

# High Current Toroidal Inductors

## Vertical PCB Mounting

### Key Features

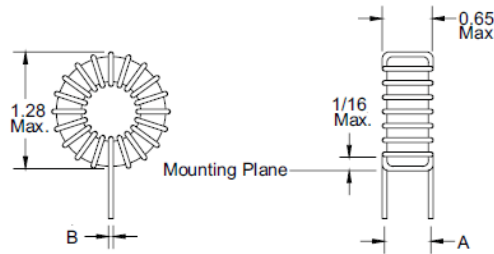
- Vertical PC Mounting for Board Layout Optimization.
- Wide Range Of Inductance and Current ratings.
- Distributed Air Gap For High Energy Storage.
- High Efficiency Reduced Core Loss.
- Self-Shielding For Low Magnetic Radiation.
- High Current Carrying Capability.

### Applications

- SMPS Energy Storage Inductors.
- EMI/RFI Filtering Inductors.
- DC-DC Converter Chokes.

### Notes

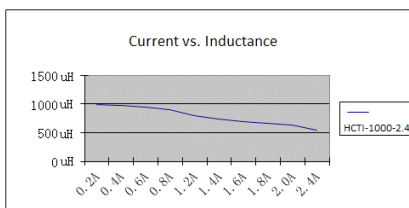
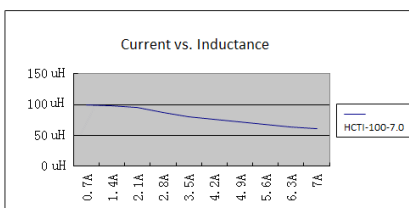
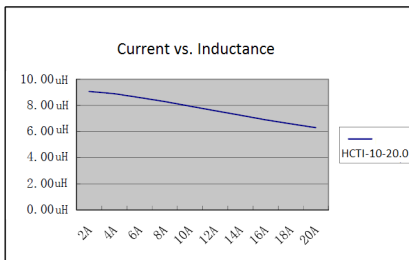
- (1) Dimensions are in inches.
- (2) Current causing 30°C max temperature rise.
- (3) Operating Temperature Range of -55 to +105°C.
- (4) Leads tinned to within 1/16 of an inch above Mounting Plane.
- (5) Lead Length of 0.50 inches



### Electro-Mechanical Characteristics

| Part Number          | L (u H)<br>±15%<br>@ 1KHz | L(u H)<br>±15%<br>@ I-rated | DC<br>Resistance<br>Ω MAX | I-rated<br>DC Current<br>Amps (2) | Dimension<br>A (inches)<br>Nominal | Dimension<br>B (inches)<br>Nominal |
|----------------------|---------------------------|-----------------------------|---------------------------|-----------------------------------|------------------------------------|------------------------------------|
| HCTI-10-20.0         | 10                        | 6.7                         | 0.005                     | 20.0                              | 0.56                               | 0.066                              |
| HCTI-12-19.1         | 12                        | 7.8                         | 0.005                     | 19.1                              | 0.56                               | 0.066                              |
| HCTI-15-18.0         | 15                        | 9.5                         | 0.006                     | 18.0                              | 0.56                               | 0.066                              |
| HCTI-18-17.2         | 18                        | 11.1                        | 0.006                     | 17.2                              | 0.56                               | 0.066                              |
| <b>HCTI-22-16.4</b>  | <b>22</b>                 | <b>13.2</b>                 | <b>0.007</b>              | <b>16.4</b>                       | <b>0.56</b>                        | <b>0.066</b>                       |
| HCTI-27-15.6         | 27                        | 15.7                        | 0.008                     | 15.6                              | 0.56                               | 0.066                              |
| HCTI-33-11.7         | 33                        | 21.3                        | 0.013                     | 11.7                              | 0.53                               | 0.053                              |
| HCTI-39-11.2         | 39                        | 24.7                        | 0.014                     | 11.2                              | 0.53                               | 0.053                              |
| HCTI-47-10.7         | 47                        | 29.0                        | 0.016                     | 10.7                              | 0.53                               | 0.053                              |
| HCTI-56-10.2         | 56                        | 33.7                        | 0.017                     | 10.2                              | 0.53                               | 0.053                              |
| HCTI-68-7.7          | 68                        | 45.2                        | 0.030                     | 7.70                              | 0.52                               | 0.042                              |
| HCTI-100-7.0         | 100                       | 63.1                        | 0.037                     | 7.00                              | 0.52                               | 0.042                              |
| <b>HCTI-120-6.7</b>  | <b>120</b>                | <b>73.9</b>                 | <b>0.040</b>              | <b>6.70</b>                       | <b>0.52</b>                        | <b>0.042</b>                       |
| HCTI-150-5.0         | 150                       | 101.4                       | 0.071                     | 5.00                              | 0.51                               | 0.034                              |
| HCTI-180-4.8         | 180                       | 118.9                       | 0.078                     | 4.80                              | 0.51                               | 0.034                              |
| HCTI-220-5.8         | 220                       | 123.8                       | 0.054                     | 5.80                              | 0.56                               | 0.042                              |
| HCTI-270-5.5         | 270                       | 147.2                       | 0.060                     | 5.50                              | 0.56                               | 0.042                              |
| HCTI-330-5.2         | 330                       | 174.1                       | 0.067                     | 5.20                              | 0.56                               | 0.042                              |
| HCTI-390-5.0         | 390                       | 200.2                       | 0.072                     | 5.00                              | 0.56                               | 0.042                              |
| HCTI-470-3.8         | 470                       | 271.4                       | 0.130                     | 3.80                              | 0.54                               | 0.034                              |
| HCTI-560-3.6         | 560                       | 314.8                       | 0.140                     | 3.60                              | 0.54                               | 0.034                              |
| HCTI-680-3.4         | 680                       | 370.7                       | 0.150                     | 3.40                              | 0.54                               | 0.034                              |
| HCTI-820-2.6         | 820                       | 500.9                       | 0.270                     | 2.60                              | 0.53                               | 0.027                              |
| <b>HCTI-1000-2.4</b> | <b>1000</b>               | <b>593.6</b>                | <b>0.300</b>              | <b>2.40</b>                       | <b>0.53</b>                        | <b>0.027</b>                       |

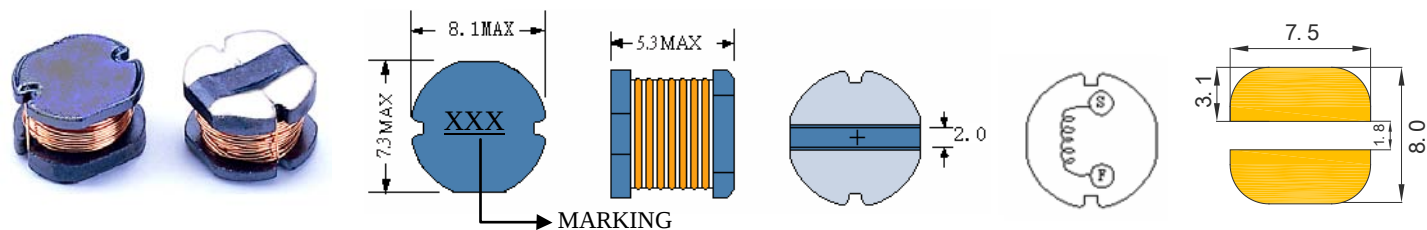
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## SMD POWER INDUCTORS



