

Cautions and Warnings

Please be noted that this spec is only for reference if you have projects designed with the product number listed in. If you are looking for new project design-in, please find BPSC Series specification/datasheet on Chilisin website. Or you may find our sales contact for more information on old part number at your convenience. Appreciated your attention and understanding.

Note: Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

SCDS Series

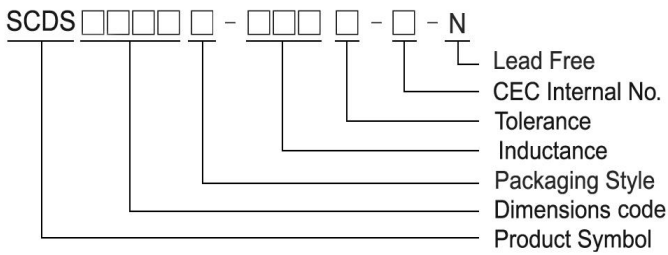
Features

- RoHS, Halogen Free and REACH Compliance
- Magnetic shielded
- Various package size and wide inductance range

Applications

- AP Routers
- STBs
- LCD TVs and monitors
- Game consoles
- LED lightings
- DC/DC converters

Product Identification



- T : Packaging: Tape and Reel
- CEC Internal No.: S: Base type terminals

SCDS 3D16T-XXXX-S-N

Shape and Dimensions



Recommended Pattern



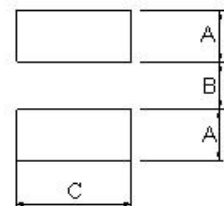
| Dimensions in mm | | | | | | Dimension in mm | | | | |
|------------------|-----------------|-----------------|-------------------|-------------------|-----|-----------------|-----|-----|-----|-----|
| TYPE | A | B | C | D | E | TYPE | A | B | C | D |
| SCDS3D16 | 4 ⁺⁰ | 4 ⁺⁰ | 1.8 ⁺⁰ | 5.2 ⁺⁰ | 1.0 | SCDS3D16 | 4.6 | 1.6 | 1.4 | 4.6 |

SCDS 4D18 ~ 6D38

Shape and Dimensions



Recommended Pattern



| Dimension in mm | | | | | | Dimension in mm | | | |
|-----------------|-----------------|-----------------|-------------------|-------------------|-----|-----------------|------|-----|-----|
| TYPE | A | B | C | D | E | TYPE | A | B | C |
| SCDS4D18 | 4.7 ± 0.3 | 4.7 ± 0.3 | 2.0 ⁺⁰ | 6.9 ⁺⁰ | 1.5 | SCDS4D18 | 1.9 | 1.5 | 5.3 |
| SCDS4D28 | 4.7 ± 0.3 | 4.7 ± 0.3 | 3.0 ⁺⁰ | 6.9 ⁺⁰ | 1.5 | SCDS4D28 | 1.9 | 1.5 | 5.3 |
| SCDS4D40 | 4.7 ± 0.3 | 4.7 ± 0.3 | 4 ⁺⁰ | 6.9 ⁺⁰ | 1.5 | SCDS4D40 | 1.9 | 1.5 | 5.3 |
| SCDS5D18 | 5.7 ± 0.3 | 5.7 ± 0.3 | 2.0 ⁺⁰ | 8.2 ⁺⁰ | 2.0 | SCDS5D18 | 2.15 | 2.0 | 6.3 |
| SCDS5D28 | 5.7 ± 0.3 | 5.7 ± 0.3 | 3.0 ⁺⁰ | 8.2 ⁺⁰ | 2.0 | SCDS5D28 | 2.15 | 2.0 | 6.3 |
| SCDS6D28 | 6.7 ± 0.3 | 6.7 ± 0.3 | 3.0 ⁺⁰ | 9.5 ⁺⁰ | 2.0 | SCDS6D28 | 2.65 | 2.0 | 7.3 |
| SCDS6D38 | 7 ⁺⁰ | 7 ⁺⁰ | 4 ⁺⁰ | 9.5 ⁺⁰ | 2.0 | SCDS6D38 | 2.65 | 2.0 | 7.3 |

