



● FEATURE

1. Shielded construction
2. High Saturation
3. Low Profile
4. Frequency range up to 5MHz
5. Low DCR(uH)
6. Low Buzz Noise



● APPLICAION

1. Notebook, Laptop, server application
2. High current power supplier
3. Graphic Card, VGA Module
4. Thin type on-board power supply module for exchanger
5. DC-DC converter for VRM application
6. Inductor for general purpose

● ORDERING INFORMATION

WSI07018

PN

-R33

Inductance

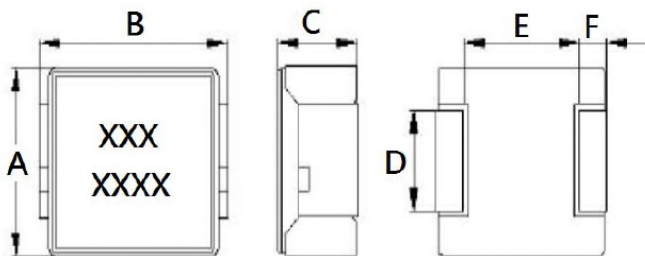
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M:±20%

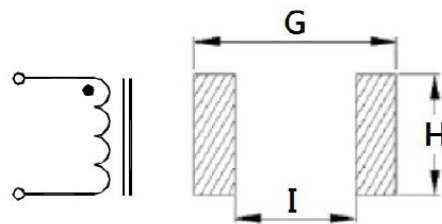
N:±30%

● SHAPE AND DIMENSION

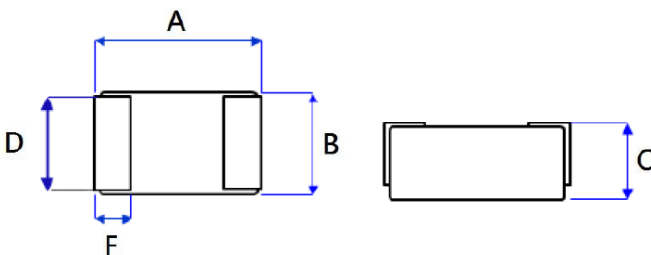
WSIxXXXX



● SCHEMATICS AND LAND PATTERNS(mm)



WSI252012B





● SPECIFICATION (Marking=Inductance Value)

Dimension in mm

| TYPE       | A     | B     | C    | D     | E    | F    | G     | H     | I     |
|------------|-------|-------|------|-------|------|------|-------|-------|-------|
| WSI252012B | 2.50  | 2.00  | 1.20 | 1.84  | -    | 0.60 | 2.90  | 2.10  | 1.20  |
| WSI04012   | 4.30  | 4.70  | 1.20 | 2.00  | 2.80 | 0.76 | 4.95  | 2.35  | 1.65  |
| WSI04020   | 4.30  | 4.70  | 2.00 | 2.00  | 2.80 | 0.76 | 4.95  | 2.35  | 1.65  |
| WSI05012   | 5.40  | 6.00  | 1.20 | 2.50  | 3.00 | 1.10 | 5.99  | 1.80  | 2.16  |
| WSI05020   | 5.40  | 6.00  | 2.00 | 2.50  | 3.00 | 1.10 | 5.99  | 1.80  | 2.16  |
| WSI05030   | 5.40  | 6.00  | 3.00 | 2.50  | 3.00 | 1.10 | 5.99  | 1.80  | 2.16  |
| WSI07012   | 6.90  | 7.30  | 1.20 | 2.50  | 3.70 | 1.80 | 7.40  | 3.45  | 3.70  |
| WSI07015   | 6.90  | 7.30  | 1.50 | 3.00  | -    | 1.80 | 8.00  | 3.45  | 3.70  |
| WSI07018   | 6.90  | 7.60  | 1.80 | 3.20  | 4.20 | 1.40 | 7.40  | 3.45  | 3.70  |
| WSI07024   | 6.90  | 7.60  | 2.40 | 3.20  | 4.20 | 1.40 | 7.40  | 3.45  | 3.70  |
| WSI07030   | 6.90  | 7.60  | 3.00 | 3.00  | 4.20 | 1.50 | 8.40  | 3.50  | 3.70  |
| WSI07035   | 6.90  | 7.60  | 3.50 | 3.20  | 4.20 | 1.40 | 7.40  | 3.45  | 3.70  |
| WSI07050   | 6.90  | 7.60  | 5.00 | 3.20  | 4.20 | 1.40 | 7.40  | 3.45  | 3.70  |
| WSI10040   | 10.30 | 11.50 | 4.00 | 4.30  | 6.30 | 2.40 | 12.60 | 4.60  | 5.00  |
| WSI13038   | 12.90 | 14.00 | 3.80 | 4.90  | 8.40 | 2.90 | 13.80 | 5.15  | 7.60  |
| WSI13050   | 12.90 | 14.00 | 5.00 | 4.90  | 8.40 | 2.90 | 13.80 | 5.15  | 7.60  |
| WSI13067   | 12.90 | 14.00 | 6.70 | 4.90  | 8.40 | 2.90 | 13.80 | 5.15  | 7.60  |
| WSI17070HC | 17.30 | 18.50 | 7.00 | 12.00 | -    | 3.00 | 18.50 | 12.50 | 11.70 |