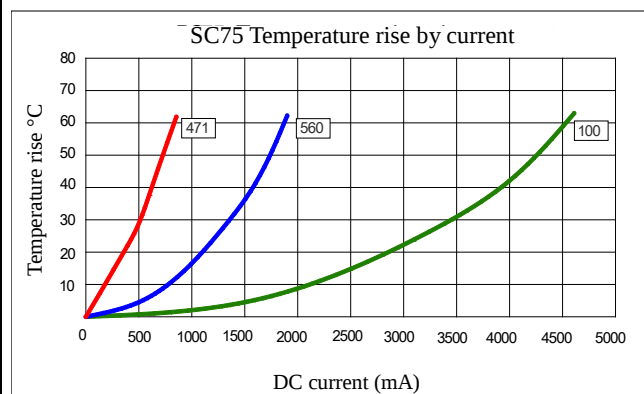
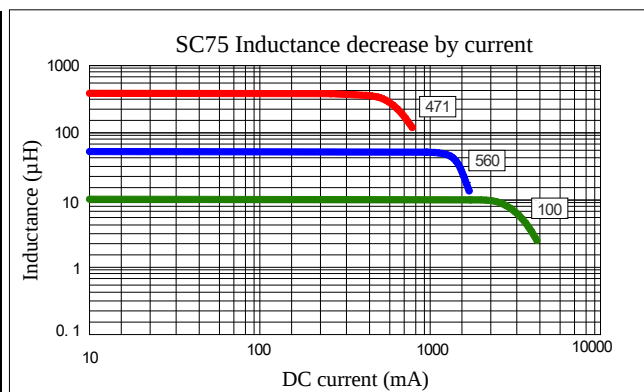
### • Features

1. Open frame construction.

## ELECTRICAL CHARACTERISTICS



| Part Number | Inductance<br>( $\mu$ H)<br>(1) | Test<br>Frequency | DC Resistance<br>( $\Omega$ MAX)<br>(2) | Saturation<br>Current <sup>(3)</sup><br>(A) | Temperature<br>Current <sup>(4)</sup><br>(A) |
|-------------|---------------------------------|-------------------|-----------------------------------------|---------------------------------------------|----------------------------------------------|
| SC75-100    | 10                              | 2.52MHZ           | 0.07                                    | 2.30                                        | 3.20                                         |
| SC75-120    | 12                              | 2.52MHZ           | 0.08                                    | 2.00                                        | 3.00                                         |
| SC75-150    | 15                              | 2.52MHZ           | 0.09                                    | 1.80                                        | 2.75                                         |
| SC75-180    | 18                              | 2.52MHZ           | 0.10                                    | 1.60                                        | 2.40                                         |
| SC75-220    | 22                              | 2.52MHZ           | 0.11                                    | 1.50                                        | 2.10                                         |
| SC75-270    | 27                              | 2.52MHZ           | 0.12                                    | 1.30                                        | 1.85                                         |
| SC75-330    | 33                              | 2.52MHZ           | 0.15                                    | 1.20                                        | 1.70                                         |
| SC75-390    | 39                              | 2.52MHZ           | 0.16                                    | 1.10                                        | 1.55                                         |
| SC75-470    | 47                              | 2.52MHZ           | 0.18                                    | 1.10                                        | 1.47                                         |
| SC75-560    | 56                              | 2.52MHZ           | 0.24                                    | 0.94                                        | 1.30                                         |
| SC75-680    | 68                              | 2.52MHZ           | 0.28                                    | 0.85                                        | 1.12                                         |
| SC75-820    | 82                              | 2.52MHZ           | 0.37                                    | 0.78                                        | 1.03                                         |
| SC75-101    | 100                             | 1KHZ              | 0.43                                    | 0.72                                        | 0.90                                         |
| SC75-121    | 120                             | 1KHZ              | 0.47                                    | 0.66                                        | 0.86                                         |
| SC75-151    | 150                             | 1KHZ              | 0.64                                    | 0.58                                        | 0.80                                         |
| SC75-181    | 180                             | 1KHZ              | 0.71                                    | 0.51                                        | 0.76                                         |
| SC75-221    | 220                             | 1KHZ              | 0.96                                    | 0.49                                        | 0.68                                         |
| SC75-271    | 270                             | 1KHZ              | 1.11                                    | 0.42                                        | 0.60                                         |
| SC75-331    | 330                             | 1KHZ              | 1.26                                    | 0.40                                        | 0.52                                         |
| SC75-391    | 390                             | 1KHZ              | 1.77                                    | 0.36                                        | 0.50                                         |
| SC75-471    | 470                             | 1KHZ              | 1.96                                    | 0.34                                        | 0.46                                         |
|             |                                 |                   |                                         |                                             |                                              |
|             |                                 |                   |                                         |                                             |                                              |
|             |                                 |                   |                                         |                                             |                                              |



(1). Inductance tolerance  $\pm 20\%$  tested at 0.25V, 0ADC and 25°C.

(2). DCR measured at 25°C.

(3). The DC current at which the inductance decreases by 10% from its initial value.

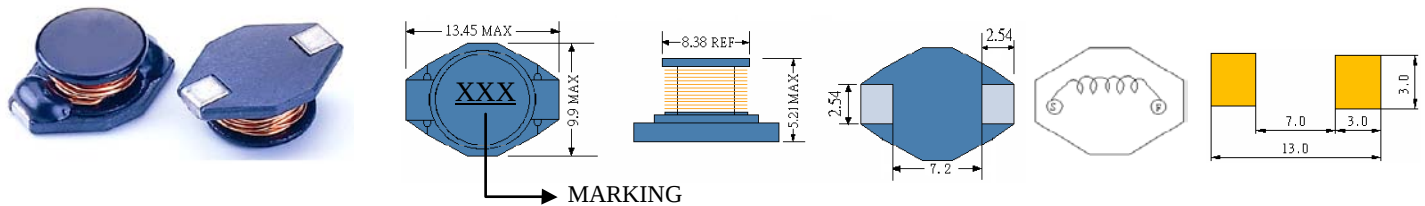
(4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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# SC3316F

## SMD POWER INDUCTORS



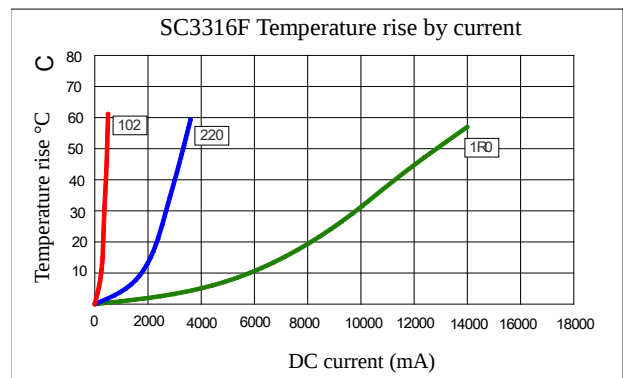
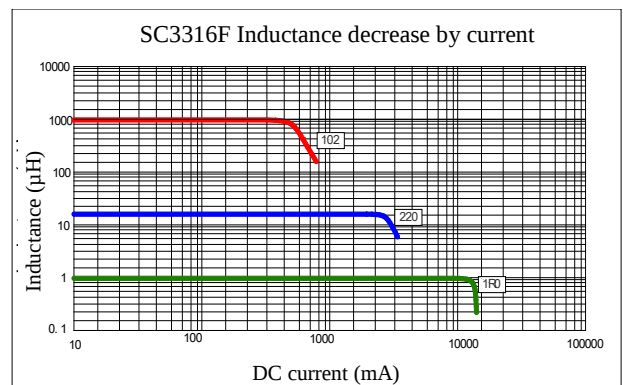
### • Features

