

## 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

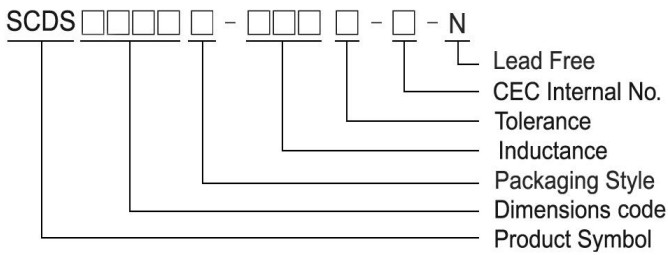
### Features

- 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

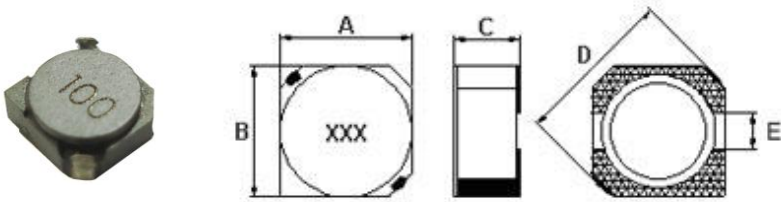
### Product Identification



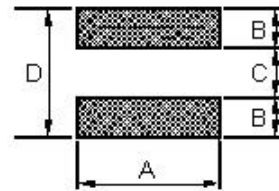
- T : Packaging: Tape and Reel
- CEC Internal No.: S: Base type terminals

### SCDS 3D16T-XXXX-S-N

#### Shape and Dimensions



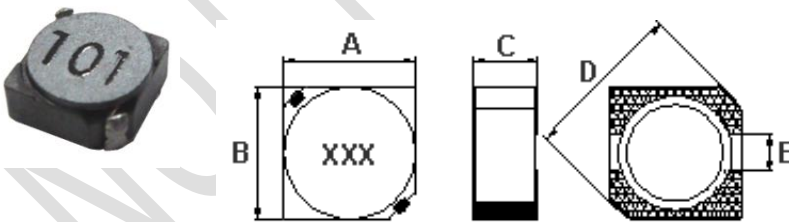
#### Recommended Pattern



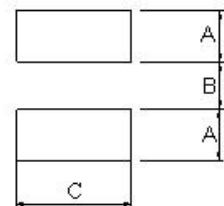
| Dimensions in mm |                 |                 |                   |                   |     | Dimension in mm |     |     |     |     |
|------------------|-----------------|-----------------|-------------------|-------------------|-----|-----------------|-----|-----|-----|-----|
| TYPE             | A               | B               | C                 | D                 | E   | TYPE            | A   | B   | C   | D   |
| SCDS3D16         | 4 <sup>+0</sup> | 4 <sup>+0</sup> | 1.8 <sup>+0</sup> | 5.2 <sup>+0</sup> | 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 <sup>+0</sup> | 6.9 <sup>+0</sup> | 1.5 | SCDS4D18        | 1.9  | 1.5 | 5.3 |
| SCDS4D28        | 4.7 ± 0.3       | 4.7 ± 0.3       | 3.0 <sup>+0</sup> | 6.9 <sup>+0</sup> | 1.5 | SCDS4D28        | 1.9  | 1.5 | 5.3 |
| SCDS4D40        | 4.7 ± 0.3       | 4.7 ± 0.3       | 4 <sup>+0</sup>   | 6.9 <sup>+0</sup> | 1.5 | SCDS4D40        | 1.9  | 1.5 | 5.3 |
| SCDS5D18        | 5.7 ± 0.3       | 5.7 ± 0.3       | 2.0 <sup>+0</sup> | 8.2 <sup>+0</sup> | 2.0 | SCDS5D18        | 2.15 | 2.0 | 6.3 |
| SCDS5D28        | 5.7 ± 0.3       | 5.7 ± 0.3       | 3.0 <sup>+0</sup> | 8.2 <sup>+0</sup> | 2.0 | SCDS5D28        | 2.15 | 2.0 | 6.3 |
| SCDS6D28        | 6.7 ± 0.3       | 6.7 ± 0.3       | 3.0 <sup>+0</sup> | 9.5 <sup>+0</sup> | 2.0 | SCDS6D28        | 2.65 | 2.0 | 7.3 |
| SCDS6D38        | 7 <sup>+0</sup> | 7 <sup>+0</sup> | 4 <sup>+0</sup>   | 9.5 <sup>+0</sup> | 2.0 | SCDS6D38        | 2.65 | 2.0 | 7.3 |