SMD Shielded Power Inductors - SCDS Series

Standard Specifications

| Stamp | Inductance (μ H) | RDC ($m\Omega$) Max | | | | | | | | Rated Current (A) | | | | | | | |
|-------|--------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | SCDS 3D16 | SCDS 4D18 | SCDS 4D28 | SCDS 4D40 | SCDS 5D18 | SCDS 5D28 | SCDS 6D28 | SCDS 6D38 | SCDS 3D16 | SCDS 4D18 | SCDS 4D28 | SCDS 4D40 | SCDS 5D18 | SCDS 5D28 | SCDS 6D28 | SCDS 6D38 |
| | | | | | | | | | | | | | | | | | |
| 1R0 | 1.0 | | 45 | | | 38 | 15 | 24 | | | 1.72 | | | 2.80 | 3.50 | 3.50 | |
| 1R2 | 1.2 | | | 23.6 | | | | | | | | 2.56 | | | | | |
| 1R5 | 1.5 | 52 | 60 | | | 38 | 15 | 19.5 | | 1.55 | 1.50 | | | 2.50 | 3.00 | 3.40 | |
| 1R8 | 1.8 | | 70 | 27.5 | | | | | | | 1.35 | 2.20 | | | | | |
| 2R0 | 2.0 | | | 29.0 | | 45 | | | | | | 2.10 | | 2.50 | | | |
| 2R2 | 2.2 | 72 | 75 | 31.3 | 22 | 48 | 18 | 35 | 18 | 1.20 | 1.32 | 2.04 | 4.6 | 1.90 | 2.60 | 3.00 | 3.80 |
| 2R5 | 2.5 | | | | | | 18 | | | | | | | | 2.60 | | |
| 2R6 | 2.6 | | | | | | 22 | | | | | | | | 2.40 | | |
| 2R7 | 2.7 | | 105 | 43.3 | | | | | 20 | | 1.28 | 1.60 | | | | | 3.60 |
| 3R0 | 3.0 | | | | | | 24 | 24 | | | | | | | 2.40 | 3.00 | |
| 3R3 | 3.3 | 85 | 110 | 49.2 | 33 | 56 | 27 | 25 | 20 | 1.10 | 1.04 | 1.57 | 3.4 | 1.90 | 2.10 | 3.00 | 3.50 |
| 3R6 | 3.6 | 90 | | | | | | | | 0.95 | | | | | | | |
| 3R9 | 3.9 | | 155 | 64.8 | | | | | 27 | | 0.88 | 1.44 | | | | 2.60 | |
| 4R1 | 4.1 | | | | | 57 | | | | | | | | 1.95 | | | |
| 4R2 | 4.2 | | | | | | 31 | | | | | | | | 2.20 | | |
| 4R3 | 4.3 | | | | | | 41 | | | | | | | | 2.5Typ | | |
| 4R7 | 4.7 | 105 | 162 | 72.0 | 44 | 76 | 38 | 31 | 22 | 0.90 | 0.84 | 1.32 | 2.8 | 1.60 | 1.90 | 2.40 | 3.10 |
| 5R0 | 5.0 | | | | | | 38 | 31 | 24 | | | | | | 1.90 | 2.40 | 2.90 |
| 5R3 | 5.3 | | | | | | 38 | | | | | | | | 1.90 | | |
| 5R4 | 5.4 | | | | | 76 | | | | | | | | 1.60 | | | |
| 5R6 | 5.6 | | 170 | 100.9 | | | | | 27 | | 0.80 | 1.17 | | | | | 2.50 |
| 6R0 | 6.0 | | | | | | | 35 | 27 | | | | | | | 2.25 | |
| 6R2 | 6.2 | | | | | 96 | 45 | 51 | 27 | | | | | 1.40 | 1.80 | 2.40 | 2.50 |
| 6R3 | 6.3 | | 180 | | | | | | | | 0.78 | | | | | | |
| 6R8 | 6.8 | 170 | 200 | 108.9 | 46 | 100 | 50 | 50 | 31 | 0.73 | 0.76 | 1.12 | 2.6 | 1.35 | 1.65 | 2.15 | 2.30 |