1. Open frame construction
2. Excellent Power Density
3. Engineered to Provide High Efficiency

## ELECTRICAL CHARACTERISTICS



| Part Number | Inductance<br>(uH)<br>(1) | Test<br>Frequency | DC Resistance<br>(Ω MAX)<br>(2) | Saturation<br>Current <sup>(3)</sup><br>(A) | Temperature<br>Current <sup>(4)</sup><br>(A) |
|-------------|---------------------------|-------------------|---------------------------------|---------------------------------------------|----------------------------------------------|
| SC3316F-1R0 | 1.0                       | 100KHZ            | 9m                              | 9.0                                         | 9.80                                         |
| SC3316F-1R5 | 1.5                       | 100KHZ            | 10m                             | 8.0                                         | 9.20                                         |
| SC3316F-2R2 | 2.2                       | 100KHZ            | 13m                             | 7.0                                         | 7.00                                         |
| SC3316F 3R3 | 3.3                       | 100KHZ            | 15m                             | 6.4                                         | 6.50                                         |
| SC3316F-4R7 | 4.7                       | 100KHZ            | 18m                             | 5.4                                         | 5.60                                         |
| SC3316F-6R8 | 6.8                       | 100KHZ            | 27m                             | 4.6                                         | 4.50                                         |
| SC3316F-100 | 10                        | 100KHZ            | 38m                             | 3.8                                         | 3.90                                         |
| SC3316F-150 | 15                        | 100KHZ            | 56m                             | 3.0                                         | 3.10                                         |
| SC3316F-220 | 22                        | 100KHZ            | 85m                             | 2.6                                         | 2.70                                         |
| SC3316F-330 | 33                        | 100KHZ            | 0.10                            | 2.0                                         | 2.10                                         |
| SC3316F-470 | 47                        | 100KHZ            | 0.16                            | 1.6                                         | 1.80                                         |
| SC3316F-680 | 68                        | 100KHZ            | 0.22                            | 1.4                                         | 1.50                                         |
| SC3316F-101 | 100                       | 100KHZ            | 0.28                            | 1.2                                         | 1.30                                         |
| SC3316F-151 | 150                       | 100KHZ            | 0.40                            | 1.0                                         | 1.00                                         |
| SC3316F-221 | 220                       | 100KHZ            | 0.61                            | 0.8                                         | 0.80                                         |
| SC3316F-331 | 330                       | 100KHZ            | 1.02                            | 0.6                                         | 0.68                                         |
| SC3316F-471 | 470                       | 100KHZ            | 1.27                            | 0.5                                         | 0.60                                         |
| SC3316F-681 | 680                       | 100KHZ            | 2.20                            | 0.4                                         | 0.42                                         |
| SC3316F-102 | 1000                      | 100KHZ            | 3.00                            | 0.3                                         | 0.34                                         |



(1). Inductance tolerance for 1.0uH~3.3uH:  $\pm 30\%$ , for 4.7uH~1000uH:  $\pm 20\%$ . Tested at 0.25V, 0ADC and 25°C.

(2). DCR measured at 25°C.

(3). The DC current at which the inductance decreases by 10% from its initial value.

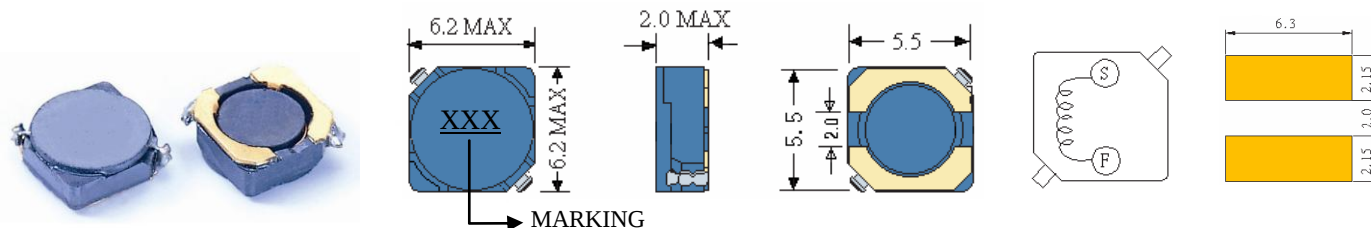
(4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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# SCRH5D18

## SMD POWER INDUCTORS



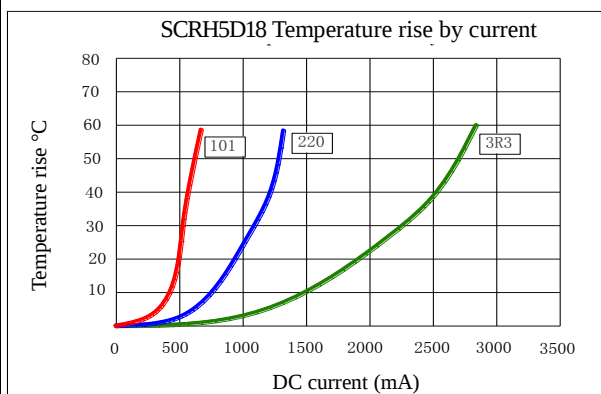
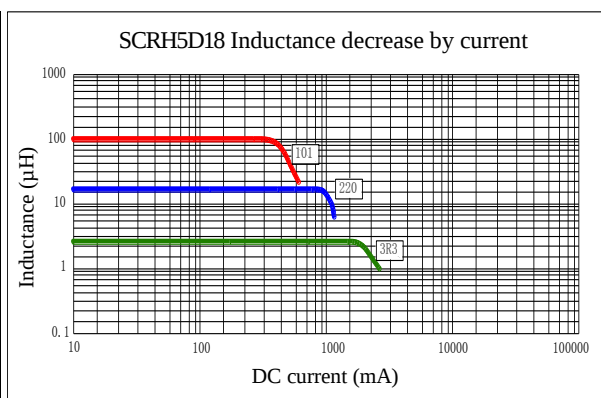
### • Features

