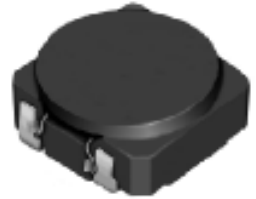
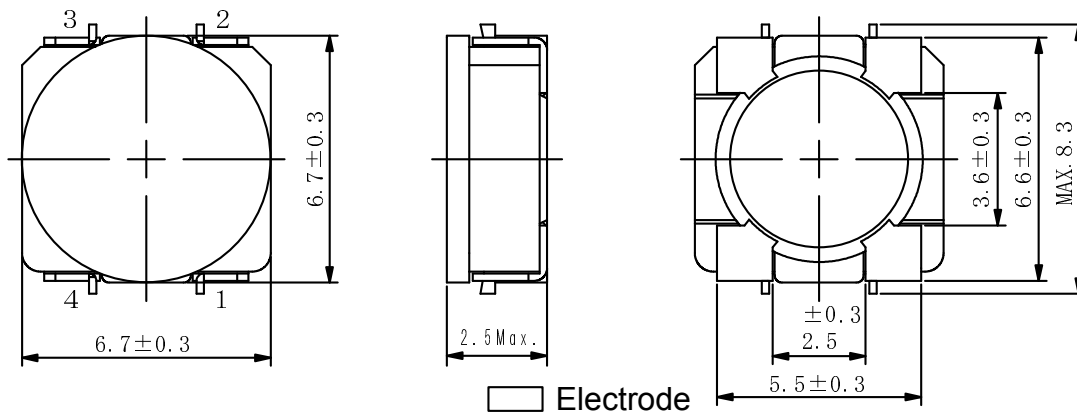
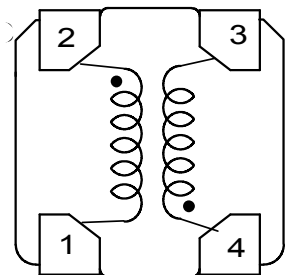


**Type: CLS6D23**
**◆ Description**

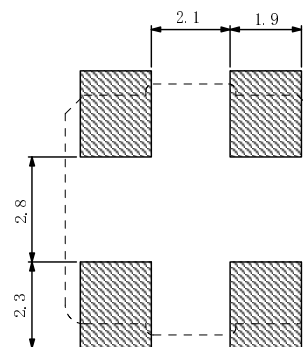
- 4 Terminal pins' type gives a flexible design as inductors or transformers.
- Can also be used as a coupled inductor, two single inductors connected in parallel, as 1:1 transformer or as an autotransformer when connected in series.
- Core material: Ferrite.
- Custom design is available.


**◆ Feature**

- Max. Operating frequency: 1MHz.
- 2 in 1 Coils for high efficiency up-down DC-DC converters.(SEPIC, Zeta, Cuk converter).
- Storage temperature range: -40°C~+105°C.
- Operating temperature range: -40°C~+105°C (including coil's self-heat).
- Product weight: 400mg(Ref.).
- Ideally used in the power supply for DSC、Note PC、DVC and W-LED backlighting.
- RoHS Compliance.

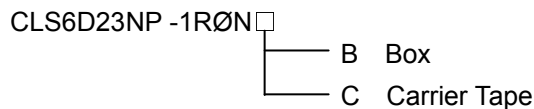
**◆ Dimensions (mm)**

**◆ Schematics (Bottom)**


“●” indicates polarity.