| 7R3 | 7.3 | | | | | | | 54 | | | | | | | | 2.10 | |
| 7R4 | 7.4 | | | | | | | | 31 | | | | | | | | 2.30 |
| 8R2 | 8.2 | | 245 | 117.5 | | | 53 | | | | 0.68 | 1.04 | | | 1.60 | | |
| 8R6 | 8.6 | | | | | | | 58 | | | | | | | | 1.85 | |
| 8R7 | 8.7 | | | | | | | | 34 | | | | | | | | 2.20 |
| 8R9 | 8.9 | | | | | 116 | | | | | | | | 1.25 | | | |
| 100 | 10 | 210 | 280 | 128.3 | 150 | 124 | 65 | 65 | 38 | 0.55 | 0.61 | 1.00 | 1.8 | 1.20 | 1.30 | 1.70 | 2.00 |
| 120 | 12 | | 320 | 131.6 | | 153 | 76 | 70 | 53 | | 0.56 | 0.84 | | 1.10 | 1.20 | 1.55 | 1.70 |
| 150 | 15 | 295 | 360 | 149.0 | 210 | 196 | 103 | 84 | 57 | 0.45 | 0.50 | 0.76 | 1.6 | 0.97 | 1.10 | 1.40 | 1.60 |
| 180 | 18 | | 400 | 166.0 | | 210 | 110 | 95 | 92 | | 0.48 | 0.72 | | 0.85 | 1.00 | 1.32 | 1.50 |
| 220 | 22 | 430 | 480 | 235.0 | 270 | 290 | 122 | 128 | 96 | 0.40 | 0.41 | 0.70 | 1.4 | 0.80 | 0.90 | 1.20 | 1.30 |
| 270 | 27 | 620 | 570 | 261.0 | | 330 | 175 | 142 | 109 | 0.35 | 0.35 | 0.58 | | 0.75 | 0.85 | 1.05 | 1.20 |
| 330 | 33 | 675 | 694 | 331.3 | | 386 | 189 | 165 | 124 | 0.32 | 0.32 | 0.56 | | 0.65 | 0.75 | 0.97 | 1.10 |
| 390 | 39 | | 800 | 383.7 | | 520 | 212 | 210 | 138 | | 0.30 | 0.50 | | 0.57 | 0.70 | 0.86 | 1.00 |
| 470 | 47 | | 950 | 587.0 | | 595 | 250 | 238 | 150 | | 0.28 | 0.48 | | 0.54 | 0.62 | 0.80 | 0.95 |
| 560 | 56 | | 1080 | 624.5 | | 665 | 305 | 277 | 202 | | 0.26 | 0.41 | | 0.50 | 0.58 | 0.73 | 0.85 |
| 680 | 68 | 1700 | 1300 | 699.0 | | 840 | 355 | 304 | 234 | 0.18 | 0.24 | 0.35 | | 0.43 | 0.52 | 0.65 | 0.75 |
| 820 | 82 | | | 914.8 | | 978 | 463 | 390 | 324 | | | 0.32 | | 0.41 | 0.46 | 0.60 | 0.70 |
| 101 | 100 | | 2000 | 1020 | | 1200 | 520 | 535 | 358 | | 0.20 | 0.29 | | 0.36 | 0.42 | 0.54 | 0.65 |
| 121 | 120 | | | 1270 | | | | | | | | | | 0.27 | | | |
| 151 | 150 | | 2840 | 1350 | | | | | | | | 0.15 | 0.24 | | | | |
| 181 | 180 | | | 1540 | | | 1050 | | | | | | 0.22 | | | 0.29 | |
| 221 | 220 | 5500 | | 2000 | | | 1200 | | | 0.08 | | 0.20 | | | 0.28 | | |
| 331 | 330 | | | 3400 | | | 1700 | | | | | 0.19 | | | 0.19 | | |
| 391 | 390 | | | 3560 | | | 1800 | | | | | 0.18 | | | 0.18 | | |
| 471 | 470 | | | | | | 2500 | | | | | | | | 0.15 | | |
| 561 | 560 | | | | | | 3200 | | 1800 | | | | | | 0.12 | | 0.22 |
| 681 | 680 | | | 5200 | | | | | | | | 0.10 | | | | | |