1. Magnetically shielded construction
2. Excellent Power Density
3. Engineered to Provide High Efficiency

## ELECTRICAL CHARACTERISTICS



| Part Number         | Inductance (uH)<br>(1) | Test Frequency | DC Resistance (Ω MAX)<br>(2) | Saturation Current (A)<br>(3) | Temperature Current (A)<br>(4) |
|---------------------|------------------------|----------------|------------------------------|-------------------------------|--------------------------------|
| SCRH5D18-3R3        | 3.3                    | 10KHZ          | 50m                          | 2.15                          | 2.15                           |
| SCRH5D18-4R1        | 4.1                    | 10KHZ          | 57m                          | 1.95                          | 1.95                           |
| SCRH5D18-4R7        | 4.7                    | 10KHZ          | 64m                          | 1.75                          | 1.90                           |
| SCRH5D18-5R4        | 5.4                    | 10KHZ          | 76m                          | 1.60                          | 1.85                           |
| SCRH5D18-6R2        | 6.2                    | 10KHZ          | 96m                          | 1.40                          | 1.75                           |
| SCRH5D18-8R9        | 8.9                    | 10KHZ          | 116m                         | 1.25                          | 1.57                           |
| <b>SCRH5D18-100</b> | <b>10</b>              | <b>10KHZ</b>   | <b>124m</b>                  | <b>1.20</b>                   | <b>1.41</b>                    |
| SCRH5D18-120        | 12                     | 10KHZ          | 153m                         | 1.10                          | 1.37                           |
| SCRH5D18-150        | 15                     | 10KHZ          | 196m                         | 0.97                          | 1.34                           |
| SCRH5D18-180        | 18                     | 10KHZ          | 210m                         | 0.85                          | 1.10                           |
| <b>SCRH5D18-220</b> | <b>22</b>              | <b>10KHZ</b>   | <b>290m</b>                  | <b>0.80</b>                   | <b>1.00</b>                    |
| SCRH5D18-270        | 27                     | 10KHZ          | 330m                         | 0.75                          | 0.90                           |
| SCRH5D18-330        | 33                     | 10KHZ          | 386m                         | 0.65                          | 0.81                           |
| SCRH5D18-390        | 39                     | 10KHZ          | 520 m                        | 0.57                          | 0.77                           |
| SCRH5D18-470        | 47                     | 10KHZ          | 595m                         | 0.54                          | 0.73                           |
| SCRH5D18-560        | 56                     | 10KHZ          | 665m                         | 0.50                          | 0.65                           |
| SCRH5D18-680        | 68                     | 10KHZ          | 840m                         | 0.43                          | 0.62                           |
| SCRH5D18-820        | 82                     | 10KHZ          | 978m                         | 0.41                          | 0.55                           |
| SCRH5D18-101        | 100                    | 10KHZ          | 1.20                         | 0.36                          | 0.50                           |
|                     |                        |                |                              |                               |                                |
|                     |                        |                |                              |                               |                                |
|                     |                        |                |                              |                               |                                |



- (1). Inductance tolerance  $\pm 30\%$  tested at 0.25V, 0ADC and 25°C
- (2). DCR measured at 25°C.
- (3). The DC current at which the inductance decreases by 35% from its initial value.
- (4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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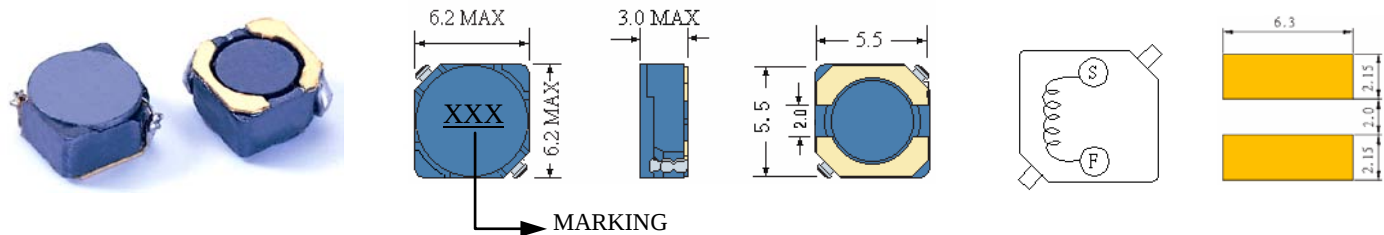
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# SCRH5D28

## SMD POWER INDUCTORS

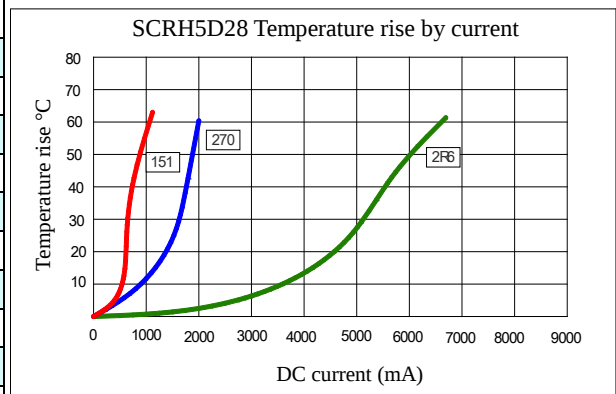
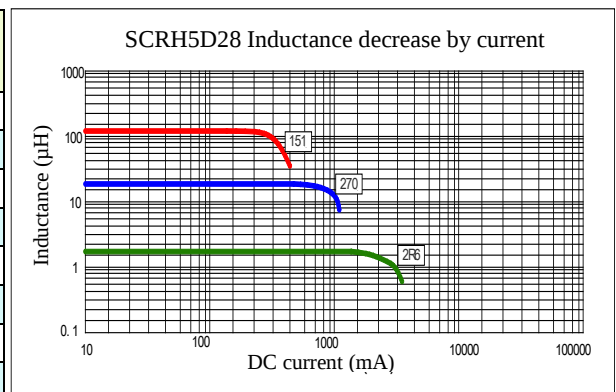


### • Features

1. Magnetically shielded construction
2. Excellent Power Density
3. Engineered to Provide High Efficiency

## ELECTRICAL CHARACTERISTICS

| Part NumSer  | Inductance (uH)<br>(1) | Test Frequency | DC Resistance (Ω MAX)<br>(2) | Saturation Current (3)<br>(A) | Temperature Current (4)<br>(A) |
|--------------|------------------------|----------------|------------------------------|-------------------------------|--------------------------------|
| SCRH5D28-2R6 | 2.6                    | 10KHZ          | 18m                          | 2.60                          | 4.90                           |
| SCRH5D28-3R0 | 3.0                    | 10KHZ          | 24m                          | 2.30                          | 4.40                           |
| SCRH5D28-4R2 | 4.2                    | 10KHZ          | 31m                          | 2.00                          | 4.00                           |
| SCRH5D28-5R3 | 5.3                    | 10KHZ          | 38m                          | 1.80                          | 3.60                           |
| SCRH5D28-6R2 | 6.2                    | 10KHZ          | 45m                          | 1.65                          | 3.24                           |
| SCRH5D28-8R2 | 8.2                    | 10KHZ          | 53m                          | 1.44                          | 2.92                           |
| SCRH5D28-100 | 10                     | 10KHZ          | 65m                          | 1.30                          | 2.62                           |
| SCRH5D28-120 | 12                     | 10KHZ          | 76m                          | 1.15                          | 2.35                           |
| SCRH5D28-150 | 15                     | 10KHZ          | 103m                         | 1.00                          | 2.11                           |
| SCRH5D28-180 | 18                     | 10KHZ          | 110m                         | 0.95                          | 1.89                           |
| SCRH5D28-220 | 22                     | 10KHZ          | 122m                         | 0.86                          | 1.70                           |
| SCRH5D28-270 | 27                     | 10KHZ          | 175m                         | 0.79                          | 1.53                           |
| SCRH5D28-330 | 33                     | 10KHZ          | 189m                         | 0.72                          | 1.37                           |
| SCRH5D28-390 | 39                     | 10KHZ          | 212m                         | 0.65                          | 1.23                           |
| SCRH5D28-470 | 47                     | 10KHZ          | 260m                         | 0.60                          | 1.10                           |
| SCRH5D28-560 | 56                     | 10KHZ          | 305m                         | 0.55                          | 1.04                           |
| SCRH5D28-680 | 68                     | 10KHZ          | 355m                         | 0.50                          | 0.98                           |
| SCRH5D28-820 | 82                     | 10KHZ          | 463m                         | 0.45                          | 0.93                           |
| SCRH5D28-101 | 100                    | 10KHZ          | 520m                         | 0.40                          | 0.84                           |
| SCRH5D28-121 | 120                    | 10KHZ          | 850m                         | 0.31                          | 0.75                           |
| SCRH5D28-151 | 150                    | 10KHZ          | 956m                         | 0.26                          | 0.68                           |



