 1.5    | N         | 100KHz, 0.25V  | 0.065        | 2.10         |
| SDIA0412□T2R2   | 2.2    | N         | 100KHz, 0.25V  | 0.080        | 1.76         |
| SDIA0412□T3R3   | 3.3    | N         | 100KHz, 0.25V  | 0.110        | 1.72         |
| SDIA0412□T4R7   | 4.7    | N         | 100KHz, 0.25V  | 0.125        | 1.15         |
| SDIA0412□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.198        | 0.85         |
| SDIA0412□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.265        | 0.80         |
| SDIA0412□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.340        | 0.56         |
| SDIA0412□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.587        | 0.46         |
| SDIA0412□T470-1 | 47     | M         | 100KHz, 1V     | 1.104±20%    | 0.30         |

SDIA0415 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30% | IDC (A) max. |
|---------------|--------|-----------|----------------|--------------|--------------|
| SDIA0415□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.035        | 2.50         |
| SDIA0415□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.040        | 2.20         |
| SDIA0415□T2R2 | 2.2    | M, N      | 100KHz, 0.25V  | 0.053        | 2.00         |
| SDIA0415□T3R3 | 3.3    | M, N      | 100KHz, 0.25V  | 0.075        | 1.80         |
| SDIA0415□T4R7 | 4.7    | M, N      | 100KHz, 0.25V  | 0.100        | 1.35         |
| SDIA0415□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.135        | 1.20         |
| SDIA0415□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.200        | 1.00         |
| SDIA0415□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.300        | 0.85         |
| SDIA0415□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.400        | 0.68         |

SDIA0418 Type(□:Tolerance):

| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30% | IDC (A) max. |
|-----------------|--------|-----------|----------------|--------------|--------------|
| SDIA0418□T1R0   | 1.0    | N         | 100KHz, 0.25V  | 0.023        | 4.00         |
| SDIA0418□T1R5   | 1.5    | N         | 100KHz, 0.25V  | 0.033        | 3.35         |
| SDIA0418□T2R2   | 2.2    | M, N      | 100KHz, 0.25V  | 0.042        | 3.00         |
| SDIA0418□T3R3   | 3.3    | M, N      | 100KHz, 0.25V  | 0.070        | 2.45         |
| SDIA0418□T4R7   | 4.7    | M, N      | 100KHz, 0.25V  | 0.090        | 2.00         |
| SDIA0418□T5R6   | 5.6    | M, N      | 100KHz, 0.25V  | 0.103        | 1.60         |
| SDIA0418□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.124        | 1.60         |
| SDIA0418□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.200        | 1.30         |
| SDIA0418□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.268        | 1.10         |
| SDIA0418□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.390        | 0.80         |
| SDIA0418□T330   | 33     | M, N      | 1KHz, 0.25V    | 0.560        | 0.65         |
| SDIA0418□T470   | 47     | M, N      | 1KHz, 0.25V    | 0.850        | 0.60         |
| SDIA0418□T680   | 68     | M, N      | 1KHz, 0.25V    | 1.000        | 0.52         |
| SDIA0418□T101   | 100    | M, N      | 1KHz, 0.25V    | 1.500        | 0.40         |
| SDIA0418□T101-1 | 100    | M         | 100KHz, 1V     | 1.750        | 0.40         |

Note: SDIA0418□T101-1 The current when the inductance becomes 35% lower than its initial value.

**Electrical Characteristics**

SDIA0420 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0420□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.029         | 4.78         |
| SDIA0420□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.035         | 4.45         |
| SDIA0420□T2R2 | 2.2    | M, N      | 100KHz, 0.25V  | 0.040         | 3.40         |
| SDIA0420□T3R3 | 3.3    | M, N      | 100KHz, 0.25V  | 0.070         | 3.20         |
| SDIA0420□T4R7 | 4.7    | M, N      | 100KHz, 0.25V  | 0.075         | 2.35         |
| SDIA0420□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.125         | 2.20         |
| SDIA0420□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.165         | 1.60         |
| SDIA0420□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.230         | 1.35         |
| SDIA0420□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.350         | 1.05         |
| SDIA0420□T330 | 33     | M, N      | 1KHz, 0.25V    | 0.550         | 0.85         |
| SDIA0420□T470 | 47     | M, N      | 1KHz, 0.25V    | 0.710         | 0.74         |