**◆ Land Pattern (mm)**


**Type: CLS6D23**
**◆ Specification**

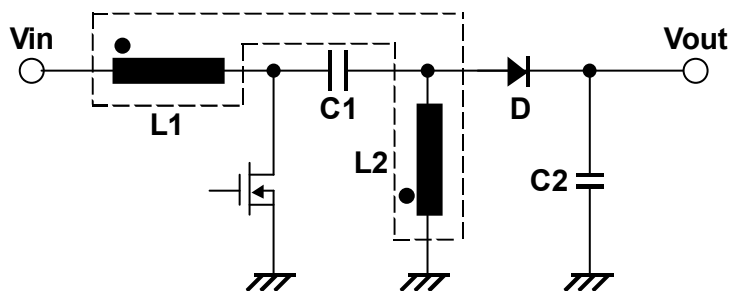
| Part No.        | Stamp | Inductance<br>[Within] | D.C.R.<br>[Max.] (mΩ)<br>(at 20°C)※1 |            | Saturation Current (A)<br>※2 |             |            |             | Temperature<br>Rise current<br>(A) ※3 |              |
|-----------------|-------|------------------------|--------------------------------------|------------|------------------------------|-------------|------------|-------------|---------------------------------------|--------------|
|                 |       |                        | (2-1)                                | (4-3)      | In parallel                  |             | In series  |             | In<br>parallel                        | In<br>series |
|                 |       |                        |                                      |            | at<br>20°C                   | at<br>100°C | at<br>20°C | at<br>100°C |                                       |              |
| CLS6D23NP-1R0N□ | 1R0   | 1.0μH±30%              | 23(19)                               | 29(23)     | 4.10                         | 3.08        | 2.05       | 1.54        | 2.10                                  | 1.00         |
| CLS6D23NP-1R5N□ | 1R5   | 1.5μH±30%              | 31(25)                               | 40(32)     | 3.36                         | 2.52        | 1.73       | 1.30        | 1.95                                  | 0.93         |
| CLS6D23NP-2R0N□ | 2R0   | 2.0μH±30%              | 38(31)                               | 45(36)     | 3.04                         | 2.28        | 1.52       | 1.14        | 1.78                                  | 0.85         |
| CLS6D23NP-3R0N□ | 3R0   | 3.0μH±30%              | 42(34)                               | 52(42)     | 2.40                         | 1.80        | 1.22       | 0.92        | 1.60                                  | 0.76         |
| CLS6D23NP-4R6N□ | 4R6   | 4.6μH±30%              | 65(52)                               | 86(69)     | 1.87                         | 1.40        | 0.92       | 0.69        | 1.23                                  | 0.58         |
| CLS6D23NP-6R8N□ | 6R8   | 6.8μH±30%              | 97(78)                               | 125(101)   | 1.56                         | 1.17        | 0.78       | 0.59        | 0.91                                  | 0.43         |
| CLS6D23NP-100N□ | 100   | 10μH±30%               | 130(104)                             | 190(153)   | 1.26                         | 0.95        | 0.65       | 0.49        | 0.80                                  | 0.38         |
| CLS6D23NP-150N□ | 150   | 15μH±30%               | 215(175)                             | 285(229)   | 1.00                         | 0.75        | 0.50       | 0.38        | 0.60                                  | 0.29         |
| CLS6D23NP-220N□ | 220   | 22μH±30%               | 260(210)                             | 350(279)   | 0.86                         | 0.65        | 0.42       | 0.32        | 0.55                                  | 0.26         |
| CLS6D23NP-330N□ | 330   | 33μH±30%               | 360(290)                             | 480(385)   | 0.73                         | 0.55        | 0.35       | 0.26        | 0.45                                  | 0.21         |
| CLS6D23NP-470N□ | 470   | 47μH±30%               | 530(425)                             | 730(587)   | 0.58                         | 0.44        | 0.26       | 0.20        | 0.35                                  | 0.17         |
| CLS6D23NP-680N□ | 680   | 68μH±30%               | 882(735)                             | 1152(960)  | 0.45                         | 0.34        | 0.22       | 0.17        | 0.28                                  | 0.13         |
| CLS6D23NP-101N□ | 101   | 100μH±30%              | 1050(875)                            | 1465(1220) | 0.39                         | 0.29        | 0.20       | 0.15        | 0.24                                  | 0.11         |