Note1. Measurement ambient temperature of L, DCR and IDC : at 25°C

Note2. Isat: DC current at which the inductance drops 20%(typ) from its value without current

Note3. Irms: Average current for 40°C temperature rise from 25°C ambient(typical)

Note4. Inductance tolerance: M: ±20%; N: ±30%



●ELECTRICAL CHARACTERISTICS

| PART NUMBER      | L<br>(uH) | RDC<br>(mΩ)Max | Isat<br>(A) | Irms<br>(A) |
|------------------|-----------|----------------|-------------|-------------|
| WSI252012B-1R0MA | 1.0±20%   | 53             | 3.4         | 3.1         |

Note: Measurement frequency of Inductance value : at 1MHz, 1.0V

| PART NUMBER   | L<br>(uH) | RDC<br>(mΩ) Typical | RDC<br>(mΩ)Max | Isat<br>(A) | Irms<br>(A) |
|---------------|-----------|---------------------|----------------|-------------|-------------|
| WSI04012-R10M | 0.10±20%  | 4.3                 | 5.5            | 25          | 11.5        |
| WSI04012-R22M | 0.22±20%  | 6.6                 | 8.0            | 20          | 8.5         |
| WSI04012-R47M | 0.47±20%  | 20                  | 18             | 6.5         | 6.0         |
| WSI04012-1R0M | 1.0±20%   | 41                  | 55.5           | 4.5         | 4           |
| WSI04012-1R5M | 1.5±20%   | 55                  | 63             | 4           | 3           |
| WSI04012-2R2M | 2.2±20%   | 69                  | 80             | 3.5         | 2.8         |
| WSI04012-3R3M | 3.3±20%   | 84                  | 97             | 3           | 2.3         |
| WSI04012-4R7M | 4.7±20%   | 128                 | 145            | 2.5         | 2.0         |
| WSI04012-5R6M | 5.6±20%   | 180                 | 208            | 2.3         | 1.7         |
| WSI04012-6R8M | 6.8±20%   | 300                 | 360            | 1.7         | 1.5         |
| WSI04012-8R2M | 8.2±20%   | 313                 | 376            | 1.6         | 1.4         |
| WSI04012-100M | 10±20%    | 410                 | 463            | 1.4         | 1.3         |

Note: Measurement frequency of Inductance value : at 100kHz

| PART NUMBER   | L<br>(uH) | RDC<br>(mΩ) Typical | RDC<br>(mΩ)Max | Isat<br>(A) | Irms<br>(A) |
|---------------|-----------|---------------------|----------------|-------------|-------------|
| WSI04020-R10N | 0.10±30%  | 3.2                 | 4.0            | 35          | 12          |
| WSI04020-R22M | 0.22±20%  | 6.6                 | 7.3            | 24          | 11          |
| WSI04020-R33M | 0.33±20%  | 7.8                 | 8.6            | 18          | 10          |
| WSI04020-R47M | 0.47±20%  | 11.2                | 14             | 12          | 8           |
| WSI04020-R68M | 0.68±20%  | 16                  | 19             | 10          | 7           |
| WSI04020-1R0M | 1.0±20%   | 22                  | 27             | 8.5         | 5           |
| WSI04020-1R2M | 1.2±20%   | 25                  | 30             | 7.8         | 4.8         |
| WSI04020-1R5M | 1.5±20%   | 34.8                | 42             | 7           | 4.5         |
| WSI04020-2R2M | 2.2±20%   | 51                  | 61             | 6           | 4           |
| WSI04020-3R3M | 3.3±20%   | 69                  | 76             | 4           | 3.5         |
| WSI04020-4R7M | 4.7±20%   | 95                  | 105            | 3.5         | 2.6         |
| WSI04020-5R6M | 5.6±20%   | 112                 | 125            | 3           | 2.2         |
| WSI04020-6R8M | 6.8±20%   | 150                 | 172            | 2.8         | 2.1         |
| WSI04020-100M | 10±20%    | 215                 | 243            | 2.3         | 1.8         |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI05012-R10N      | 0.10±30%          | 4.3                         | 5.2                    | 14.5                | 14                  |
| WSI05012-R22N      | 0.22±30%          | 5.5                         | 6.7                    | 14                  | 10.7                |
| WSI05012-R33M      | 0.33±20%          | 7.8                         | 9.4                    | 13.5                | 8.5                 |
| WSI05012-R47M      | 0.47±20%          | 13.6                        | 15.8                   | 11                  | 7                   |
| WSI05012-R68M      | 0.68±20%          | 21.5                        | 24.5                   | 9                   | 6                   |
| WSI05012-1R0M      | 1.0±20%           | 26                          | 30                     | 6                   | 5                   |
| WSI05012-1R2M      | 1.2±20%           | 33                          | 40                     | 5.5                 | 4.5                 |
| WSI05012-1R5M      | 1.5±20%           | 38                          | 44                     | 5                   | 4                   |
| WSI05012-2R2M      | 2.2±20%           | 65                          | 75                     | 4                   | 3.5                 |
| WSI05012-3R3M      | 3.3±20%           | 75                          | 86                     | 3.8                 | 3                   |
| WSI05012-4R7M      | 4.7±20%           | 100                         | 115                    | 3.2                 | 2.5                 |
| WSI05012-5R6M      | 5.6±20%           | 175                         | 201                    | 3.2                 | 2.4                 |
| WSI05012-6R8M      | 6.8±20%           | 193                         | 222                    | 3                   | 2                   |
| WSI05012-8R2M      | 8.2±20%           | 327                         | 378                    | 2.8                 | 1.7                 |
| WSI005012-100M     | 10±20%            | 335                         | 385                    | 1.8                 | 1.5                 |