SDIA0430 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0430□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.014         | 5.26         |
| SDIA0430□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.020         | 4.84         |
| SDIA0430□T2R2 | 2.2    | N         | 100KHz, 0.25V  | 0.030         | 4.50         |
| SDIA0430□T3R3 | 3.3    | N         | 100KHz, 0.25V  | 0.040         | 3.30         |
| SDIA0430□T4R7 | 4.7    | N         | 100KHz, 0.25V  | 0.060         | 2.90         |
| SDIA0430□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.090         | 2.75         |
| SDIA0430□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.100         | 1.95         |
| SDIA0430□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.190         | 1.65         |
| SDIA0430□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.225         | 1.30         |
| SDIA0430□T330 | 33     | M, N      | 1KHz, 0.25V    | 0.330         | 1.10         |
| SDIA0430□T470 | 47     | M, N      | 1KHz, 0.25V    | 0.445         | 0.95         |
| SDIA0430□T680 | 68     | M, N      | 1KHz, 0.25V    | 0.868         | 0.72         |
| SDIA0430□T820 | 82     | M, N      | 1KHz, 0.25V    | 1.060         | 0.66         |
| SDIA0430□T101 | 100    | M, N      | 1KHz, 0.25V    | 1.150         | 0.60         |

SDIA0520 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0520□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.020         | 4.33         |
| SDIA0520□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.026         | 4.10         |
| SDIA0520□T2R2 | 2.2    | M, N      | 100KHz, 0.25V  | 0.038         | 3.85         |
| SDIA0520□T3R3 | 3.3    | M, N      | 100KHz, 0.25V  | 0.046         | 3.25         |
| SDIA0520□T4R7 | 4.7    | M, N      | 100KHz, 0.25V  | 0.065         | 2.40         |
| SDIA0520□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.092         | 2.10         |
| SDIA0520□T8R2 | 8.2    | M, N      | 100KHz, 0.25V  | 0.100         | 1.90         |
| SDIA0520□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.125         | 1.80         |
| SDIA0520□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.180         | 1.44         |
| SDIA0520□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.250         | 1.18         |
| SDIA0520□T330 | 33     | M, N      | 1KHz, 0.25V    | 0.370         | 0.97         |
| SDIA0520□T470 | 47     | M, N      | 1KHz, 0.25V    | 0.560         | 0.81         |

SDIA0528 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0528□T2R2 | 2.2    | N         | 100KHz, 0.25V  | 0.035         | 5.50         |
| SDIA0528□T3R3 | 3.3    | N         | 100KHz, 0.25V  | 0.045         | 4.50         |
| SDIA0528□T4R7 | 4.7    | N         | 100KHz, 0.25V  | 0.030         | 3.80         |
| SDIA0528□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.070         | 3.20         |
| SDIA0528□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.100         | 2.80         |
| SDIA0528□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.200         | 1.80         |
| SDIA0528□T330 | 33     | M, N      | 1KHz, 0.25V    | 0.300         | 1.40         |
| SDIA0528□T470 | 47     | M, N      | 1KHz, 0.25V    | 0.460         | 1.00         |

**SMD Power Inductor**

**■Electrical Characteristics**

SDIA0540 Type(□:Tolerance):

| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|-----------------|--------|-----------|----------------|---------------|--------------|
| SDIA0540□T1R0   | 1.0    | N         | 100KHz, 0.25V  | 0.012         | 7.35         |
| SDIA0540□T1R5   | 1.5    | N         | 100KHz, 0.25V  | 0.015         | 6.40         |
| SDIA0540□T2R2   | 2.2    | M, N      | 100KHz, 0.25V  | 0.019         | 5.00         |
| SDIA0540□T3R3   | 3.3    | M, N      | 100KHz, 0.25V  | 0.024         | 4.00         |
| SDIA0540□T4R7   | 4.7    | M, N      | 100KHz, 0.25V  | 0.030         | 3.50         |
| SDIA0540□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.043         | 2.90         |
| SDIA0540□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.064         | 2.35         |
| SDIA0540□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.086         | 2.00         |
| SDIA0540□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.129         | 1.60         |
| SDIA0540□T330   | 33     | M, N      | 1KHz, 0.25V    | 0.188         | 1.30         |
| SDIA0540□T470   | 47     | M, N      | 1KHz, 0.25V    | 0.272         | 1.10         |
| SDIA0540□T680   | 68     | M, N      | 1KHz, 0.25V    | 0.400         | 0.90         |
| SDIA0540□T101   | 100    | M, N      | 1KHz, 0.25V    | 0.560         | 0.75         |
| SDIA0540□T101-1 | 100    | M, N      | 100KHz, 0.25V  | 0.560         | 0.75         |

**Note: SDIA0540□T101-1 The current when the inductance becomes 35% lower than its initial value.**

SDIA0620 Type(□:Tolerance):

| Part No       | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|---------------|--------|-----------|----------------|---------------|--------------|
| SDIA0620□T1R0 | 1.0    | N         | 100KHz, 0.25V  | 0.020         | 4.30         |
| SDIA0620□T1R5 | 1.5    | N         | 100KHz, 0.25V  | 0.025         | 4.25         |
| SDIA0620□T2R2 | 2.2    | N         | 100KHz, 0.25V  | 0.035         | 3.75         |
| SDIA0620□T3R3 | 3.3    | N         | 100KHz, 0.25V  | 0.045         | 3.15         |
| SDIA0620□T4R7 | 4.7    | N         | 100KHz, 0.25V  | 0.058         | 3.00         |
| SDIA0620□T5R6 | 5.6    | M, N      | 100KHz, 0.25V  | 0.070         | 2.40         |
| SDIA0620□T6R8 | 6.8    | M, N      | 100KHz, 0.25V  | 0.085         | 2.20         |
| SDIA0620□T100 | 10     | M, N      | 1KHz, 0.25V    | 0.120         | 1.75         |
| SDIA0620□T150 | 15     | M, N      | 1KHz, 0.25V    | 0.160         | 1.50         |
| SDIA0620□T220 | 22     | M, N      | 1KHz, 0.25V    | 0.240         | 1.25         |
| SDIA0620□T330 | 33     | M, N      | 1KHz, 0.25V    | 0.400         | 1.10         |
| SDIA0620□T470 | 47     | M, N      | 1KHz, 0.25V    | 0.500         | 1.00         |

SDIA0628 Type(□:Tolerance):

| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|-----------------|--------|-----------|----------------|---------------|--------------|
| SDIA0628□T1R0   | 1.0    | N         | 100KHz, 0.25V  | 0.012         | 6.70         |
| SDIA0628□T1R5   | 1.5    | N         | 100KHz, 0.25V  | 0.016         | 6.00         |
| SDIA0628□T2R2   | 2.2    | N         | 100KHz, 0.25V  | 0.020         | 5.10         |
| SDIA0628□T3R3   | 3.3    | N         | 100KHz, 0.25V  | 0.025         | 3.63         |
| SDIA0628□T4R7   | 4.7    | N         | 100KHz, 0.25V  | 0.033         | 3.00         |
| SDIA0628□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.056         | 2.60         |
| SDIA0628□T6R8-1 | 6.8    | M         | 1KHz, 0.25V    | 0.047         | 2.60         |
| SDIA0628□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.078         | 2.05         |
| SDIA0628□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.125         | 1.75         |
| SDIA0628□T180   | 18     | M, N      | 1KHz, 0.25V    | 0.130         | 1.55         |
| SDIA0628□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.140         | 1.45         |
| SDIA0628□T270   | 27     | M, N      | 1KHz, 0.25V    | 0.180         | 1.40         |
| SDIA0628□T330   | 33     | M, N      | 1KHz, 0.25V    | 0.220         | 1.36         |
| SDIA0628□T470   | 47     | M, N      | 1KHz, 0.25V    | 0.280         | 1.15         |
| SDIA0628□T680   | 68     | M, N      | 1KHz, 0.25V    | 0.450         | 0.95         |
| SDIA0628□T820   | 82     | M, N      | 1KHz, 0.25V    | 0.550         | 0.80         |
| SDIA0628□T101   | 100    | M, N      | 1KHz, 0.25V    | 0.670         | 0.65         |