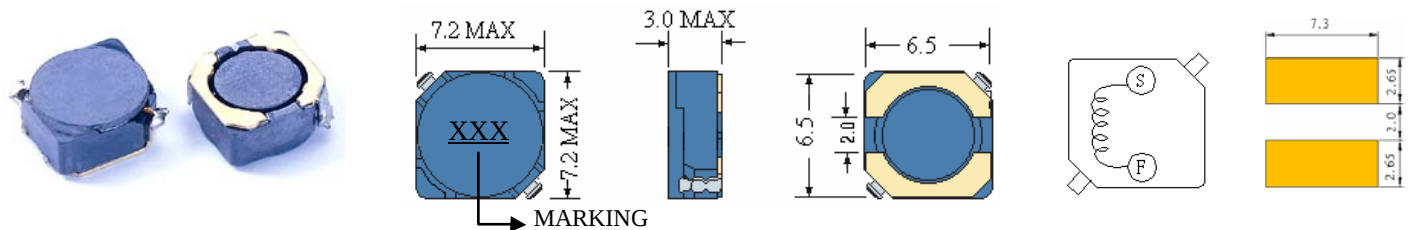
- (1). Inductance tolerance  $\pm 30\%$  tested at 0.25V, 0ADC and 25°C
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- (3). The DC current at which the inductance decreases by 35% from its initial value.
- (4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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# SCRH6D28

## SMD POWER INDUCTORS



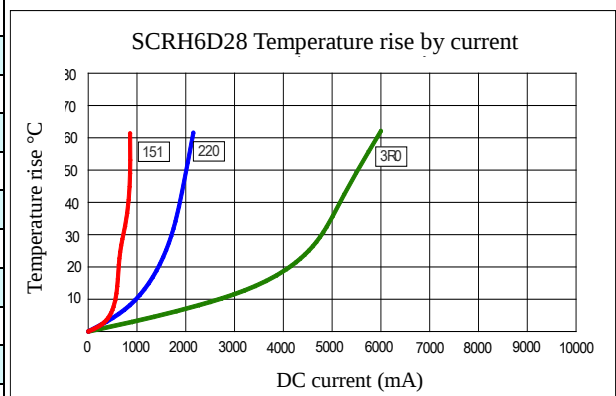
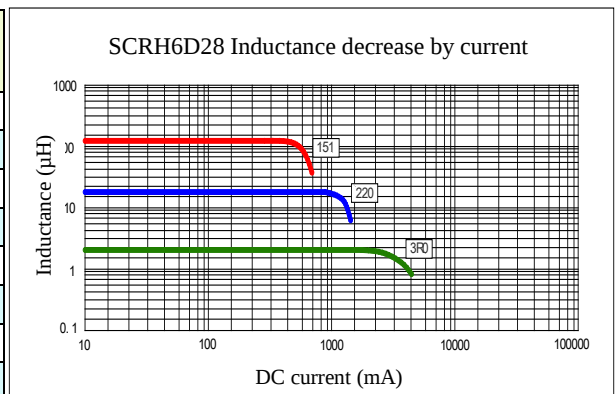
### • Features

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## CHARACTERISTICS



| Part Number  | Inductance (uH)<br>(1) | Test Frequency | DC Resistance (Ω MAX)<br>(2) | Saturation Current (3)<br>(A) | Temperature Current (4)<br>(A) |
|--------------|------------------------|----------------|------------------------------|-------------------------------|--------------------------------|
| SCRH6D28-3R0 | 3.0                    | 10KHZ          | 24m                          | 3.00                          | 4.70                           |
| SCRH6D28-3R9 | 3.9                    | 10KHZ          | 27m                          | 2.60                          | 4.50                           |
| SCRH6D28-5R0 | 5.0                    | 10KHZ          | 31m                          | 2.40                          | 4.00                           |
| SCRH6D28-6R0 | 6.0                    | 10KHZ          | 35m                          | 2.25                          | 3.60                           |
| SCRH6D28-7R3 | 7.3                    | 10KHZ          | 54m                          | 2.10                          | 3.23                           |
| SCRH6D28-8R6 | 8.6                    | 10KHZ          | 58m                          | 1.85                          | 2.90                           |
| SCRH6D28-100 | 10                     | 10KHZ          | 65m                          | 1.70                          | 2.60                           |
| SCRH6D28-120 | 12                     | 10KHZ          | 70m                          | 1.55                          | 2.34                           |
| SCRH6D28-150 | 15                     | 10KHZ          | 84m                          | 1.40                          | 2.10                           |
| SCRH6D28-180 | 18                     | 10KHZ          | 95m                          | 1.32                          | 1.89                           |
| SCRH6D28-220 | 22                     | 10KHZ          | 128m                         | 1.20                          | 1.70                           |
| SCRH6D28-270 | 27                     | 10KHZ          | 142m                         | 1.05                          | 1.62                           |
| SCRH6D28-330 | 33                     | 10KHZ          | 165m                         | 0.97                          | 1.37                           |
| SCRH6D28-390 | 39                     | 10KHZ          | 210m                         | 0.86                          | 1.23                           |
| SCRH6D28-470 | 47                     | 10KHZ          | 238m                         | 0.80                          | 1.17                           |
| SCRH6D28-560 | 56                     | 10KHZ          | 277m                         | 0.73                          | 1.11                           |
| SCRH6D28-680 | 68                     | 10KHZ          | 304m                         | 0.65                          | 0.99                           |
| SCRH6D28-820 | 82                     | 10KHZ          | 390m                         | 0.60                          | 0.89                           |
| SCRH6D28-101 | 100                    | 10KHZ          | 535m                         | 0.54                          | 0.80                           |
| SCRH6D28-121 | 120                    | 10KHZ          | 580m                         | 0.45                          | 0.72                           |
| SCRH6D28-151 | 150                    | 10KHZ          | 615m                         | 0.42                          | 0.68                           |