Note: Measurement frequency of Inductance value : at 100kHz

| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI05020-R33T      | 0.33              | 6.3                         | 7.3                    | 21.3                | 12                  |
| WSI05020-R47T      | 0.47              | 7.3                         | 8.6                    | 18                  | 11.5                |
| WSI05020-R68T      | 0.68              | 11                          | 12.4                   | 12.8                | 10                  |
| WSI05020-1R0T      | 1.0               | 17.5                        | 20                     | 13.7                | 7                   |
| WSI05020-1R5T      | 1.5               | 26.5                        | 30.5                   | 9.8                 | 5.5                 |
| WSI05020-2R2T      | 2.2               | 42                          | 50                     | 9                   | 4.2                 |
| WSI05020-3R3T      | 3.3               | 66                          | 76                     | 7.3                 | 3.3                 |
| WSI05020-4R7T      | 4.7               | 103                         | 116                    | 5                   | 2.8                 |
| WSI05020-5R6T      | 5.6               | 112                         | 122                    | 4                   | 2.5                 |
| WSI05020-6R8T      | 6.8               | 130                         | 150                    | 3.8                 | 2.4                 |
| WSI05020-8R2T      | 8.2               | 148                         | 171                    | 3.5                 | 2.3                 |
| WSI05020-100T      | 10                | 180                         | 199                    | 3.4                 | 2.3                 |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI05030-R22M      | 0.22±20%          | 3.7                         | 4.4                    | 21                  | 15.5                |
| WSI05030-R33M      | 0.33±20%          | 4.3                         | 5.0                    | 18                  | 14                  |
| WSI05030-R47M      | 0.47±20%          | 6.4                         | 7.4                    | 16                  | 12                  |
| WSI05030-R68M      | 0.68±20%          | 10                          | 12                     | 14                  | 8.5                 |
| WSI05030-1R0M      | 1.0±20%           | 13                          | 14                     | 11                  | 7                   |
| WSI05030-1R2M      | 1.2±20%           | 14                          | 16                     | 10.5                | 6.5                 |
| WSI05030-1R5M      | 1.5±20%           | 16                          | 25                     | 10                  | 6                   |
| WSI05030-2R2M      | 2.2±20%           | 25                          | 35                     | 9                   | 5.5                 |
| WSI05030-3R3M      | 3.3±20%           | 32                          | 38                     | 8                   | 5                   |
| WSI05030-4R7M      | 4.7±20%           | 50                          | 53                     | 6                   | 4.6                 |
| WSI05030-5R6M      | 5.6±20%           | 55                          | 63                     | 4.5                 | 4.25                |
| WSI05030-6R8M      | 6.8±20%           | 68                          | 76.2                   | 4.3                 | 4                   |
| WSI05030-100M      | 10±20%            | 110                         | 128                    | 3.5                 | 2.75                |
| WSI05030-220M      | 22±20%            | 220                         | 250                    | 1.7                 | 1.9                 |

Note: Measurement frequency of Inductance value : at 100kHz

| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|------------------------|---------------------|---------------------|
| WSI07012-R47M      | 0.47±20%          | 17                     | 11                  | 8                   |
| WSI07012-R68M      | 0.68±20%          | 19                     | 8                   | 7                   |
| WSI07012-1R0M      | 1.0±20%           | 28                     | 7                   | 6                   |
| WSI07012-1R5M      | 1.5±20%           | 40.8                   | 6                   | 4.5                 |
| WSI07012-2R2M      | 2.2±20%           | 61                     | 5                   | 4                   |
| WSI07012-3R3M      | 3.3±20%           | 103                    | 3.6                 | 3.0                 |
| WSI07012-4R7M      | 4.7±20%           | 150                    | 3.2                 | 2.5                 |
| WSI07012-6R8M      | 6.8±20%           | 217                    | 2.4                 | 2.1                 |
| WSI07012-100M      | 10±20%            | 290                    | 2.2                 | 2.0                 |

Note: Measurement frequency of Inductance value : at 100kHz

| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|------------------------|---------------------|---------------------|
| WSI07015-100MA     | 10±20%            | 180                    | 3.0                 | 2.4                 |

