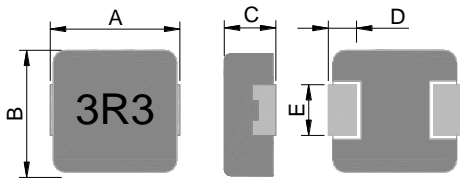




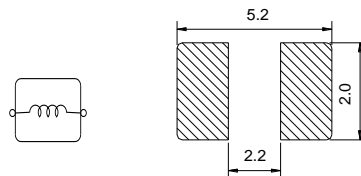
**FEATURES**

1. Low loss realized with low DCR.
2. High performance realized by metal dust core.
3. Ultra low buzz noise, due to composite construction.
4. 100% Lead(Pb)-Free and RoHS compliant.
5. Operating temperature -40~+125°C  
(Including self - temperature rise)

**DIMENSIONS (mm)**



**Recommend PC Board Pattern**



**Note:**

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only
3. Recommend solder paste thickness at 0.12mm and above

| Part No.   | Size (mm)   |             |             |             |             |
|------------|-------------|-------------|-------------|-------------|-------------|
|            | A           | B           | C           | D           | E           |
| SRPI 0402P | 4.45 ± 0.25 | 4.10 ± 0.20 | 1.80 ± 0.20 | 0.80 ± 0.25 | 2.00 ± 0.20 |

## ■ SERIES LIST

| No. | Part No.        | L<br>( $\mu$ H) | RDC<br>(m $\Omega$ ) |      | Isat<br>(A) |      | Irms<br>(A) |      |
|-----|-----------------|-----------------|----------------------|------|-------------|------|-------------|------|
|     |                 |                 | Typ.                 | Max. | Typ         | Max  | Typ         | Max  |
| 1   | SRPI 0402P-R10M | 0.10 $\pm$ 20%  | 2.9                  | 3.2  | 26.0        | 22.0 | 16.0        | 14.0 |
| 2   | SRPI 0402P-R22M | 0.22 $\pm$ 20%  | 4.8                  | 5.5  | 15.0        | 13.0 | 14.0        | 12.5 |
| 3   | SRPI 0402P-R33M | 0.33 $\pm$ 20%  | 7.5                  | 8.3  | 10.5        | 9.5  | 12.0        | 11.0 |
| 4   | SRPI 0402P-R47M | 0.47 $\pm$ 20%  | 9.5                  | 11.0 | 9.0         | 8.0  | 10.0        | 9.0  |
| 5   | SRPI 0402P-R68M | 0.68 $\pm$ 20%  | 11.6                 | 13.5 | 7.6         | 6.6  | 9.0         | 8.0  |
| 6   | SRPI 0402P-R82M | 0.82 $\pm$ 20%  | 16.3                 | 18.8 | 6.0         | 5.5  | 8.0         | 7.0  |
| 7   | SRPI 0402P-1R0M | 1.0 $\pm$ 20%   | 19                   | 22   | 5.5         | 5.0  | 7.5         | 6.5  |
| 8   | SRPI 0402P-1R2M | 1.2 $\pm$ 20%   | 21                   | 25   | 5.4         | 4.9  | 7.0         | 6.2  |
| 9   | SRPI 0402P-1R5M | 1.5 $\pm$ 20%   | 27                   | 31   | 5.2         | 4.8  | 6.7         | 5.8  |
| 10  | SRPI 0402P-2R2M | 2.2 $\pm$ 20%   | 41                   | 48   | 4.5         | 4.0  | 5.5         | 5.0  |
| 11  | SRPI 0402P-3R3M | 3.3 $\pm$ 20%   | 65                   | 75   | 3.1         | 2.7  | 4.5         | 3.5  |
| 12  | SRPI 0402P-4R7M | 4.7 $\pm$ 20%   | 84                   | 95   | 2.8         | 2.5  | 3.8         | 3.2  |
| 13  | SRPI 0402P-5R6M | 5.6 $\pm$ 20%   | 97                   | 115  | 2.6         | 2.3  | 3.2         | 2.8  |
| 14  | SRPI 0402P-6R8M | 6.8 $\pm$ 20%   | 131                  | 157  | 2.4         | 2.1  | 2.9         | 2.5  |
| 15  | SRPI 0402P-8R2M | 8.2 $\pm$ 20%   | 140                  | 168  | 2.2         | 2.0  | 2.6         | 2.3  |
| 16  | SRPI 0402P-100M | 10 $\pm$ 20%    | 165                  | 215  | 2.1         | 1.9  | 2.4         | 2.2  |

Note:

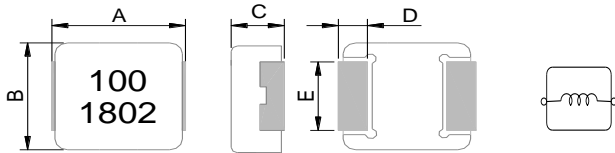
1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta T$  of 40°C
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.  
Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
7. Rated DC Current : The less value which is Irms or Isat.



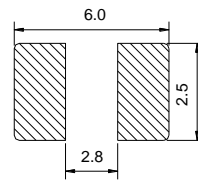
**FEATURES**

1. Low loss realized with low DCR.
2. High performance realized by metal dust core.
3. Ultra low buzz noise, due to composite construction.
4. 100% Lead(Pb)-Free and RoHS compliant.
5. Operating temperature -40 ~ +125°C  
(Including self - temperature rise)

**DIMENSIONS (mm)**



**Recommend PC Board Pattern**



**Note:**

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only
3. Recommend solder paste thickness at 0.12mm and above

| Part No.   | Size (mm)   |             |             |             |             |
|------------|-------------|-------------|-------------|-------------|-------------|
|            | A           | B           | C           | D           | E           |
| SRPI 0502P | 5.70 ± 0.30 | 5.20 ± 0.20 | 1.80 ± 0.20 | 1.00 ± 0.30 | 2.50 ± 0.30 |
| SRPI 0503P | 5.70 ± 0.3  | 5.2 ± 0.2   | 2.8 ± 0.2   | 1.0 ± 0.3   | 2.0 ± 0.2   |