**Electrical Characteristics**

SDIA0645 Type(□:Tolerance):

| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|-----------------|--------|-----------|----------------|---------------|--------------|
| SDIA0645□T2R2   | 2.2    | M, N      | 100KHz, 0.25V  | 0.021         | 6.00         |
| SDIA0645□T3R3   | 3.3    | M, N      | 100KHz, 0.25V  | 0.023         | 5.20         |
| SDIA0645□T4R7   | 4.7    | M, N      | 100KHz, 0.25V  | 0.026         | 4.00         |
| SDIA0645□T4R7-1 | 4.7    | M, N      | 100KHz, 0.25V  | 0.025         | 5.20         |
| SDIA0645□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.040         | 3.80         |
| SDIA0645□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.046         | 3.10         |
| SDIA0645□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.070         | 2.50         |
| SDIA0645□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.107         | 2.00         |
| SDIA0645□T330   | 33     | M, N      | 1KHz, 0.25V    | 0.141         | 1.65         |
| SDIA0645□T470   | 47     | M, N      | 1KHz, 0.25V    | 0.211         | 1.40         |
| SDIA0645□T560   | 56     | M, N      | 1KHz, 0.25V    | 0.221         | 1.30         |
| SDIA0645□T680   | 68     | M, N      | 1KHz, 0.25V    | 0.304         | 1.10         |
| SDIA0645□T101   | 100    | M, N      | 1KHz, 0.25V    | 0.466         | 0.90         |
| SDIA0645□T151   | 150    | M, N      | 1KHz, 0.25V    | 0.600         | 0.60         |
| SDIA0645□T151-1 | 150    | M         | 100KHz, 1V     | 0.580         | 0.90         |
| SDIA0645□T221   | 220    | M, N      | 1KHz, 0.25V    | 1.100         | 0.80         |

**Note:** SDIA0645□T4R7-1/SDIA0645□T151-1 The current when the inductance becomes 35% lower than its initial value.

SDIA0840 Type(□:Tolerance):