Note: Measurement frequency of Inductance value : at 100kHz, 0.25V



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|------------------------|---------------------|---------------------|
| WSI07018-R33M      | 0.33±20%          | 7                      | 18                  | 12                  |
| WSI07018-R68M      | 0.68±20%          | 13.9                   | 15                  | 9                   |
| WSI07018-R82M      | 0.82±20%          | 15.9                   | 14                  | 8                   |
| WSI07018-1R0M      | 1.0±20%           | 18.5                   | 11.5                | 7                   |
| WSI07018-1R5M      | 1.5±20%           | 34                     | 10                  | 6                   |
| WSI07018-2R2M      | 2.2±20%           | 46                     | 8.5                 | 5                   |
| WSI07018-3R3M      | 3.3±20%           | 60.1                   | 6                   | 3.25                |
| WSI07018-4R7M      | 4.7±20%           | 78                     | 5.5                 | 3                   |
| WSI07018-6R8M      | 6.8±20%           | 136                    | 4.5                 | 2.5                 |
| WSI07018-100M      | 10±20%            | 195                    | 4                   | 2                   |

Note: Measurement frequency of Inductance value : at 100kHz

| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI07024-R10M      | 0.10±20%          | 1.5                         | 1.7                    | 50                  | 30                  |
| WSI07024-R22M      | 0.22±20%          | 2.9                         | 3.2                    | 34                  | 21                  |
| WSI07024-R33M      | 0.33±20%          | 3.7                         | 4.1                    | 22                  | 18                  |
| WSI07024-R47M      | 0.47±20%          | 6.0                         | 6.5                    | 21                  | 13.5                |
| WSI07024-R68M      | 0.68±20%          | 8.7                         | 9.4                    | 18                  | 11                  |
| WSI07024-R82M      | 0.82±20%          | 10.6                        | 11.8                   | 17                  | 10                  |
| WSI07024-1R0M      | 1.0±20%           | 13.1                        | 14.2                   | 16                  | 9                   |
| WSI07024-1R5M      | 1.5±20%           | 18.5                        | 21.2                   | 15                  | 7.5                 |
| WSI07024-2R2M      | 2.2±20%           | 28.0                        | 34.0                   | 14                  | 6.5                 |
| WSI07024-3R3M      | 3.3±20%           | 36.5                        | 51.6                   | 13                  | 5                   |
| WSI07024-4R7M      | 4.7±20%           | 45.2                        | 63.0                   | 10                  | 4.5                 |
| WSI07024-6R8M      | 6.8±20%           | 72.5                        | 95.0                   | 9                   | 3.5                 |
| WSI07024-8R2M      | 8.2±20%           | 84.2                        | 106                    | 8                   | 3                   |
| WSI07024-100M      | 10±20%            | 115.6                       | 129                    | 7                   | 2.5                 |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI07030-R10M      | 0.10±20%          | 1.5                         | 1.7                    | 60                  | 32.5                |
| WSI07030-R15M      | 0.15±20%          | 1.9                         | 2.5                    | 52                  | 26                  |
| WSI07030-R20M      | 0.20±20%          | 2.4                         | 3.0                    | 41                  | 24                  |
| WSI07030-R22M      | 0.22±20%          | 2.5                         | 2.8                    | 40                  | 23                  |
| WSI07030-R33M      | 0.33±20%          | 3.5                         | 3.9                    | 30                  | 20                  |
| WSI07030-R47M      | 0.47±20%          | 4.0                         | 4.2                    | 26                  | 17.5                |
| WSI07030-R68M      | 0.68±20%          | 5.0                         | 5.5                    | 25                  | 15.5                |
| WSI07030-R82M      | 0.82±20%          | 6.7                         | 8                      | 24                  | 13                  |
| WSI07030-1R0M      | 1.0±20%           | 9.0                         | 10                     | 22                  | 11                  |
| WSI07030-1R5M      | 1.5±20%           | 14                          | 15                     | 18                  | 9                   |
| WSI07030-2R2M      | 2.2±20%           | 18                          | 20                     | 14                  | 8                   |
| WSI07030-3R3M      | 3.3±20%           | 27                          | 30                     | 13.5                | 6                   |
| WSI07030-4R7M      | 4.7±20%           | 37                          | 40                     | 10                  | 5.5                 |
| WSI07030-6R8M      | 6.8±20%           | 54                          | 60                     | 8                   | 4.5                 |
| WSI07030-8R2M      | 8.2±20%           | 64                          | 68                     | 7.5                 | 4                   |
| WSI07030-100M      | 10±20%            | 78                          | 105                    | 7                   | 3                   |
| WSI07030-220M      | 22±20%            | 210                         | 230                    | 3                   | 2                   |
| WSI07030-330M      | 33±20%            | 340                         | 380                    | 2.5                 | 1.5                 |
| WSI07030-470M      | 47±20%            | -                           | 580                    | 2.5                 | 1.25                |
| WSI07030B-R47M     | 0.47±20%          | 3.5                         | 4.1                    | 20                  | 18                  |
| WSI07030B-R68M     | 0.68±20%          | 4.8                         | 5.3                    | 17                  | 16                  |
| WSI07030B-1R0M     | 1.0±20%           | 6.7                         | 7.4                    | 15                  | 12                  |
| WSI07030B-1R5M     | 1.5±20%           | 10.6                        | 12.1                   | 14                  | 12                  |
| WSI07030B-2R2M     | 2.2±20%           | 13.5                        | 15                     | 10                  | 9.5                 |
| WSI07030B-3R3M     | 3.3±20%           | 18                          | 22                     | 9.5                 | 8.5                 |
| WSI07030B-4R7M     | 4.7±20%           | 28                          | 33                     | 6.5                 | 6.0                 |
| WSI07030B-6R8M     | 6.8±20%           | 42.5                        | 48                     | 6.0                 | 5.5                 |
| WSI07030B-100M     | 10±20%            | 62                          | 67                     | 5.5                 | 4.8                 |
| WSI07030B-220M     | 22±20%            | 180                         | 200                    | 3.0                 | 2.3                 |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI07035-R10M      | 0.10±20%          | 1.5                         | 1.8                    | 60                  | 32.5                |
| WSI07035-R15M      | 0.15±20%          | 1.9                         | 2.6                    | 52                  | 26                  |
| WSI07035-R20M      | 0.20±20%          | 2.4                         | 3.2                    | 41                  | 24                  |
| WSI07035-R22M      | 0.22±20%          | 2.5                         | 3.9                    | 40                  | 23                  |
| WSI07035-R33M      | 0.33±20%          | 3.5                         | 4.1                    | 30                  | 20                  |
| WSI07035-R47M      | 0.47±20%          | 4.0                         | 4.4                    | 26                  | 17.5                |
| WSI07035-R68M      | 0.68±20%          | 5.0                         | 5.8                    | 25                  | 15.5                |
| WSI07035-R82M      | 0.82±20%          | 6.7                         | 8.4                    | 24                  | 13                  |
| WSI07035-1R0M      | 1.0±20%           | 9.0                         | 10.5                   | 22                  | 11                  |
| WSI07035-1R5M      | 1.5±20%           | 14                          | 15.8                   | 18                  | 9                   |
| WSI07035-2R2M      | 2.2±20%           | 18                          | 21.0                   | 14                  | 8                   |
| WSI07035-3R3M      | 3.3±20%           | 28                          | 31.5                   | 13.5                | 6                   |
| WSI07035-4R7M      | 4.7±20%           | 37                          | 42.0                   | 10                  | 5.5                 |
| WSI07035-6R8M      | 6.8±20%           | 54                          | 63.0                   | 8                   | 4.5                 |
| WSI07035-8R2M      | 8.2±20%           | 64                          | 71.4                   | 7.5                 | 4                   |
| WSI07035-100M      | 10±20%            | 102                         | 110.3                  | 7                   | 3                   |