## ■ SERIES LIST

| No. | Part No.        | L<br>( $\mu$ H) | RDC<br>(m $\Omega$ ) |       | Isat<br>(A) |      | Irms<br>(A) |      |
|-----|-----------------|-----------------|----------------------|-------|-------------|------|-------------|------|
|     |                 |                 | Typ.                 | Max.  | Typ         | Max  | Typ         | Max  |
| 1   | SRPI 0502P-R15N | 0.15 $\pm$ 30%  | 2.8                  | 3.2   | 27.0        | 24.0 | 22.0        | 19.0 |
| 2   | SRPI 0502P-R22M | 0.22 $\pm$ 20%  | 3.8                  | 4.4   | 20.0        | 17.0 | 16.0        | 14.0 |
| 3   | SRPI 0502P-R33M | 0.33 $\pm$ 20%  | 5.2                  | 6.0   | 11.0        | 9.0  | 14.0        | 13.0 |
| 4   | SRPI 0502P-R47M | 0.47 $\pm$ 20%  | 6.1                  | 7.2   | 9.0         | 8.0  | 13.0        | 11.0 |
| 5   | SRPI 0502P-R68M | 0.68 $\pm$ 20%  | 8.0                  | 9.2   | 8.0         | 7.0  | 12.0        | 10.0 |
| 6   | SRPI 0502P-1R0M | 1.0 $\pm$ 20%   | 14                   | 16.2  | 7.5         | 6.5  | 8.6         | 7.5  |
| 7   | SRPI 0502P-1R5M | 1.5 $\pm$ 20%   | 22                   | 26.4  | 7.0         | 6.0  | 7.5         | 6.5  |
| 8   | SRPI 0502P-2R2M | 2.2 $\pm$ 20%   | 29                   | 34    | 5.8         | 5.0  | 6.5         | 6.0  |
| 9   | SRPI 0502P-3R3M | 3.3 $\pm$ 20%   | 50                   | 60    | 5.0         | 4.7  | 6.0         | 5.0  |
| 10  | SRPI 0502P-4R7M | 4.7 $\pm$ 20%   | 84                   | 97    | 4.7         | 4.4  | 4.0         | 3.0  |
| 11  | SRPI 0502P-5R6M | 5.6 $\pm$ 20%   | 91                   | 109   | 4.4         | 4.0  | 3.5         | 2.8  |
| 12  | SRPI 0502P-6R8M | 6.8 $\pm$ 20%   | 110                  | 127   | 4.2         | 3.8  | 3.1         | 2.6  |
| 13  | SRPI 0502P-8R2M | 8.2 $\pm$ 20%   | 123                  | 142   | 3.9         | 3.4  | 2.9         | 2.5  |
| 14  | SRPI 0502P-100M | 10 $\pm$ 20%    | 150                  | 180   | 3.5         | 3.0  | 2.7         | 2.4  |
| 15  | SRPI 0502P-150M | 15 $\pm$ 20%    | 224                  | 252   | 2.6         | 2.3  | 2.2         | 1.9  |
| 16  | SRPI 0502P-220M | 22 $\pm$ 20%    | 290                  | 325   | 2.2         | 1.9  | 1.9         | 1.6  |
| 1   | SRPI 0503P-R47M | 0.47 $\pm$ 20%  | 5.2                  | 6.0   | 10.0        | 9.0  | 13.5        | 12.0 |
| 2   | SRPI 0503P-R68M | 0.68 $\pm$ 20%  | 7.4                  | 8.5   | 9.0         | 8.0  | 12.5        | 11.0 |
| 3   | SRPI 0503P-R82M | 0.82 $\pm$ 20%  | 8.0                  | 9.2   | 8.8         | 7.7  | 10.0        | 9.0  |
| 4   | SRPI 0503P-1R0M | 1.0 $\pm$ 20%   | 10.5                 | 12.0  | 8.5         | 7.5  | 9.0         | 8.0  |
| 5   | SRPI 0503P-1R5M | 1.5 $\pm$ 20%   | 13.6                 | 15.7  | 7.5         | 6.5  | 8.0         | 7.0  |
| 6   | SRPI 0503P-2R2M | 2.2 $\pm$ 20%   | 21.6                 | 25.0  | 6.5         | 5.8  | 7.0         | 6.5  |
| 7   | SRPI 0503P-3R3M | 3.3 $\pm$ 20%   | 28.0                 | 33.0  | 6.0         | 5.3  | 6.3         | 5.8  |
| 8   | SRPI 0503P-4R7M | 4.7 $\pm$ 20%   | 38.0                 | 44.0  | 5.3         | 4.6  | 5.5         | 4.8  |
| 9   | SRPI 0503P-5R6M | 5.6 $\pm$ 20%   | 50.0                 | 58.0  | 4.6         | 4.0  | 5.0         | 4.3  |
| 10  | SRPI 0503P-6R8M | 6.8 $\pm$ 20%   | 57.0                 | 66.0  | 3.5         | 3.1  | 4.3         | 3.7  |
| 11  | SRPI 0503P-100M | 10 $\pm$ 20%    | 88.0                 | 103.0 | 2.5         | 2.1  | 3.8         | 3.4  |

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta T$  of 40°C
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.  
Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
7. Rated DC Current : The less value which is Irms or Isat.

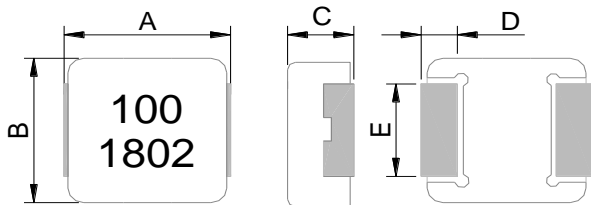


**FEATURES**

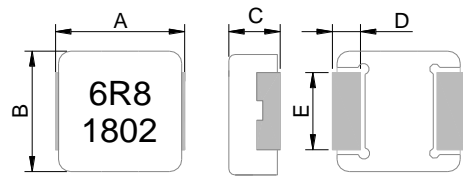
1. Shielded construction.
2. Capable of corresponding high frequency .
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.
7. Operating temperature -40~+125°C  
(Including self - temperature rise)

**DIMENSIONS (mm)**

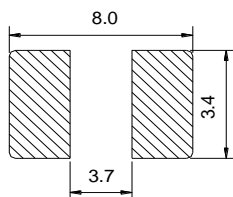
**SRPI 0603P**



**SRPI 0604P 0624P**



**Recommend PC Board Pattern**



Note:

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.15mm and above.

| Part No.   | Size (mm)   |             |             |             |             |
|------------|-------------|-------------|-------------|-------------|-------------|
|            | A           | B           | C           | D           | E           |
| SRPI 0603P | 7.1 ± 0.3   | 6.6 ± 0.2   | 2.8 ± 0.2   | 1.6 ± 0.3   | 3.0 ± 0.2   |
| SRPI 0604P | 7.10 ± 0.30 | 6.60 ± 0.20 | 3.80 ± 0.20 | 1.60 ± 0.30 | 2.80 ± 0.30 |
| SRPI 0624P | 7.10 ± 0.30 | 6.70 ± 0.20 | 2.20 ± 0.20 | 1.60 ± 0.30 | 3.0 ± 0.20  |