- (1). Inductance tolerance  $\pm 30\%$  tested at 0.25V, 0ADC and 25°C
- (2). DCR measured at 25°C.
- (3). The DC current at which the inductance decreases by 35% from its initial value.
- (4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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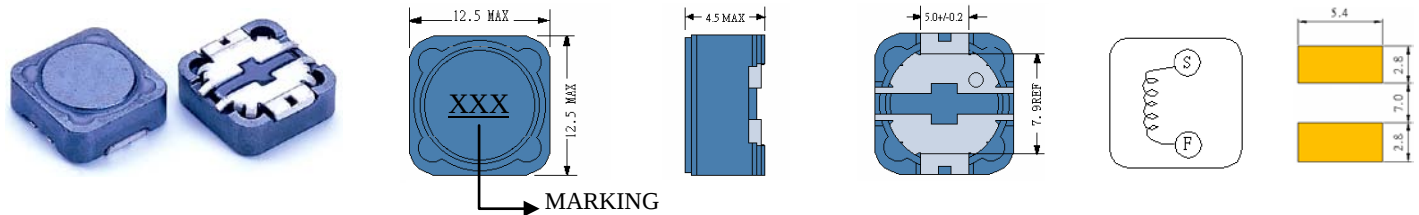
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# SCRH124

## SMD POWER INDUCTORS



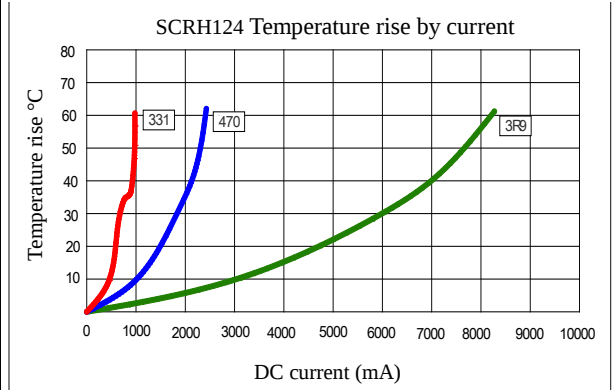
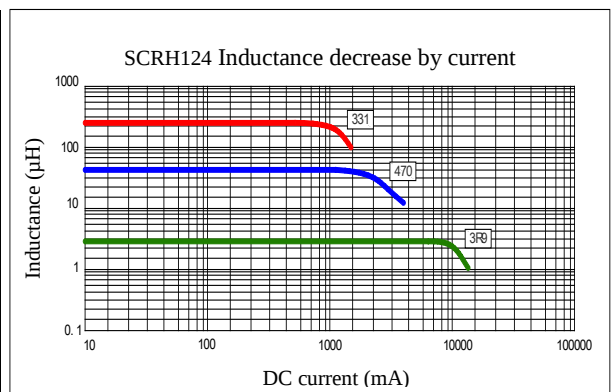
### • Features

1. Magnetically shielded construction
2. Excellent Power Density
3. Engineered to Provide High Efficiency

## CHARACTERISTICS



| Part Number | Inductance (uH)<br>(1) | Test Frequency | DC Resistance (Ω MAX)<br>(2) | Saturation Current (3)<br>(A) | Temperature Current (4)<br>(A) |
|-------------|------------------------|----------------|------------------------------|-------------------------------|--------------------------------|
| SCRH124-3R9 | 3.9                    | 100KHZ         | 15m                          | 6.5                           | 6.0                            |
| SCRH124-4R7 | 4.7                    | 100KHZ         | 18m                          | 5.7                           | 5.4                            |
| SCRH124-6R8 | 6.8                    | 100KHZ         | 23m                          | 4.9                           | 4.8                            |
| SCRH124-8R2 | 8.2                    | 100KHZ         | 26m                          | 4.6                           | 4.4                            |
| SCRH124-100 | 10                     | 100KHZ         | 28m                          | 4.5                           | 4.1                            |
| SCRH124-120 | 12                     | 100KHZ         | 38m                          | 4.0                           | 3.9                            |
| SCRH124-150 | 15                     | 100KHZ         | 50m                          | 3.2                           | 3.5                            |
| SCRH124-180 | 18                     | 100KHZ         | 57m                          | 3.1                           | 3.1                            |
| SCRH124-220 | 22                     | 100KHZ         | 66m                          | 2.9                           | 3.0                            |
| SCRH124-270 | 27                     | 100KHZ         | 80m                          | 2.8                           | 2.7                            |
| SCRH124-330 | 33                     | 100KHZ         | 97m                          | 2.7                           | 2.43                           |
| SCRH124-390 | 39                     | 100KHZ         | 132m                         | 2.1                           | 2.07                           |
| SCRH124-470 | 47                     | 100KHZ         | 160m                         | 1.9                           | 1.87                           |
| SCRH124-560 | 56                     | 100KHZ         | 190m                         | 1.8                           | 1.77                           |
| SCRH124-680 | 68                     | 100KHZ         | 220m                         | 1.5                           | 1.60                           |
| SCRH124-820 | 82                     | 100KHZ         | 260m                         | 1.3                           | 1.44                           |
| SCRH124-101 | 100                    | 100KHZ         | 308m                         | 1.2                           | 1.36                           |
| SCRH124-121 | 120                    | 100KHZ         | 380m                         | 1.1                           | 1.23                           |
| SCRH124-151 | 150                    | 100KHZ         | 530m                         | 0.95                          | 1.16                           |
| SCRH124-181 | 180                    | 100KHZ         | 620m                         | 0.85                          | 1.05                           |
| SCRH124-221 | 220                    | 100KHZ         | 700m                         | 0.80                          | 0.95                           |
| SCRH124-271 | 270                    | 100KHZ         | 870m                         | 0.60                          | 0.86                           |
| SCRH124-331 | 330                    | 100KHZ         | 990m                         | 0.50                          | 0.78                           |
|             |                        |                |                              |                               |                                |
|             |                        |                |                              |                               |                                |
|             |                        |                |                              |                               |                                |



(1). Inductance tolerance for 3.9uH~8.2uH:  $\pm 30\%$ , for 10uH~330uH:  $\pm 20\%$ . Tested at 0.25V, 0ADC and 25°C

(2). DCR measured at 25°C.

(3). The DC current at which the inductance decreases by 25% from its initial value.

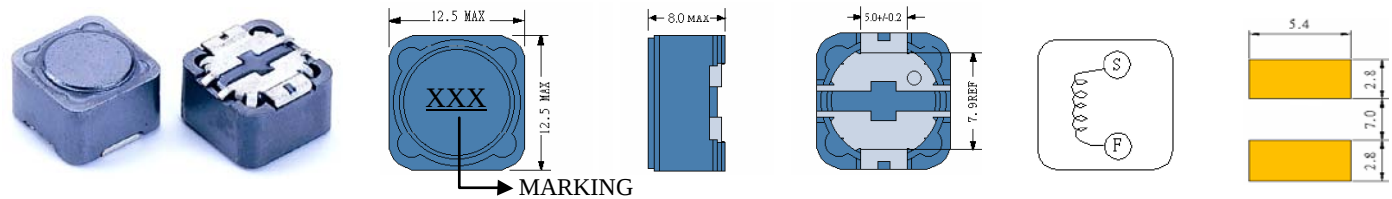
(4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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# SCRH127