Note: Measurement frequency of Inductance value : at 100kHz

| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI07050-R56M      | 0.56±20%          | 3.4                         | 3.6                    | 20                  | 13.5                |
| WSI07050-R68M      | 0.68±20%          | 4.2                         | 4.5                    | 18                  | 13                  |
| WSI07050-R82M      | 0.82±20%          | 4.6                         | 4.9                    | 16.5                | 12.5                |
| WSI07050-1R0M      | 1.0±20%           | 5.6                         | 6.5                    | 15                  | 12                  |
| WSI07050-1R5M      | 1.5±20%           | 8.6                         | 9.0                    | 12                  | 11.5                |
| WSI07050-2R2M      | 2.2±20%           | 13                          | 13.6                   | 10                  | 10                  |
| WSI07050-3R3M      | 3.3±20%           | 19.9                        | 20.9                   | 8                   | 8                   |
| WSI07050-4R7M      | 4.7±20%           | 28.9                        | 30.3                   | 7                   | 6.5                 |
| WSI07050-5R6M      | 5.6±20%           | 32.7                        | 34.4                   | 7                   | 6                   |
| WSI07050-6R8M      | 6.8±20%           | 42.5                        | 44.6                   | 5.5                 | 5.5                 |
| WSI07050-8R2M      | 8.2±20%           | 48.3                        | 50.7                   | 5                   | 5                   |
| WSI07050-100M      | 10±20%            | 67.9                        | 71.3                   | 4.5                 | 4.5                 |