## SERIES LIST

| No. | Part No.        | L<br>( $\mu$ H) | RDC<br>(m $\Omega$ ) |      | Isat<br>(A) |      | Irms<br>(A) |      |
|-----|-----------------|-----------------|----------------------|------|-------------|------|-------------|------|
|     |                 |                 | Typ.                 | Max. | Typ         | Max  | Typ         | Max  |
| 1   | SRPI 0603P-R15N | 0.15 $\pm$ 30%  | 1.7                  | 2.1  | 40.0        | 36.0 | 30.0        | 25.0 |
| 2   | SRPI 0603P-R22M | 0.22 $\pm$ 20%  | 2.0                  | 2.5  | 34.0        | 32.0 | 23.0        | 21.0 |
| 3   | SRPI 0603P-R33M | 0.33 $\pm$ 20%  | 2.8                  | 3.4  | 25.0        | 22.0 | 21.0        | 20.0 |
| 4   | SRPI 0603P-R36M | 0.36 $\pm$ 20%  | 3.3                  | 3.9  | 24.0        | 21.0 | 20.0        | 18.0 |
| 5   | SRPI 0603P-R47M | 0.47 $\pm$ 20%  | 3.4                  | 4.0  | 20.0        | 18.0 | 18.0        | 16.0 |
| 6   | SRPI 0603P-R56M | 0.56 $\pm$ 20%  | 3.9                  | 4.5  | 18.0        | 16.0 | 16.5        | 15.0 |
| 7   | SRPI 0603P-R68M | 0.68 $\pm$ 20%  | 4.7                  | 5.3  | 17.0        | 15.0 | 16.0        | 14.5 |
| 8   | SRPI 0603P-R82M | 0.82 $\pm$ 20%  | 5.4                  | 6.0  | 16.0        | 14.0 | 14.0        | 13.0 |
| 9   | SRPI 0603P-1R0M | 1.0 $\pm$ 20%   | 6.7                  | 7.4  | 15.0        | 13.5 | 12.0        | 11.0 |
| 10  | SRPI 0603P-1R2M | 1.2 $\pm$ 20%   | 7.7                  | 9.5  | 14.0        | 12.5 | 10.0        | 9.5  |
| 11  | SRPI 0603P-1R5M | 1.5 $\pm$ 20%   | 10.2                 | 12.1 | 14.0        | 12.0 | 10.0        | 9.0  |
| 12  | SRPI 0603P-2R2M | 2.2 $\pm$ 20%   | 13.5                 | 15   | 10.0        | 9.0  | 8.0         | 7.5  |
| 13  | SRPI 0603P-3R3M | 3.3 $\pm$ 20%   | 19                   | 22   | 9.5         | 8.5  | 6.5         | 6.0  |
| 14  | SRPI 0603P-4R7M | 4.7 $\pm$ 20%   | 28                   | 33   | 6.5         | 5.5  | 5.5         | 5.0  |
| 15  | SRPI 0603P-5R6M | 5.6 $\pm$ 20%   | 39                   | 42   | 6.0         | 5.2  | 5.5         | 5.0  |
| 16  | SRPI 0603P-6R8M | 6.8 $\pm$ 20%   | 43                   | 50   | 6.0         | 5.0  | 4.5         | 4.2  |
| 17  | SRPI 0603P-8R2M | 8.2 $\pm$ 20%   | 54                   | 60   | 6.0         | 4.7  | 4.5         | 4.0  |
| 18  | SRPI 0603P-100M | 10 $\pm$ 20%    | 62                   | 68   | 5.5         | 4.5  | 4.0         | 3.5  |
| 19  | SRPI 0603P-150M | 15 $\pm$ 20%    | 110                  | 140  | 4.5         | 4.0  | 3.0         | 2.5  |
| 20  | SRPI 0603P-220M | 22 $\pm$ 20%    | 150                  | 190  | 3.0         | 2.5  | 2.5         | 2.0  |
| 21  | SRPI 0603P-330M | 33 $\pm$ 20%    | 215                  | 258  | 2.5         | 2.0  | 2.1         | 1.8  |
| 1   | SRPI 0604P-R15M | 0.15 $\pm$ 20%  | 1.4                  | 1.68 | 45.0        | 40.0 | 35.0        | 30.0 |
| 2   | SRPI 0604P-R33M | 0.33 $\pm$ 20%  | 2.2                  | 2.5  | 28.0        | 25.0 | 25.0        | 23.0 |
| 3   | SRPI 0604P-R45M | 0.45 $\pm$ 20%  | 2.8                  | 3.2  | 21.0        | 18.0 | 20.0        | 18.0 |
| 4   | SRPI 0604P-R56M | 0.56 $\pm$ 20%  | 3.4                  | 3.7  | 20.0        | 17.0 | 19.0        | 16.0 |
| 5   | SRPI 0604P-1R0M | 1.0 $\pm$ 20%   | 5.6                  | 6.2  | 15.0        | 13.5 | 15.0        | 13.0 |
| 6   | SRPI 0604P-6R8M | 6.8 $\pm$ 20%   | 31                   | 38   | 6.8         | 5.8  | 7.6         | 6.6  |
| 1   | SRPI 0624P-R10N | 0.10 $\pm$ 30%  | 1.2                  | 1.35 | 70.0        | 60.0 | 30.0        | 25.0 |
| 2   | SRPI 0624P-R12N | 0.12 $\pm$ 30%  | 1.3                  | 1.6  | 50.0        | 40.0 | 29.0        | 25.0 |
| 3   | SRPI 0624P-R15N | 0.15 $\pm$ 30%  | 1.5                  | 1.8  | 41.0        | 34.0 | 32.0        | 30.0 |
| 4   | SRPI 0624P-R22M | 0.22 $\pm$ 20%  | 2.2                  | 2.53 | 34.0        | 28.0 | 26.0        | 23.0 |
| 5   | SRPI 0624P-R33M | 0.33 $\pm$ 20%  | 3.2                  | 3.52 | 27.0        | 24.0 | 24.0        | 21.0 |
| 6   | SRPI 0624P-R36M | 0.36 $\pm$ 20%  | 3.4                  | 3.8  | 25.0        | 22.0 | 23.0        | 20.0 |
| 7   | SRPI 0624P-R45M | 0.45 $\pm$ 20%  | 4.0                  | 4.4  | 22.0        | 18.0 | 20.0        | 17.0 |
| 8   | SRPI 0624P-R47M | 0.47 $\pm$ 20%  | 4.4                  | 5.06 | 22.0        | 18.0 | 19.0        | 16.0 |
| 9   | SRPI 0624P-R68M | 0.68 $\pm$ 20%  | 5.2                  | 6.0  | 17.0        | 15.0 | 17.0        | 14.0 |
| 10  | SRPI 0624P-R82M | 0.82 $\pm$ 20%  | 7.3                  | 8.1  | 16.0        | 14.0 | 16.0        | 13.0 |
| 11  | SRPI 0624P-1R0M | 1.0 $\pm$ 20%   | 10.0                 | 11.8 | 15.0        | 13.0 | 13.0        | 11.0 |
| 12  | SRPI 0624P-1R5M | 1.5 $\pm$ 20%   | 13.5                 | 16.0 | 14.0        | 12.0 | 11.0        | 9.0  |
| 13  | SRPI 0624P-2R2M | 2.2 $\pm$ 20%   | 18.5                 | 23.0 | 10.0        | 9.0  | 9.5         | 8.0  |
| 14  | SRPI 0624P-3R3M | 3.3 $\pm$ 20%   | 31.0                 | 38.0 | 8.5         | 7.0  | 8.0         | 6.0  |
| 15  | SRPI 0624P-4R7M | 4.7 $\pm$ 20%   | 38.0                 | 46.0 | 7.0         | 6.0  | 6.5         | 5.5  |
| 16  | SRPI 0624P-5R6M | 5.6 $\pm$ 20%   | 47.0                 | 56.4 | 6.2         | 5.7  | 6.0         | 5.0  |
| 17  | SRPI 0624P-6R8M | 6.8 $\pm$ 20%   | 58.0                 | 67.0 | 6.0         | 5.6  | 4.5         | 4.0  |
| 18  | SRPI 0624P-100M | 10 $\pm$ 20%    | 81.0                 | 93.0 | 4.6         | 4.2  | 3.7         | 3.4  |