# SMD Shielded Power Inductors - SCDS Series

## Standard Specifications

| Stamp | Inductance<br>( $\mu$ H) | RDC ( $m\Omega$ ) Max |              |              |              |              |              |              |              | Rated Current (A) |              |              |              |              |              |              |              |
|-------|--------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|       |                          | SCDS<br>3D16          | SCDS<br>4D18 | SCDS<br>4D28 | SCDS<br>4D40 | SCDS<br>5D18 | SCDS<br>5D28 | SCDS<br>6D28 | SCDS<br>6D38 | SCDS<br>3D16      | SCDS<br>4D18 | SCDS<br>4D28 | SCDS<br>4D40 | SCDS<br>5D18 | SCDS<br>5D28 | SCDS<br>6D28 | SCDS<br>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           |              |                   |              |              |              |              |              | 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 = <sup>+40</sup>/<sub>-20</sub>%**

- 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 $\mu\text{H}$  (7.96MHz/ 1V), 10~150 $\mu\text{H}$  (100kHz/ 1V)

L : Agilent/ E4980 or HP4284A

RDC : Chroma 16502

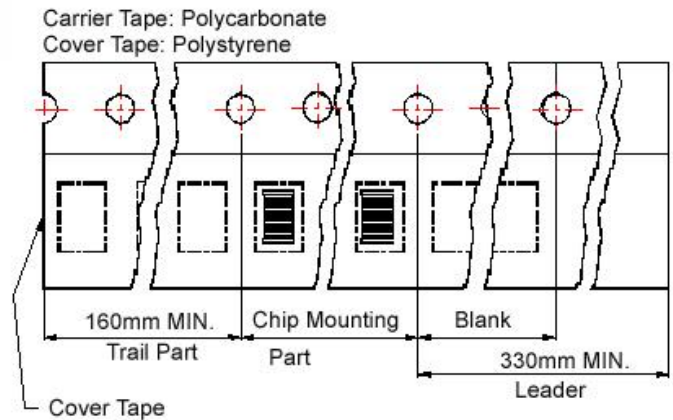
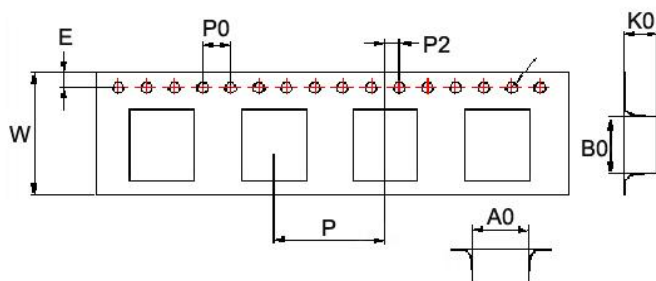
Rated Current : HP4284+42841A or WK3260B+WK3265B

## Tolerance Of Inductors

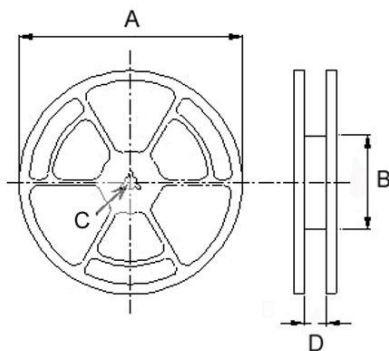
- SCDS 3D16 1.5 ~ 220 $\mu\text{H}$  ± 30%
- SCDS 4D18 1.0 ~ 150 $\mu\text{H}$  ± 30%
- SCDS 4D28 1.2 ~ 680 $\mu\text{H}$  ± 30%
- SCDS 4D40 2.2 ~ 22 $\mu\text{H}$  ± 30%
- SCDS 5D18 1.0 ~ 100 $\mu\text{H}$  ± 30%
- SCDS 5D28 1.0 ~ 560 $\mu\text{H}$  ± 30%
- SCDS 6D28 1.0 ~ 100 $\mu\text{H}$  ± 30%
- SCDS 6D38 2.2 ~ 560 $\mu\text{H}$  ± 30%
- Tolerance : M = ±20% , T = ±30% , N = <sup>+40</sup>/<sub>-20</sub>%

## Packaging Specifications

### Tape Dimensions



### Reel Dimensions



### Dimensions in mm

| TYPE      | Tape Dimensions |      |      |      |      |    |    |    |    | Reel Dimensions |     |    |      | Quantity<br>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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