Note: Measurement frequency of Inductance value : at 100kHz





| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI10040-R19M      | 0.19±20%          | 0.875                       | 0.95                   | 90                  | 40                  |
| WSI10040-R36M      | 0.36±20%          | 0.85                        | 1.20                   | 50                  | 32                  |
| WSI10040-R47M      | 0.47±20%          | 1.80                        | 2.00                   | 41                  | 25                  |
| WSI10040-R56M      | 0.56±20%          | 2.30                        | 2.50                   | 40                  | 22                  |
| WSI10040-R68M      | 0.68±20%          | 2.26                        | 3.00                   | 35                  | 21                  |
| WSI10040-1R0M      | 1.0±20%           | 3.90                        | 4.00                   | 36                  | 19                  |
| WSI10040-1R5M      | 1.5±20%           | 5.10                        | 6.50                   | 20                  | 16                  |
| WSI10040-2R2M      | 2.2±20%           | 7.50                        | 8.50                   | 19                  | 13                  |
| WSI10040-3R3M      | 3.3±20%           | 10.3                        | 11.5                   | 16                  | 11                  |
| WSI10040-4R7M      | 4.7±20%           | 14.5                        | 16.5                   | 14                  | 8                   |
| WSI10040-5R6M      | 5.6±20%           | 17.6                        | 23.5                   | 12                  | 8                   |
| WSI10040-6R8M      | 6.8±20%           | 21.2                        | 25.5                   | 11                  | 7.5                 |
| WSI10040-8R2M      | 8.2±20%           | 28.5                        | 31.0                   | 10                  | 7.0                 |
| WSI10040-100M      | 10±20%            | 37.5                        | 42.0                   | 8                   | 5.0                 |
| WSI10040-150M      | 15±20%            | 60.0                        | 70.0                   | 7                   | 5.0                 |
| WSI10040-220M      | 22±20%            | 85.0                        | 92.0                   | 6                   | 3.5                 |
| WSI10040-330M      | 33±20%            | 125                         | 150                    | 4                   | 3.0                 |
| WSI10040-470M      | 47±20%            | 170                         | 191                    | 3                   | 3.0                 |
| WSI10040-680M      | 68±20%            | 280                         | 340                    | 3                   | 2.5                 |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI13038-R10M      | 0.10±20%          | 0.80                        | 0.96                   | 84                  | 43                  |
| WSI13038-R15M      | 0.15±20%          | 1.0                         | 1.2                    | 75                  | 41                  |
| WSI13038-R22M      | 0.22±20%          | 1.1                         | 1.3                    | 65                  | 38.5                |
| WSI13038-R33M      | 0.33±20%          | 1.3                         | 1.5                    | 62                  | 38.5                |
| WSI13038-R47M      | 0.47±20%          | 1.6                         | 2.0                    | 55                  | 32                  |
| WSI13038-R60M      | 0.60±20%          | 1.8                         | 2.2                    | 51                  | 29                  |
| WSI13038-R68M      | 0.68±20%          | 2.3                         | 2.5                    | 49                  | 28                  |
| WSI13038-R82M      | 0.82±20%          | 2.6                         | 3.0                    | 44                  | 25                  |
| WSI13038-1R0M      | 1.0±20%           | 3.3                         | 3.5                    | 40                  | 24                  |
| WSI13038-1R5M      | 1.5±20%           | 5.1                         | 5.5                    | 35                  | 19                  |
| WSI13038-1R8M      | 1.8±20%           | 6.0                         | 7.0                    | 30                  | 16.5                |
| WSI13038-2R2M      | 2.2±20%           | 7.2                         | 8.0                    | 29                  | 16                  |
| WSI13038-3R3M      | 3.3±20%           | 11.0                        | 12.0                   | 27                  | 12                  |
| WSI13038-4R7M      | 4.7±20%           | 14.3                        | 15.0                   | 24                  | 10                  |
| WSI13038-5R6M      | 5.6±20%           | 17.1                        | 18.0                   | 19                  | 9.5                 |
| WSI13038-6R8M      | 6.8±20%           | 19.8                        | 22.0                   | 18                  | 9                   |
| WSI13038-8R2M      | 8.2±20%           | 24.8                        | 28.0                   | 16                  | 8.5                 |
| WSI13038-100M      | 10±20%            | 30.4                        | 34.0                   | 14                  | 7                   |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI13050-R10M      | 0.10±20%          | 0.53                        | 0.60                   | 118                 | 55                  |
| WSI13050-R22M      | 0.22±20%          | 0.64                        | 0.80                   | 110                 | 51                  |
| WSI13050-R33M      | 0.33±20%          | 0.85                        | 1.10                   | 80                  | 42                  |
| WSI13050-R47M      | 0.47±20%          | 1.10                        | 1.30                   | 65                  | 38                  |
| WSI13050-R56M      | 0.56±20%          | 1.30                        | 1.50                   | 55                  | 36                  |
| WSI13050-R68M      | 0.68±20%          | 1.50                        | 1.70                   | 54                  | 34                  |
| WSI13050-R82M      | 0.82±20%          | 2.00                        | 2.30                   | 53                  | 31                  |
| WSI13050-1R0M      | 1.0±20%           | 2.10                        | 2.50                   | 50                  | 29                  |
| WSI13050-1R5M      | 1.5±20%           | 3.40                        | 4.10                   | 48                  | 23                  |
| WSI13050-2R2M      | 2.2±20%           | 4.60                        | 5.50                   | 32                  | 20                  |
| WSI13050-3R3M      | 3.3±20%           | 7.70                        | 9.20                   | 32                  | 15                  |
| WSI13050-4R7M      | 4.7±20%           | 12.8                        | 15.0                   | 27                  | 12                  |
| WSI13050-5R6M      | 5.6±20%           | 14.0                        | 16.5                   | 22                  | 11.5                |
| WSI13050-6R8M      | 6.8±20%           | 15.4                        | 18.5                   | 21                  | 11                  |
| WSI13050-8R2M      | 8.2±20%           | 18.9                        | 22.5                   | 18                  | 9.5                 |
| WSI13050-100M      | 10±20%            | 21.4                        | 25.5                   | 16                  | 9                   |
| WSI13050-150M      | 15±20%            | -                           | 39.0                   | 11                  | 6.5                 |
| WSI13050-470M      | 47±20%            | -                           | 168                    | 6                   | 3                   |