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25 $^{\circ}$ C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta$ T of 40 $^{\circ}$ C

5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
7. Rated DC Current : The less value which is Irms or Isat.



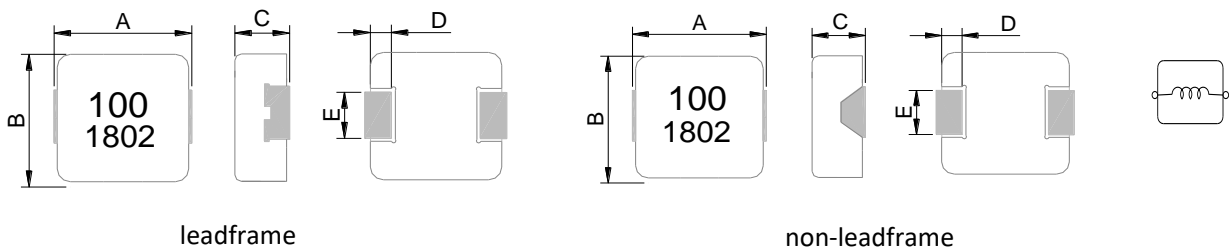
**FEATURES**

1. Shielded construction.
2. Capable of corresponding high frequency
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.
7. Operating temperature -40~+125°C  
(Including self - temperature rise)

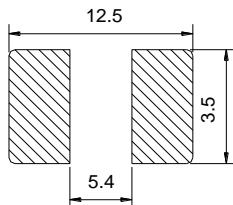
**APPLICATIONS**

1. DC/DC converters in distributed power systems.
2. DC/DC converter for Field Programmable Gate Array(FPGA).
3. Battery powered devices.
4. Thin type on-board power supply module for exchanger.
5. VRM for server.
6. High current, low profile POL converters.
7. PDA/notebook/desktop/server and battery powered devices.

**DIMENSIONS (mm)**



**Recommend PC Board Pattern**



Note:

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.15mm and above.

| Part No.   | Size (mm)  |            |           |           |                |
|------------|------------|------------|-----------|-----------|----------------|
|            | A          | B          | C         | D         | E              |
| SRPI 1004P | 11.0 ± 0.3 | 10.0 ± 0.3 | 3.8 ± 0.2 | 2.0 ± 0.3 | See Spec table |
| SRPI 1005P | 11.0 ± 0.5 | 10.0 ± 0.3 | 4.8 ± 0.2 | 2.0 ± 0.3 | See Spec table |