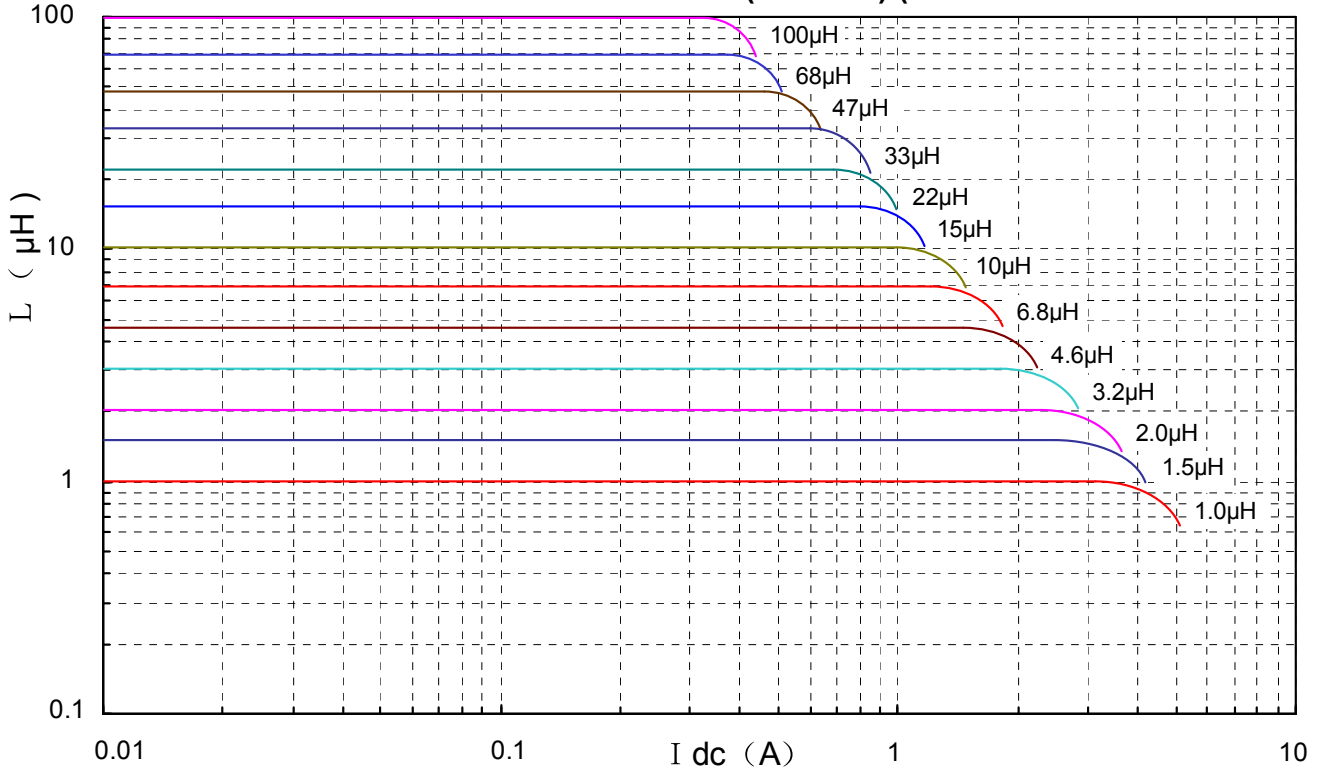
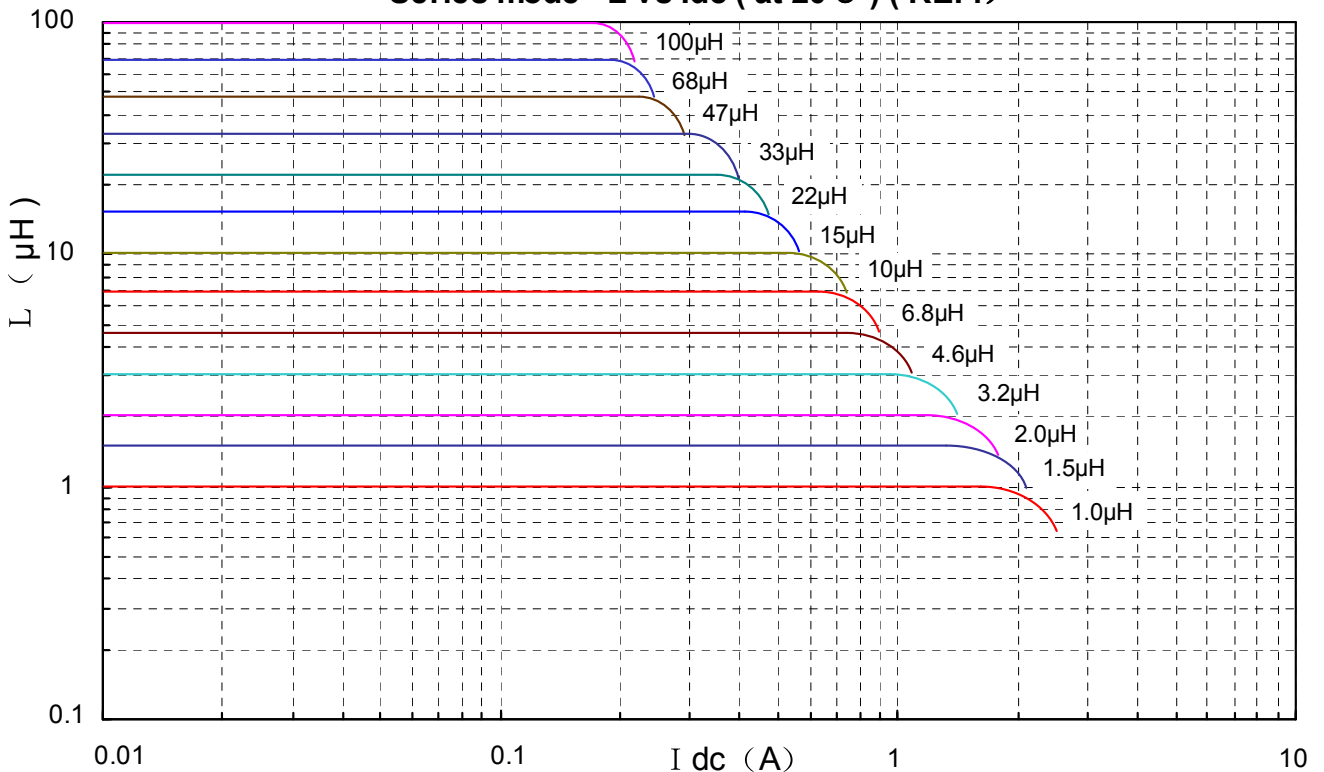
**※ Description of Part Name**