Note: Measurement frequency of Inductance value : at 100kHz



| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI13067-R10M      | 0.10±20%          | 0.47                        | 0.50                   | 120                 | 57                  |
| WSI13067-R15M      | 0.15±20%          | 0.53                        | 0.60                   | 118                 | 52.3                |
| WSI13067-R22M      | 0.22±20%          | 0.63                        | 0.70                   | 112                 | 50.4                |
| WSI13067-R30M      | 0.30±20%          | 0.70                        | 0.80                   | 72                  | 45.6                |
| WSI13067-R33M      | 0.33±20%          | 0.83                        | 0.90                   | 65                  | 43.7                |
| WSI13067-R40M      | 0.40±20%          | 0.90                        | 1.00                   | 64                  | 41.8                |
| WSI13067-R47M      | 0.47±20%          | 1.00                        | 1.20                   | 63                  | 39.0                |
| WSI13067-R56M      | 0.56±20%          | 1.20                        | 1.40                   | 62                  | 35.2                |
| WSI13067-R68M      | 0.68±20%          | 1.40                        | 1.60                   | 60                  | 33.3                |
| WSI13067-R82M      | 0.82±20%          | 1.60                        | 1.90                   | 50                  | 31.4                |
| WSI13067-1R0M      | 1.0±20%           | 1.70                        | 2.00                   | 49                  | 30.4                |
| WSI13067-1R2M      | 1.2±20%           | 2.10                        | 2.50                   | 48                  | 28.5                |
| WSI13067-1R5M      | 1.5±20%           | 2.50                        | 3.00                   | 45                  | 25.7                |
| WSI13067-1R8M      | 1.8±20%           | 2.80                        | 3.20                   | 41                  | 22.8                |
| WSI13067-2R2M      | 2.2±20%           | 3.50                        | 4.20                   | 40                  | 20.7                |
| WSI13067-3R3M      | 3.3±20%           | 5.50                        | 6.80                   | 29                  | 18.0                |
| WSI13067-4R7M      | 4.7±20%           | 9.30                        | 11.2                   | 30                  | 12.8                |
| WSI13067-5R6M      | 5.6±20%           | 9.30                        | 10.0                   | 26.5                | 12.8                |
| WSI13067-6R8M      | 6.8±20%           | 13.0                        | 14.0                   | 16.5                | 10.9                |
| WSI13067-8R2M      | 8.2±20%           | 14.5                        | 15.5                   | 16                  | 10                  |
| WSI13067-100M      | 10±20%            | 15.8                        | 16.8                   | 15.5                | 9.5                 |
| WSI13067-820M      | 82±20%            | 170                         | 205                    | 5.0                 | 2.8                 |
| WSI13067-101M      | 100±20%           | 240                         | 265                    | 4.0                 | 2.5                 |

Note: Measurement frequency of Inductance value : at 100kHz, 0.25V

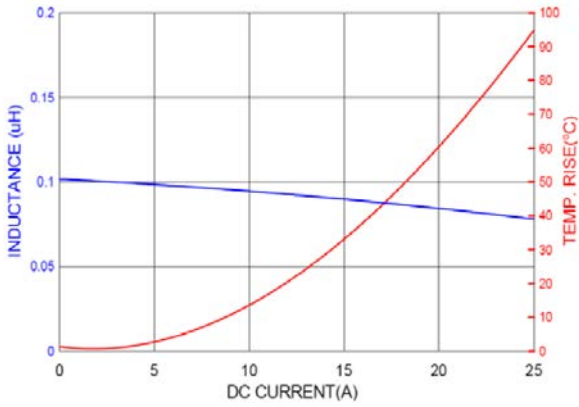
| <b>PART NUMBER</b> | <b>L<br/>(uH)</b> | <b>RDC<br/>(mΩ) Typical</b> | <b>RDC<br/>(mΩ)Max</b> | <b>Isat<br/>(A)</b> | <b>Irms<br/>(A)</b> |
|--------------------|-------------------|-----------------------------|------------------------|---------------------|---------------------|
| WSI17070HC-4R7M    | 4.7±20%           | 4.84                        | 5.11                   | 41                  | 25                  |