## SERIES LIST

| No. | Part No.        | L        | RDC<br>(mΩ) |       | Isat<br>(A) |      | Irms<br>(A) |      | E<br>(mm) | Type          |
|-----|-----------------|----------|-------------|-------|-------------|------|-------------|------|-----------|---------------|
|     |                 | (μH)     | Typ.        | Max.  | Typ         | Max  | Typ         | Max  | ±0.3      |               |
| 1   | SRPI 1004P-R15N | 0.15±30% | 0.50        | 0.60  | 82.0        | 75.0 | 44.0        | 38.0 | 3.0       | non-leadframe |
| 2   | SRPI 1004P-R22M | 0.22±20% | 0.72        | 0.83  | 70.0        | 60.0 | 36.0        | 33.0 | 3.0       | non-leadframe |
| 3   | SRPI 1004P-R36M | 0.36±20% | 1.05        | 1.18  | 51.0        | 45.0 | 33.0        | 29.0 | 3.0       | non-leadframe |
| 4   | SRPI 1004P-R42M | 0.42±20% | 1.15        | 1.3   | 50.0        | 42.0 | 32.5        | 28.5 | 3.0       | non-leadframe |
| 5   | SRPI 1004P-R45M | 0.45±20% | 1.2         | 1.4   | 48.0        | 42.0 | 32.5        | 28.5 | 3.0       | non-leadframe |
| 6   | SRPI 1004P-R47M | 0.47±20% | 1.3         | 1.5   | 46.0        | 40.0 | 32.0        | 28.0 | 3.0       | non-leadframe |
| 7   | SRPI 1004P-R56M | 0.56±20% | 1.6         | 1.8   | 34.0        | 29.0 | 25.0        | 23.0 | 2.5       | non-leadframe |
| 8   | SRPI 1004P-R68M | 0.68±20% | 1.9         | 2.2   | 31.0        | 28.0 | 23.0        | 20.0 | 2.5       | non-leadframe |
| 9   | SRPI 1004P-1R0M | 1.0±20%  | 2.9         | 3.25  | 29.0        | 26.0 | 20.0        | 18.0 | 2.5       | non-leadframe |
| 10  | SRPI 1004P-1R5M | 1.5±20%  | 3.7         | 4.2   | 26.0        | 22.0 | 17.5        | 16.0 | 2.5       | non-leadframe |
| 11  | SRPI 1004P-1R8M | 1.8±20%  | 5.1         | 5.7   | 23.0        | 20.5 | 16.5        | 15.0 | 3.0       | leadframe     |
| 12  | SRPI 1004P-2R0M | 2.0±20%  | 5.3         | 6.1   | 21.0        | 18.0 | 16.0        | 14.5 | 3.0       | leadframe     |
| 13  | SRPI 1004P-2R2M | 2.2±20%  | 5.8         | 6.7   | 20.0        | 16.0 | 15.0        | 13.0 | 3.0       | leadframe     |
| 14  | SRPI 1004P-3R3M | 3.3±20%  | 10.5        | 11.8  | 17.5        | 14.0 | 11.0        | 10.0 | 3.0       | leadframe     |
| 15  | SRPI 1004P-4R7M | 4.7±20%  | 15.8        | 19    | 15.2        | 13.0 | 8.8         | 8.0  | 3.0       | leadframe     |
| 16  | SRPI 1004P-5R6M | 5.6±20%  | 19          | 22.8  | 14.1        | 11.5 | 8.0         | 7.2  | 3.0       | leadframe     |
| 17  | SRPI 1004P-6R8M | 6.8±20%  | 22          | 24.5  | 12.2        | 11.0 | 7.8         | 6.8  | 3.0       | leadframe     |
| 18  | SRPI 1004P-8R2M | 8.2±20%  | 25          | 28    | 9.5         | 8.5  | 7.6         | 6.5  | 3.0       | leadframe     |
| 19  | SRPI 1004P-100M | 10±20%   | 27          | 30    | 8.6         | 7.5  | 7.5         | 6.1  | 3.0       | leadframe     |
| 20  | SRPI 1004P-150M | 15±20%   | 41          | 45    | 7.0         | 6.0  | 6.25        | 5.0  | 3.0       | leadframe     |
| 21  | SRPI 1004P-220M | 22±20%   | 58          | 66    | 6.2         | 5.5  | 5.0         | 4.1  | 3.0       | leadframe     |
| 22  | SRPI 1004P-330M | 33±20%   | 84          | 91    | 5.5         | 5.0  | 4.4         | 3.5  | 3.0       | leadframe     |
| 23  | SRPI 1004P-470M | 47±20%   | 125         | 143   | 4.0         | 3.7  | 3.5         | 3.0  | 3.0       | leadframe     |
| 24  | SRPI 1004P-680M | 68±20%   | 184         | 210   | 3.2         | 3.0  | 2.6         | 2.4  | 3.0       | leadframe     |
| 25  | SRPI 1004P-820M | 82±20%   | 240         | 270   | 3.0         | 2.8  | 2.3         | 2.1  | 3.0       | leadframe     |
| 26  | SRPI 1004P-101M | 100±20%  | 270         | 310   | 2.7         | 2.4  | 2.0         | 1.8  | 3.0       | leadframe     |
| 1   | SRPI 1005P-R36M | 0.36±20% | 0.82        | 0.92  | 52.0        | 46.0 | 34.0        | 30.0 | 3.0       | non-leadframe |
| 2   | SRPI 1005P-R47M | 0.47±20% | 1.15        | 1.32  | 46.0        | 40.0 | 33.0        | 29.0 | 3.0       | non-leadframe |
| 3   | SRPI 1005P-R68M | 0.68±20% | 1.60        | 1.90  | 35.0        | 32.0 | 28.0        | 25.0 | 2.5       | non-leadframe |
| 4   | SRPI 1005P-1R0M | 1.0±20%  | 2.60        | 3.00  | 33.0        | 30.0 | 25.0        | 23.0 | 2.5       | non-leadframe |
| 5   | SRPI 1005P-1R5M | 1.5±20%  | 3.40        | 3.80  | 27.0        | 24.0 | 23.0        | 21.0 | 2.5       | non-leadframe |
| 6   | SRPI 1005P-2R2M | 2.2±20%  | 5.10        | 5.60  | 20.0        | 18.0 | 19.5        | 17.5 | 3.0       | leadframe     |
| 7   | SRPI 1005P-3R3M | 3.3±20%  | 8.10        | 9.10  | 17.5        | 15.5 | 17.0        | 15.0 | 3.0       | leadframe     |
| 8   | SRPI 1005P-4R7M | 4.7±20%  | 9.30        | 10.5  | 16.0        | 14.0 | 15.0        | 13.0 | 3.0       | leadframe     |
| 9   | SRPI 1005P-5R6M | 5.6±20%  | 12.8        | 14.4  | 15.0        | 12.5 | 13.0        | 11.0 | 3.0       | leadframe     |
| 10  | SRPI 1005P-6R8M | 6.8±20%  | 15.0        | 17.3  | 14.0        | 12.0 | 12.0        | 10.0 | 3.0       | leadframe     |
| 11  | SRPI 1005P-8R2M | 8.2±20%  | 16.1        | 18.8  | 13.5        | 11.5 | 10.0        | 8.5  | 3.0       | leadframe     |
| 12  | SRPI 1005P-100M | 10±20%   | 18.9        | 21.8  | 13.0        | 11.0 | 7.6         | 7.2  | 3.0       | leadframe     |
| 13  | SRPI 1005P-150M | 15±20%   | 32.0        | 39.0  | 8.5         | 7.5  | 6.5         | 6.0  | 3.0       | leadframe     |
| 14  | SRPI 1005P-220M | 22±20%   | 44.0        | 54.0  | 6.0         | 5.5  | 6.0         | 5.5  | 3.0       | leadframe     |
| 15  | SRPI 1005P-330M | 33±20%   | 74.0        | 86.0  | 5.8         | 5.2  | 5.5         | 5.0  | 3.0       | leadframe     |
| 16  | SRPI 1005P-470M | 47±20%   | 106.0       | 127.0 | 4.0         | 3.5  | 4.5         | 4.0  | 3.0       | leadframe     |
| 17  | SRPI 1005P-101M | 100±20%  | 242.0       | 290.0 | 2.8         | 2.4  | 2.2         | 2.0  | 3.0       | leadframe     |

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40°C
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.  
Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the

part temperature. Part temperature should be verified in the end application.

6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.

7. Rated DC Current : The less value which is Irms or Isat



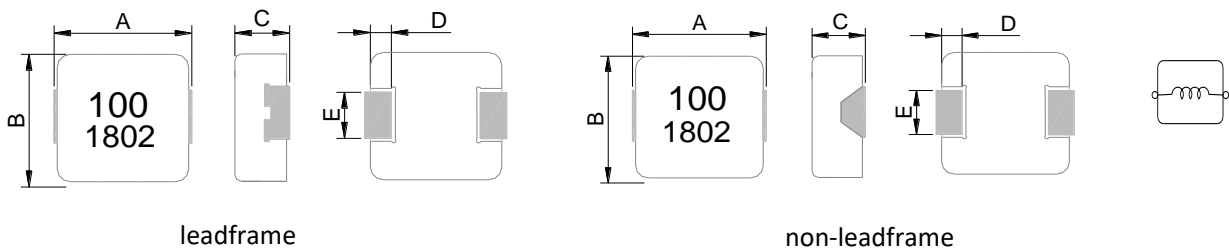
## FEATURES

1. Shielded construction.
2. Capable of corresponding high frequency
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.
7. Operating temperature -40~+125°C  
(Including self - temperature rise)

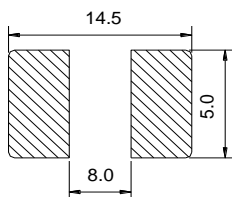
## APPLICATIONS

1. DC/DC converters in distributed power systems.
2. DC/DC converter for Field Programmable Gate Array(FPGA).
3. Battery powered devices.
4. Thin type on-board power supply module for exchanger.
5. VRM for server.
6. High current, low profile POL converters.
7. PDA/notebook/desktop/server and battery powered devices.