## SMD POWER INDUCTORS



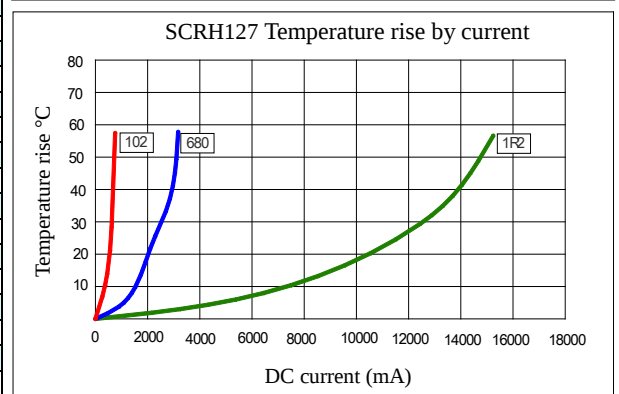
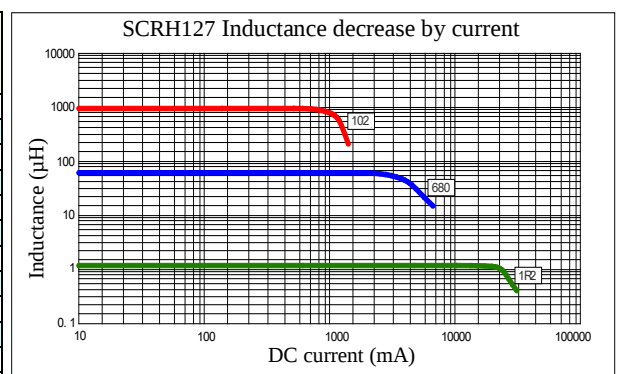
### • Features

1. Magnetically shielded construction
2. Excellent Power Density
3. Engineered to Provide High Efficiency

## ELECTRICAL CHARACTERISTICS



| Part Number | Inductance<br>(uH)<br>(1) | Test<br>Frequency | DC Resistance<br>(Ω MAX)<br>(2) | Saturation<br>Current <sup>(3)</sup><br>(A) | Temperature<br>Current <sup>(4)</sup><br>(A) |
|-------------|---------------------------|-------------------|---------------------------------|---------------------------------------------|----------------------------------------------|
| SCRH127-1R2 | 1.2                       | 100KHZ            | 7.0m                            | 9.80                                        | 12.0                                         |
| SCRH127-2R4 | 2.4                       | 100KHZ            | 11.5m                           | 8.00                                        | 10.8                                         |
| SCRH127-3R5 | 3.5                       | 100KHZ            | 13.5m                           | 7.50                                        | 9.20                                         |
| SCRH127-4R7 | 4.7                       | 100KHZ            | 15.8m                           | 6.80                                        | 7.80                                         |
| SCRH127-6R1 | 6.1                       | 100KHZ            | 17.6m                           | 6.60                                        | 5.80                                         |
| SCRH127-7R6 | 7.6                       | 100KHZ            | 20.0m                           | 5.90                                        | 6.30                                         |
| SCRH127-100 | 10                        | 1KHZ              | 21.6m                           | 5.40                                        | 5.67                                         |
| SCRH127-120 | 12                        | 1KHZ              | 24.3m                           | 4.90                                        | 5.10                                         |
| SCRH127-150 | 15                        | 1KHZ              | 27.0m                           | 4.50                                        | 4.85                                         |
| SCRH127-180 | 18                        | 1KHZ              | 39.2m                           | 3.90                                        | 4.36                                         |
| SCRH127-220 | 22                        | 1KHZ              | 43.2m                           | 3.60                                        | 4.00                                         |
| SCRH127-270 | 27                        | 1KHZ              | 45.9m                           | 3.40                                        | 3.60                                         |
| SCRH127-330 | 33                        | 1KHZ              | 64.8m                           | 3.00                                        | 3.24                                         |
| SCRH127-390 | 39                        | 1KHZ              | 72.9m                           | 2.75                                        | 2.91                                         |
| SCRH127-470 | 47                        | 1KHZ              | 0.10                            | 2.50                                        | 2.62                                         |
| SCRH127-560 | 56                        | 1KHZ              | 0.11                            | 2.35                                        | 2.35                                         |
| SCRH127-680 | 68                        | 1KHZ              | 0.14                            | 2.10                                        | 2.23                                         |
| SCRH127-820 | 82                        | 1KHZ              | 0.16                            | 1.95                                        | 2.00                                         |
| SCRH127-101 | 100                       | 1KHZ              | 0.22                            | 1.70                                        | 1.80                                         |
| SCRH127-121 | 120                       | 1KHZ              | 0.25                            | 1.60                                        | 1.70                                         |
| SCRH127-151 | 150                       | 1KHZ              | 0.28                            | 1.42                                        | 1.60                                         |
| SCRH127-181 | 180                       | 1KHZ              | 0.35                            | 1.30                                        | 1.52                                         |
| SCRH127-221 | 220                       | 1KHZ              | 0.39                            | 1.16                                        | 1.44                                         |
| SCRH127-271 | 270                       | 1KHZ              | 0.56                            | 1.06                                        | 1.36                                         |
| SCRH127-331 | 330                       | 1KHZ              | 0.64                            | 0.95                                        | 1.22                                         |
| SCRH127-391 | 390                       | 1KHZ              | 0.70                            | 0.88                                        | 1.03                                         |
| SCRH127-471 | 470                       | 1KHZ              | 0.98                            | 0.79                                        | 0.92                                         |
| SCRH127-561 | 560                       | 1KHZ              | 1.07                            | 0.73                                        | 0.83                                         |
| SCRH127-681 | 680                       | 1KHZ              | 1.46                            | 0.67                                        | 0.75                                         |
| SCRH127-821 | 820                       | 1KHZ              | 1.64                            | 0.60                                        | 0.68                                         |
| SCRH127-102 | 1000                      | 1KHZ              | 1.82                            | 0.55                                        | 0.61                                         |



(1). Inductance tolerance for 1.29uH~7.6uH:  $\pm 30\%$ , for 10uH~1000uH:  $\pm 20\%$ . Tested at 0.25V, 0ADC and 25°C

(2). DCR measured at 25°C.

(3). The DC current at which the inductance decreases by 25% from its initial value.

(4). The DC current that results in a 40°C temperature rise from 25°C ambient.