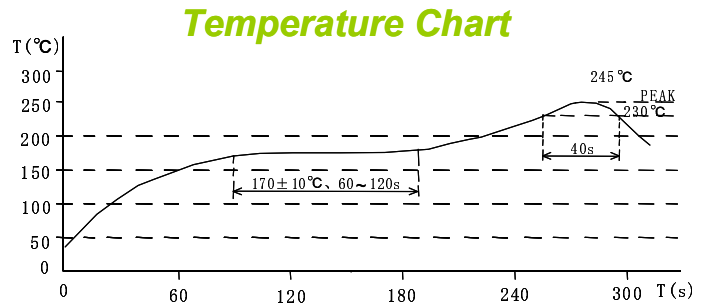
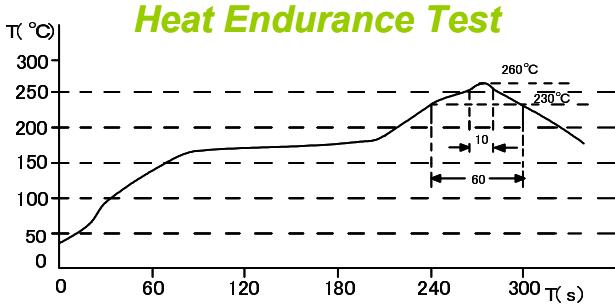
※1. ( ) typical value.

※2. Saturation Current: The DC current at which the inductance decreases to 90% of its initial value.

※3. Temperature rise current: The DC current at which the temperature rise is  $\Delta t=40^{\circ}\text{C}$ . ( $T_a=20^{\circ}\text{C}$ ).

**◆ Typical SEPIC Schematic**


**Type: CLS6D23**
**◆ Typical L Vs Current**
**Parallel mode L vs I<sub>dc</sub> ( at 20°C ) ( REF. )**

**Series mode L vs I<sub>dc</sub> ( at 20°C ) ( REF. )**


**Type: CLS6D23**
**◆ Recommendation Reflow Condition**

**◆ Packaging with Embossed Tape and Reel**

Qty.: 2000pcs/reel