## DIMENSIONS (mm)



### Recommend PC Board Pattern



Note:

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.15mm and above.

| Part No.   | Size (mm)  |            |           |           |                |
|------------|------------|------------|-----------|-----------|----------------|
|            | A          | B          | C         | D         | E              |
| SRPI 1205P | 13.5 ± 0.5 | 12.6 ± 0.2 | 4.7 ± 0.3 | 2.3 ± 0.3 | See spec table |
| SRPI 1206P | 13.5 ± 0.5 | 12.6 ± 0.2 | 5.7 ± 0.3 | 2.3 ± 0.3 | See spec table |
| SRPI 1265P | 13.5 ± 0.5 | 12.6 ± 0.2 | 6.2 ± 0.3 | 2.3 ± 0.3 | See spec table |

## SERIES LIST

| No. | Part No.        | L              | RDC  |      | Isat  |       | Irms |      | E                 | Type          |
|-----|-----------------|----------------|------|------|-------|-------|------|------|-------------------|---------------|
|     |                 | ( $\mu$ H)     | Typ. | Max. | Typ   | Max   | Typ  | Max  | (mm)<br>$\pm 0.3$ |               |
| 1   | SRPI 1205P-R47M | 0.47 $\pm$ 20% | 0.77 | 0.90 | 65.0  | 58.0  | 38.0 | 34.0 | 4.0               | non-leadframe |
| 2   | SRPI 1205P-R68M | 0.68 $\pm$ 20% | 1.30 | 1.55 | 50.0  | 42.0  | 34.0 | 31.0 | 4.0               | non-leadframe |
| 3   | SRPI 1205P-1R0M | 1.0 $\pm$ 20%  | 1.60 | 1.90 | 40.0  | 34.0  | 30.0 | 27.0 | 4.0               | non-leadframe |
| 4   | SRPI 1205P-1R5M | 1.5 $\pm$ 20%  | 3.20 | 3.80 | 31.0  | 28.0  | 25.0 | 22.0 | 4.7               | leadframe     |
| 5   | SRPI 1205P-2R2M | 2.2 $\pm$ 20%  | 4.10 | 4.80 | 26.0  | 23.0  | 17.0 | 15.5 | 4.7               | leadframe     |
| 6   | SRPI 1205P-3R3M | 3.3 $\pm$ 20%  | 6.00 | 7.00 | 23.0  | 20.5  | 15.5 | 14.0 | 4.7               | leadframe     |
| 7   | SRPI 1205P-4R7M | 4.7 $\pm$ 20%  | 8.80 | 10.2 | 18.5  | 16.0  | 14.0 | 12.5 | 4.7               | leadframe     |
| 8   | SRPI 1205P-6R8M | 6.8 $\pm$ 20%  | 13.0 | 16.0 | 16.5  | 15.0  | 12.0 | 11.0 | 4.7               | leadframe     |
| 9   | SRPI 1205P-100M | 10 $\pm$ 20%   | 19.2 | 22.0 | 13.0  | 10.5  | 10.0 | 9.0  | 4.7               | leadframe     |
| 10  | SRPI 1205P-150M | 15 $\pm$ 20%   | 30.0 | 36.0 | 11.0  | 9.2   | 9.4  | 8.2  | 4.7               | leadframe     |
| 11  | SRPI 1205P-220M | 22 $\pm$ 20%   | 42.0 | 52.0 | 8.5   | 7.5   | 8.0  | 7.0  | 4.7               | leadframe     |
| 12  | SRPI 1205P-330M | 33 $\pm$ 20%   | 66.0 | 80.0 | 7.3   | 6.5   | 6.0  | 5.2  | 4.7               | leadframe     |
| 1   | SRPI 1206P-R36M | 0.36 $\pm$ 20% | 0.65 | 0.8  | 70.0  | 60.0  | 60.0 | 50.0 | 4.7               | non-leadframe |
| 2   | SRPI 1206P-1R5M | 1.5 $\pm$ 20%  | 2.40 | 3.0  | 32.0  | 27.0  | 28.0 | 24.0 | 4.0               | non-leadframe |
| 3   | SRPI 1206P-2R2M | 2.2 $\pm$ 20%  | 3.70 | 4.3  | 28.0  | 24.0  | 25.0 | 21.0 | 4.7               | leadframe     |
| 4   | SRPI 1206P-3R3M | 3.3 $\pm$ 20%  | 5.30 | 6.5  | 28.0  | 24.0  | 21.0 | 18.0 | 4.7               | leadframe     |
| 5   | SRPI 1206P-4R7M | 4.7 $\pm$ 20%  | 7.00 | 8.4  | 23.0  | 19.5  | 19.0 | 16.0 | 4.7               | leadframe     |
| 6   | SRPI 1206P-8R2M | 8.2 $\pm$ 20%  | 13.5 | 16.0 | 17.0  | 15.5  | 13.5 | 12.0 | 4.7               | leadframe     |
| 7   | SRPI 1206P-100M | 10 $\pm$ 20%   | 15.5 | 18.6 | 16.0  | 14.5  | 12.0 | 10.5 | 4.7               | leadframe     |
| 8   | SRPI 1206P-150M | 15 $\pm$ 20%   | 24.0 | 29.0 | 10.0  | 9.0   | 10.0 | 8.5  | 4.7               | leadframe     |
| 9   | SRPI 1206P-220M | 22 $\pm$ 20%   | 31.2 | 37.5 | 9.0   | 8.0   | 8.0  | 7.0  | 4.7               | leadframe     |
| 10  | SRPI 1206P-330M | 33 $\pm$ 20%   | 56.0 | 68.0 | 7.8   | 6.7   | 6.5  | 5.5  | 4.7               | leadframe     |
| 11  | SRPI 1206P-470M | 47 $\pm$ 20%   | 76.0 | 88.0 | 6.7   | 5.5   | 5.2  | 4.5  | 4.7               | leadframe     |
| 12  | SRPI 1206P-680M | 68 $\pm$ 20%   | 103  | 124  | 5.8   | 5.0   | 4.5  | 3.7  | 4.7               | leadframe     |
| 13  | SRPI 1206P-101M | 100 $\pm$ 20%  | 162  | 195  | 5.0   | 4.0   | 3.2  | 2.8  | 4.7               | leadframe     |
| 14  | SRPI 1206P-151M | 150 $\pm$ 20%  | 270  | 325  | 4.1   | 3.2   | 2.6  | 2.2  | 4.7               | leadframe     |
| 1   | SRPI 1265P-R10N | 0.10 $\pm$ 30% | 0.2  | 0.25 | 120.0 | 115.0 | 65.0 | 60.0 | 4.7               | non-leadframe |
| 2   | SRPI 1265P-R22M | 0.22 $\pm$ 20% | 0.4  | 0.46 | 112.0 | 105.0 | 53.0 | 42.0 | 4.7               | non-leadframe |
| 3   | SRPI 1265P-R33M | 0.33 $\pm$ 20% | 0.6  | 0.70 | 75.0  | 65.0  | 46.0 | 36.0 | 4.7               | non-leadframe |
| 4   | SRPI 1265P-R68M | 0.68 $\pm$ 20% | 1.25 | 1.50 | 55.0  | 46.0  | 36.5 | 33.0 | 4.0               | non-leadframe |
| 5   | SRPI 1265P-1R0M | 1.0 $\pm$ 20%  | 1.5  | 1.80 | 45.0  | 36.0  | 33.0 | 29.0 | 4.0               | non-leadframe |
| 6   | SRPI 1265P-1R5M | 1.5 $\pm$ 20%  | 2.2  | 2.53 | 35.0  | 30.0  | 29.0 | 25.0 | 4.0               | non-leadframe |
| 7   | SRPI 1265P-1R8M | 1.8 $\pm$ 20%  | 3.2  | 3.6  | 31.0  | 27.0  | 27.0 | 23.0 | 4.7               | leadframe     |
| 8   | SRPI 1265P-2R2M | 2.2 $\pm$ 20%  | 3.7  | 4.2  | 28.5  | 24.0  | 25.0 | 21.0 | 4.7               | leadframe     |
| 9   | SRPI 1265P-3R3M | 3.3 $\pm$ 20%  | 5.3  | 6.2  | 27.0  | 22.5  | 22.0 | 19.0 | 4.7               | leadframe     |
| 10  | SRPI 1265P-4R7M | 4.7 $\pm$ 20%  | 6.8  | 8.0  | 25.0  | 21.0  | 20.0 | 17.0 | 4.7               | leadframe     |
| 11  | SRPI 1265P-5R6M | 5.6 $\pm$ 20%  | 8.3  | 9.8  | 23.0  | 19.5  | 18.0 | 15.0 | 4.7               | leadframe     |
| 12  | SRPI 1265P-6R8M | 6.8 $\pm$ 20%  | 9.8  | 11.3 | 21.0  | 18.0  | 16.5 | 14.0 | 4.7               | leadframe     |
| 13  | SRPI 1265P-8R2M | 8.2 $\pm$ 20%  | 12.0 | 13.8 | 19.0  | 17.0  | 15.0 | 12.5 | 4.7               | leadframe     |
| 14  | SRPI 1265P-100M | 10 $\pm$ 20%   | 13.0 | 15.8 | 17.0  | 15.0  | 13.0 | 11.0 | 4.7               | leadframe     |
| 15  | SRPI 1265P-150M | 15 $\pm$ 20%   | 22   | 26   | 13.5  | 12.0  | 11.0 | 9.5  | 4.7               | leadframe     |
| 16  | SRPI 1265P-220M | 22 $\pm$ 20%   | 31   | 35   | 10.0  | 9.0   | 10.0 | 8.0  | 4.7               | leadframe     |
| 17  | SRPI 1265P-330M | 33 $\pm$ 20%   | 46   | 55   | 9.0   | 8.0   | 9.0  | 6.5  | 4.7               | leadframe     |
| 18  | SRPI 1265P-470M | 47 $\pm$ 20%   | 58   | 67   | 706.0 | 6.8   | 8.0  | 5.7  | 4.7               | leadframe     |
| 19  | SRPI 1265P-680M | 68 $\pm$ 20%   | 82   | 100  | 6.0   | 5.0   | 5.8  | 4.8  | 4.7               | leadframe     |
| 20  | SRPI 1265P-820M | 82 $\pm$ 20%   | 110  | 132  | 5.0   | 4.2   | 5.0  | 4.0  | 4.7               | leadframe     |
| 21  | SRPI 1265P-101M | 100 $\pm$ 20%  | 140  | 161  | 5.0   | 4.0   | 5.0  | 3.8  | 4.7               | leadframe     |