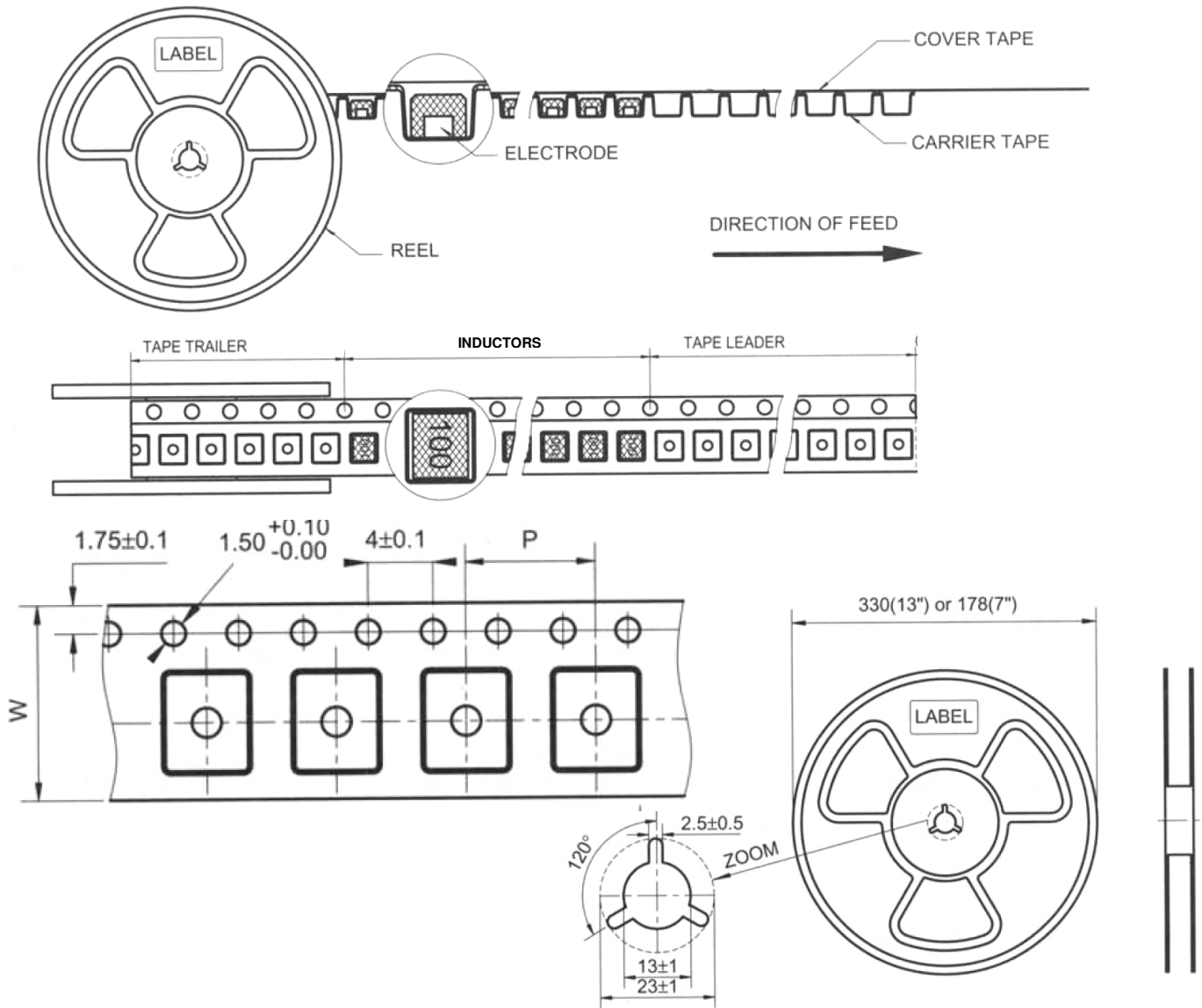
| Part No         | L (μH) | Tolerance | Test Condition | DCR (Ω) ±30%. | IDC (A) max. |
|-----------------|--------|-----------|----------------|---------------|--------------|
| SDIA0840□T1R4   | 1.4    | N         | 100KHz, 0.25V  | 0.007         | 10.00        |
| SDIA0840□T2R2   | 2.2    | M, N      | 100KHz, 0.25V  | 0.012         | 8.10         |
| SDIA0840□T3R3   | 3.3    | M, N      | 100KHz, 0.25V  | 0.017         | 6.50         |
| SDIA0840□T4R7   | 4.7    | M, N      | 100KHz, 0.25V  | 0.020         | 5.90         |
| SDIA0840□T5R6   | 5.6    | M, N      | 100KHz, 0.25V  | 0.024         | 5.50         |
| SDIA0840□T6R8   | 6.8    | M, N      | 100KHz, 0.25V  | 0.028         | 4.55         |
| SDIA0840□T100   | 10     | M, N      | 1KHz, 0.25V    | 0.034         | 3.80         |
| SDIA0840□T100-1 | 10     | M         | 100KHz, 1V     | 0.034         | 3.80         |
| SDIA0840□T150   | 15     | M, N      | 1KHz, 0.25V    | 0.056         | 2.95         |
| SDIA0840□T220   | 22     | M, N      | 1KHz, 0.25V    | 0.074         | 2.40         |
| SDIA0840□T330   | 33     | M, N      | 1KHz, 0.25V    | 0.100         | 2.05         |
| SDIA0840□T330-1 | 33     | M         | 100KHz, 0.5V   | 0.100         | 2.05         |
| SDIA0840□T390   | 39     | M, N      | 1KHz, 0.25V    | 0.107         | 1.95         |
| SDIA0840□T470   | 47     | M, N      | 1KHz, 0.25V    | 0.158         | 1.75         |
| SDIA0840□T560   | 56     | M, N      | 1KHz, 0.25V    | 0.148         | 1.55         |
| SDIA0840□T680   | 68     | M, N      | 1KHz, 0.25V    | 0.196         | 1.45         |
| SDIA0840□T101   | 100    | M, N      | 1KHz, 0.25V    | 0.295         | 1.15         |
| SDIA0840□T151   | 150    | M, N      | 1KHz, 0.25V    | 0.470         | 1.10         |
| SDIA0840□T221   | 220    | M, N      | 1KHz, 0.25V    | 0.660         | 0.85         |
| SDIA0840□T221-1 | 220    | M         | 1KHz, 0.25V    | 0.599         | 0.80         |
| SDIA0840□T221-2 | 220    | M         | 1KHz, 0.25V    | 0.660         | 1.00         |
| SDIA0840□T331   | 330    | M, N      | 1KHz, 0.25V    | 0.970         | 0.68         |
| SDIA0840□T471   | 470    | M, N      | 1KHz, 0.25V    | 1.400         | 0.60         |
| SDIA0840□T681   | 680    | M, N      | 1KHz, 0.25V    | 2.200         | 0.30         |