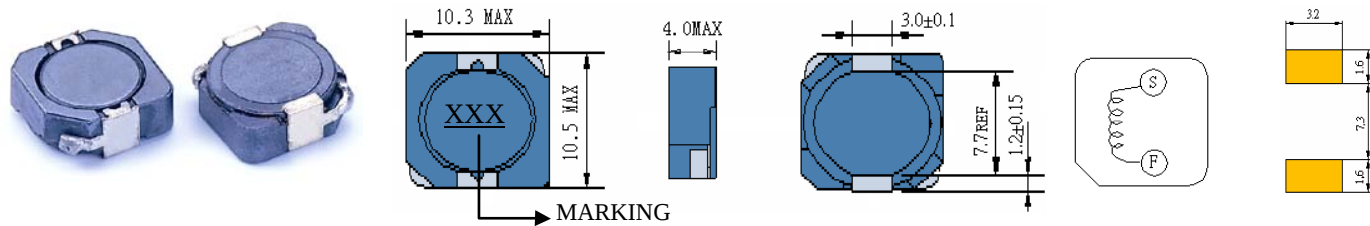
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# SCRH104R

## SMD POWER INDUCTORS

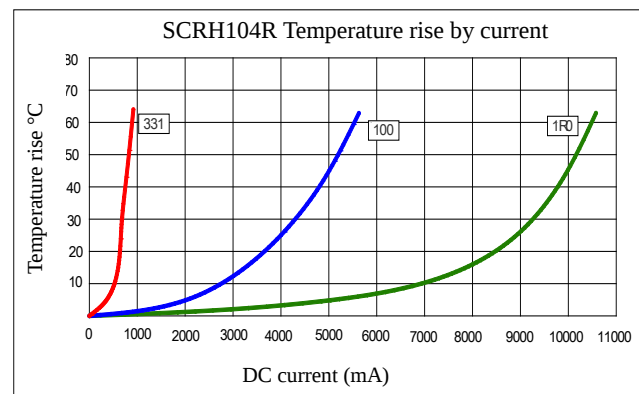
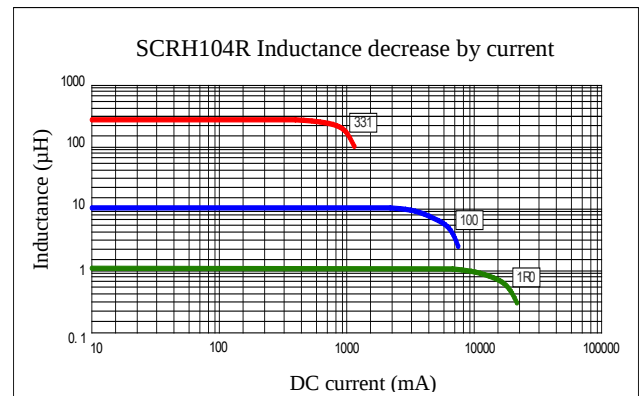


### • Features

1. Magnetically shielded construction
2. Excellent Power Density
3. Engineered to Provide High Efficiency

## ELECTRICAL CHARACTERISTICS

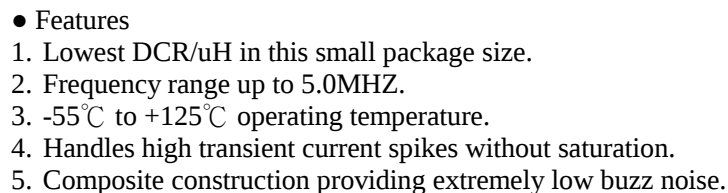
| Part Number         | Inductance (uH)<br>(1) | Test Frequency | DC Resistance (Ω MAX)<br>(2) | Saturation Current <sup>(3)</sup><br>(A) | Temperature Current <sup>(4)</sup><br>(A) |
|---------------------|------------------------|----------------|------------------------------|------------------------------------------|-------------------------------------------|
| SCRH104R-1R0        | 1.0                    | 100KHZ         | 8.1m                         | 10.1                                     | 9.00                                      |
| SCRH104R-1R5        | 1.5                    | 100KHZ         | 8.1m                         | 10.0                                     | 10.0                                      |
| SCRH104R-2R5        | 2.5                    | 100KHZ         | 10m                          | 7.50                                     | 7.50                                      |
| SCRH104R-3R3        | 3.3                    | 100KHZ         | 15m                          | 7.00                                     | 6.70                                      |
| SCRH104R-3R8        | 3.8                    | 100KHZ         | 15m                          | 6.00                                     | 6.00                                      |
| SCRH104R-4R7        | 4.7                    | 100KHZ         | 22m                          | 5.80                                     | 5.40                                      |
| SCRH104R-5R2        | 5.2                    | 100KHZ         | 22m                          | 5.70                                     | 5.10                                      |
| SCRH104R-5R8        | 5.8                    | 100KHZ         | 22m                          | 5.50                                     | 4.84                                      |
| SCRH104R-7R0        | 7.0                    | 100KHZ         | 27m                          | 4.80                                     | 4.59                                      |
| SCRH104R-100        | 10                     | 100KHZ         | 35m                          | 4.40                                     | 4.36                                      |
| SCRH104R-150        | 15                     | 100KHZ         | 50m                          | 3.60                                     | 3.10                                      |
| SCRH104R-220        | 22                     | 100KHZ         | 73m                          | 2.90                                     | 2.70                                      |
| SCRH104R-330        | 33                     | 100KHZ         | 117m                         | 2.30                                     | 2.10                                      |
| SCRH104R-470        | 47                     | 100KHZ         | 128m                         | 2.10                                     | 1.90                                      |
| SCRH104R-680        | 68                     | 100KHZ         | 265m                         | 1.50                                     | 1.42                                      |
| <b>SCRH104R-101</b> | <b>100</b>             | <b>100KHZ</b>  | <b>304m</b>                  | <b>1.35</b>                              | <b>1.25</b>                               |
| SCRH104R-151        | 150                    | 100KHZ         | 506m                         | 1.15                                     | 0.93                                      |
| SCRH104R-221        | 220                    | 100KHZ         | 756 m                        | 0.92                                     | 0.70                                      |
| SCRH104R-331        | 330                    | 100KHZ         | 1.09                         | 0.70                                     | 0.63                                      |



- (1). Inductance tolerance  $\pm 30\%$  tested at 0.25V, 0ADC and 25°C
- (2). DCR measured at 25°C.
- (3). The DC current at which the inductance decreases by 35% from its initial value.
- (4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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**SCIHP1367 Inductance decrease by current**

This graph plots Inductance (μH) on a logarithmic y-axis (1.0 to 100) against DC current (mA) on a logarithmic x-axis (0 to 100,000). Three curves are shown: 100 (red), 5R6 (blue), and 2R2 (green). Inductance remains relatively constant at low currents and decreases at higher currents.

| DC current (mA) | 100 Inductance (μH) | 5R6 Inductance (μH) | 2R2 Inductance (μH) |
|-----------------|---------------------|---------------------|---------------------|
| 100             | ~11                 | ~4.5                | ~1.8                |
| 1000            | ~10                 | ~4.5                | ~1.8                |
| 10000           | ~8                  | ~4.0                | ~1.7                |
| 20000           | ~5                  | ~3.5                | ~1.5                |

**SCIHP1367 Temperature rise by current**

This graph plots Temperature rise (°C) on a linear y-axis (0 to 80) against DC current (mA) on a linear x-axis (0 to 30,000). Three curves are shown: 100 (red), 5R6 (blue), and 2R2 (green). Temperature rise increases with current, with the 100 model showing the steepest increase.

| DC current (mA) | 100 Temperature rise (°C) | 5R6 Temperature rise (°C) | 2R2 Temperature rise (°C) |
|-----------------|---------------------------|---------------------------|---------------------------|
| 0               | ~3                        | ~3                        | ~3                        |
| 5000            | ~10                       | ~5                        | ~3                        |
| 10000           | ~35                       | ~20                       | ~8                        |
| 15000           | ~65                       | ~60                       | ~20                       |
| 25000           | -                         | -                         | ~60                       |

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