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta T$  of 40°C
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.  
Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
7. Rated DC Current : The less value which is Irms or Isat.



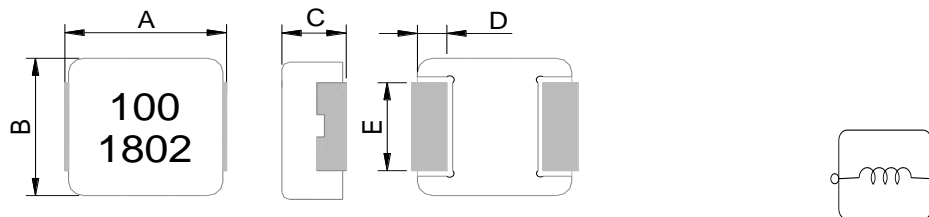
## FEATURES

1. Shielded construction.
2. Capable of corresponding high frequency
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.
7. Operating temperature -40~+125°C  
(Including self - temperature rise)

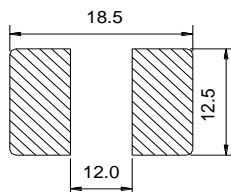
## APPLICATIONS

1. DC/DC converters in distributed power systems.
2. DC/DC converter for Field Programmable Gate Array(FPGA).
3. Battery powered devices.
4. Thin type on-board power supply module for exchanger.
5. VRM for server.
6. High current, low profile POL converters.
7. PDA/notebook/desktop/server and battery powered devices.

## DIMENSIONS (mm)



### Recommend PC Board Pattern



#### Note:

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.17mm and above.

| Part No.   | Size (mm)  |            |           |           |            |
|------------|------------|------------|-----------|-----------|------------|
|            | A          | B          | C         | D         | E          |
| SRPI 1707P | 17.8 ± 0.5 | 16.9 ± 0.3 | 6.7 ± 0.3 | 2.3 ± 0.3 | 11.9 ± 0.3 |