**Note:** SDIA0840□T100-1 The current when the inductance becomes 35% lower than its initial value.



**SMD Power Inductor**

**■Tape and Reel specifications**



Unit: mm

| Type     | Tape size |    | Parts Per Reel |      |
|----------|-----------|----|----------------|------|
|          | W         | P  | 7"             | 13"  |
| SDIA0310 | 8         | 4  | 2000           | -    |
| SDIA0312 | 8         | 4  | 2000           | -    |
| SDIA0315 | 8         | 4  | 2000           | -    |
| SDIA0410 | 12        | 8  | -              | 5000 |
| SDIA0412 | 12        | 8  | -              | 4500 |
| SDIA0415 | 12        | 8  | -              | 3000 |
| SDIA0418 | 12        | 8  | -              | 3000 |
| SDIA0420 | 12        | 8  | -              | 3000 |
| SDIA0430 | 12        | 8  | -              | 2500 |
| SDIA0520 | 12        | 8  | -              | 2500 |
| SDIA0528 | 12        | 8  | -              | 2000 |
| SDIA0540 | 12        | 8  | -              | 1500 |
| SDIA0620 | 12        | 8  | -              | 2000 |
| SDIA0628 | 16        | 8  | -              | 1500 |
| SDIA0645 | 16        | 12 | -              | 1000 |
| SDIA0840 | 16        | 12 | -              | 1000 |

**SMD Power Inductor**

**■ SMT Power Inductor Environmental Specifications**

General

| Items                    | Specifications   |
|--------------------------|--|
| Shelf Storage conditions | Temperature range: 15~28°C ; Humidity: <80% relative humidity.<br>Recommended product should be used within 12 months from the time of delivery. |

Environmental test

| Test Items                    | Specifications   | Test Conditions / Test Methods  |
|-------------------------------|--|---|
| High temperature Storage test | No case deformation or change in appearance.<br>$\Delta L/L \leq 10\%$ | Temperature 85±2°C,<br>Time: 48±2 hours,<br>Tested after 1 hour at room temperature.  |
| Low temperature Storage test  |  | Temperature -25±2°C,<br>Time: 48±2 hours,<br>Tested after 1 hour at room temperature.   |
| Humidity test                 |  | Temperature 40±2°C, 90~95% relative humidity<br>Time: 96±2 hours<br>Tested after 1 hour at room temperature.                                  |
| Thermal shock test            |  | First -25°C 30minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles.<br>Tested after 1 hour at room temperature. |

Mechanical test

| Test Items                   | Specifications   | Test Conditions / Test Methods   |
|------------------------------|--|--|
| Solderability test           | Terminal area must have 90% minimum solder coverage.                   | Product with Lead-free terminal:<br>Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.  |
| Resistance to Soldering Heat | No case deformation or change in appearance.                           | Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130~150°C . Immersing to 260±5°C for 10 seconds. |
| Vibration test               | No case deformation or change in appearance.<br>$\Delta L/L \leq 10\%$ | Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.   |
| Shock resistance             |  | Drop down with 981m/s <sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.                |

The condition of reflow (recommendation):