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HILSIN ELECTRONICS CORP.

SMD Shielded Power Inductors - SCDS Series

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T=±30% , N = ⁺⁴⁰/₋₂₀%

- Operating temperature range - 30°C ~ 100°C(Including self - temperature rise)
- Rated Current : DC current that will cause L drop approximately 35% over its nominal value or DC current cause the temperature rising approximately $\Delta t=40^{\circ}\text{C}$, whichever is lower
- Measure Equipment :
Test Freq L : SCDS 3D16(100kHz/ 0.1V) , 4D28/ 4D40 (100kHz/ 1V) , SCDS 5D18/ 5D28/ 6D28/ 6D38 (10kHz/ 1V)
SCDS 4D18: 1.0~8.2 μH (7.96MHz/ 1V), 10~150 μH (100kHz/ 1V)

L : Agilent/ E4980 or HP4284A

RDC : Chroma 16502

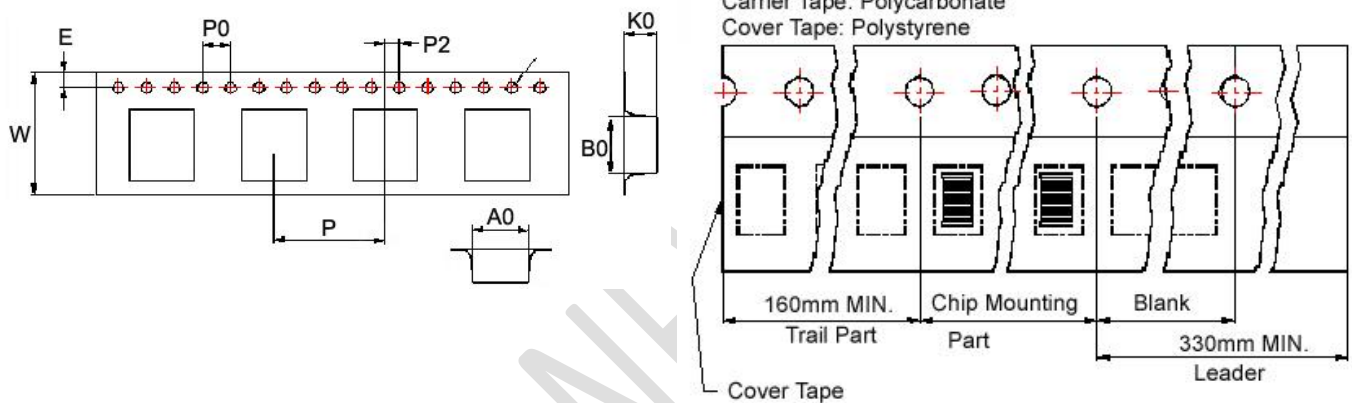
Rated Current : HP4284+42841A or WK3260B+WK3265B

Tolerance Of Inductors

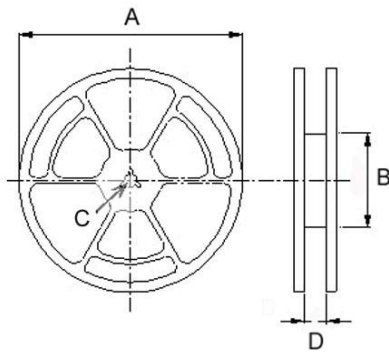
- SCDS 3D16 1.5 ~ 220 μH ± 30%
- SCDS 4D18 1.0 ~ 150 μH ± 30%
- SCDS 4D28 1.2 ~ 680 μH ± 30%
- SCDS 4D40 2.2 ~ 22 μH ± 30%
- SCDS 5D18 1.0 ~ 100 μH ± 30%
- SCDS 5D28 1.0 ~ 560 μH ± 30%
- SCDS 6D28 1.0 ~ 100 μH ± 30%
- SCDS 6D38 2.2 ~ 560 μH ± 30%
- Tolerance : M = ±20% , T = ±30% , N = ⁺⁴⁰/₋₂₀%

Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE | Tape Dimensions | | | | | | | | | Reel Dimensions | | | | Quantity PCS / REEL |
|-----------|-----------------|------|------|------|------|----|----|----|----|-----------------|-----|----|------|------------------------|
| | A0 | B0 | K0 | D | E | W | P | P0 | P2 | A | B | C | D | |
| SCDS 3D16 | 4.1 | 4.1 | 2.0 | 1.5 | 1.75 | 12 | 8 | 4 | 2 | 178 | 60 | 13 | 13.2 | 1000 |
| SCDS 4D18 | 5.3 | 5.3 | 2.4 | 1.5 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| SCDS 4D28 | 5.3 | 5.3 | 3.4 | 1.5 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| SCDS 4D40 | 5.35 | 5.35 | 4.1 | 1.55 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 1000 |
| SCDS 5D18 | 6.2 | 6.2 | 2.2 | 1.5 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| SCDS 5D28 | 6.2 | 6.2 | 3.2 | 1.5 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| SCDS 6D28 | 7.25 | 7.25 | 3.35 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1500 |
| SCDS 6D38 | 7.1 | 7.1 | 4.1 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1000 |

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