## SERIES LIST

| No. | Part No.        | L              | RDC                  |                      | Isat       |            | Irms       |            |
|-----|-----------------|----------------|----------------------|----------------------|------------|------------|------------|------------|
|     |                 | ( $\mu$ H)     | (m $\Omega$ )<br>Typ | (m $\Omega$ )<br>Max | (A)<br>Typ | (A)<br>Max | (A)<br>Typ | (A)<br>Max |
| 1   | SRPI 1707P-R47M | 0.47 $\pm$ 20% | 0.7                  | 0.9                  | 110        | 100        | 60         | 55         |
| 2   | SRPI 1707P-R56M | 0.56 $\pm$ 20% | 0.81                 | 0.97                 | 80         | 70         | 56         | 50         |
| 3   | SRPI 1707P-1R0M | 1.0 $\pm$ 20%  | 1.06                 | 1.3                  | 50         | 45         | 46         | 42         |
| 4   | SRPI 1707P-1R5M | 1.5 $\pm$ 20%  | 1.5                  | 1.8                  | 46         | 40         | 39         | 35         |
| 5   | SRPI 1707P-1R8M | 1.8 $\pm$ 20%  | 1.7                  | 2.0                  | 40         | 34         | 35         | 32         |
| 6   | SRPI 1707P-2R2M | 2.2 $\pm$ 20%  | 1.8                  | 2.2                  | 35         | 32         | 32         | 30         |
| 7   | SRPI 1707P-3R3M | 3.3 $\pm$ 20%  | 2.7                  | 3.3                  | 32         | 29         | 30         | 28         |
| 8   | SRPI 1707P-4R7M | 4.7 $\pm$ 20%  | 3.7                  | 4.5                  | 29         | 26         | 28         | 26         |
| 9   | SRPI 1707P-6R8M | 6.8 $\pm$ 20%  | 6.0                  | 7.2                  | 25         | 22         | 24         | 22         |
| 10  | SRPI 1707P-100M | 10 $\pm$ 20%   | 9.2                  | 10.6                 | 22         | 19         | 21         | 19         |
| 11  | SRPI 1707P-150M | 15 $\pm$ 20%   | 12.8                 | 15.5                 | 16         | 14         | 16         | 14         |
| 12  | SRPI 1707P-220M | 22 $\pm$ 20%   | 20.5                 | 24.0                 | 13.5       | 11.5       | 13.5       | 11.5       |
| 13  | SRPI 1707P-330M | 33 $\pm$ 20%   | 32.0                 | 37.0                 | 12         | 10         | 12         | 10         |
| 14  | SRPI 1707P-470M | 47 $\pm$ 20%   | 40.0                 | 47.0                 | 9.5        | 8.0        | 9.5        | 8.0        |
| 15  | SRPI 1707P-680M | 68 $\pm$ 20%   | 66.0                 | 76.0                 | 8.5        | 7.2        | 8.0        | 6.5        |
| 16  | SRPI 1707P-820M | 82 $\pm$ 20%   | 69.0                 | 83.0                 | 8.0        | 6.5        | 6.5        | 5.7        |

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25 $^{\circ}$ C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta$ T of 40 $^{\circ}$ C
5. The part temperature (ambient + temp rise) should not exceed 125 $^{\circ}$ C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions
7. Rated DC Current : The less value which is Irms or Isat.



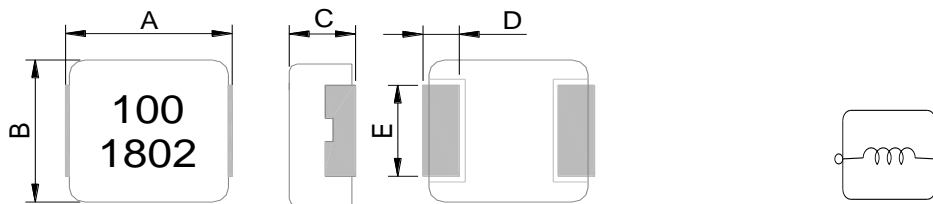
## FEATURES

1. Shielded construction.
2. Capable of corresponding high frequency
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.
7. Operating temperature -40~+125°C  
(Including self - temperature rise)

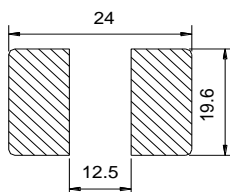
## APPLICATIONS

1. DC/DC converters in distributed power systems.
2. DC/DC converter for Field Programmable Gate Array(FPGA).
3. Battery powered devices.
4. Thin type on-board power supply module for exchanger.
5. VRM for server.
6. High current, low profile POL converters.
7. PDA/notebook/desktop/server and battery powered devices.

## DIMENSIONS (mm)



### Recommend PC Board Pattern



Note:

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.20mm and above.

| Part No.   | Size (mm)  |            |            |           |            |
|------------|------------|------------|------------|-----------|------------|
|            | A          | B          | C          | D         | E          |
| SRPI 2313P | 23.5 ± 0.5 | 22.0 ± 0.3 | 12.6 ± 0.4 | 5.4 ± 0.4 | 19.0 ± 0.3 |



## ■ SERIES LIST

| No. | Part No.        | L<br>( $\mu$ H) | RDC<br>(m $\Omega$ ) |      | Isat<br>(A) |      | Irms<br>(A) |     |
|-----|-----------------|-----------------|----------------------|------|-------------|------|-------------|-----|
|     |                 |                 | Typ.                 | Max. | Typ         | Max  | Typ         | Max |
| 1   | SRPI 2313P-1R5M | 1.5 $\pm$ 20%   | 1.00                 | 1.15 | 52          | 48   | 62          | 57  |
| 2   | SRPI 2313P-2R2M | 2.2 $\pm$ 20%   | 1.05                 | 1.25 | 48          | 43   | 58          | 52  |
| 3   | SRPI 2313P-3R3M | 3.3 $\pm$ 20%   | 1.50                 | 1.75 | 41          | 37   | 49          | 47  |
| 4   | SRPI 2313P-4R7M | 4.7 $\pm$ 20%   | 1.90                 | 2.20 | 38          | 34   | 47          | 44  |
| 5   | SRPI 2313P-6R8M | 6.8 $\pm$ 20%   | 2.70                 | 3.10 | 36          | 32   | 40          | 36  |
| 6   | SRPI 2313P-100M | 10 $\pm$ 20%    | 3.80                 | 4.15 | 28          | 20   | 33          | 30  |
| 7   | SRPI 2313P-220M | 22 $\pm$ 20%    | 9.20                 | 11.0 | 15          | 14   | 22          | 18  |
| 8   | SRPI 2313P-330M | 33 $\pm$ 20%    | 13.5                 | 15.4 | 12          | 10.5 | 19          | 16  |
| 9   | SRPI 2313P-470M | 47 $\pm$ 20%    | 17.3                 | 20.8 | 12          | 10.0 | 17          | 14  |
| 10  | SRPI 2313P-680M | 68 $\pm$ 20%    | 26.2                 | 29.5 | 12          | 9.0  | 14          | 12  |
| 11  | SRPI 2313P-820M | 82 $\pm$ 20%    | 31.0                 | 34.2 | 9.0         | 7.7  | 12          | 10  |
| 12  | SRPI 2313P-101M | 100 $\pm$ 20%   | 36.0                 | 40.0 | 9.0         | 7.5  | 11          | 9.5 |

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta$ T of 40°C
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions
7. Rated DC Current : The less value which is Irms or Isat.