Note: Measurement frequency of Inductance value : at 100kHz, 0.25V

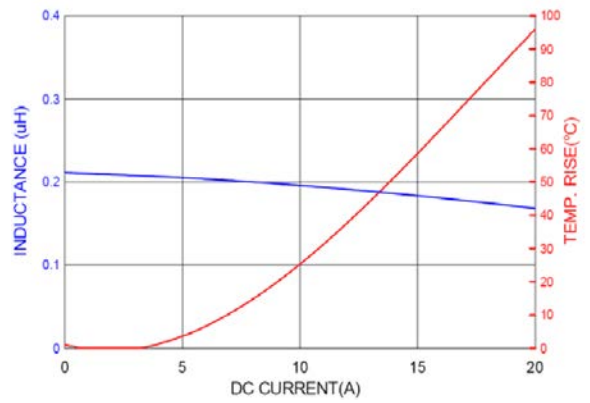


● TYPICAL ELECTRICAL CURVE

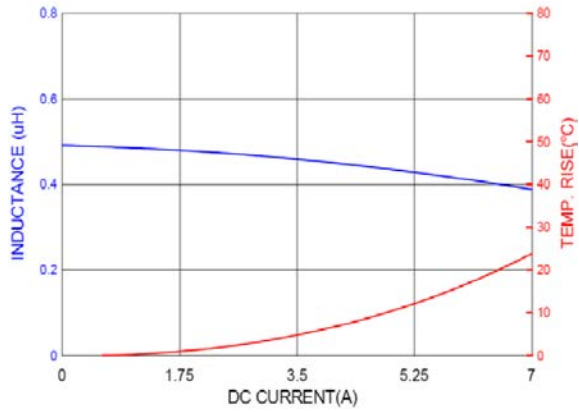
WSI04012-R10M



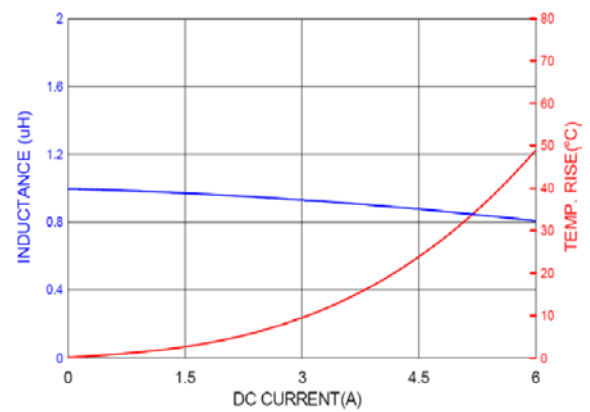
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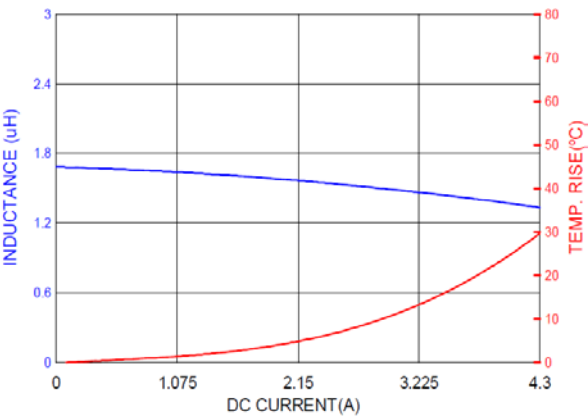
WSI04012-R47M



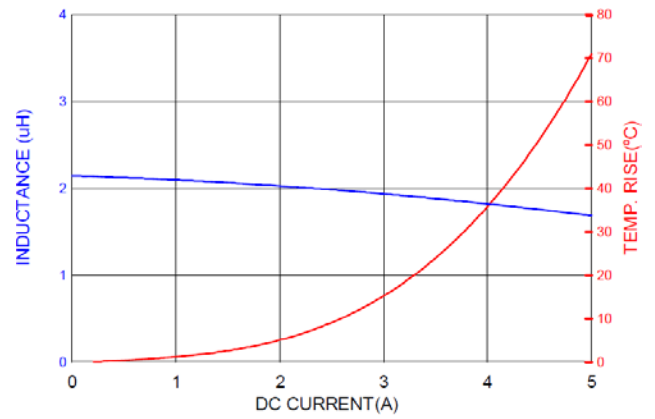
WSI04012-1R0M



WSI04012-1R5M

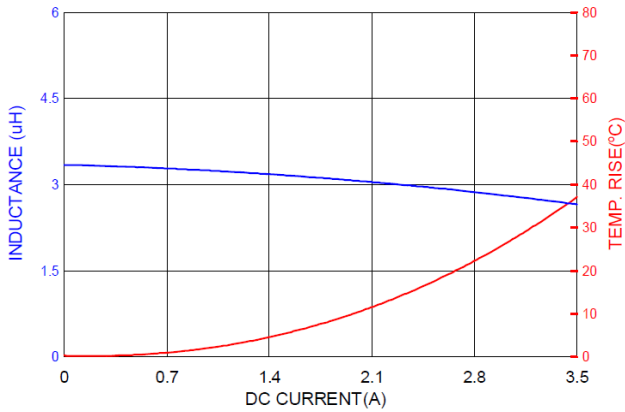


WSI04012-2R2M

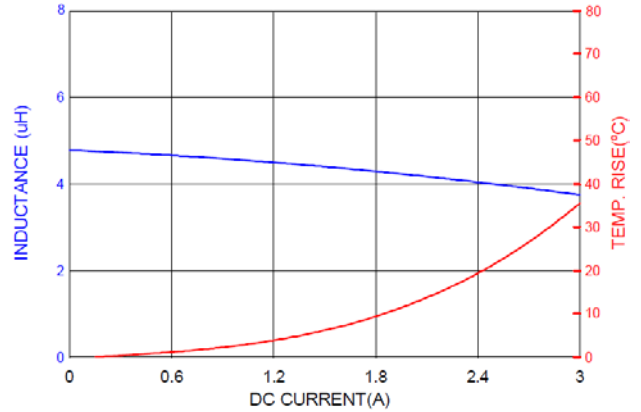




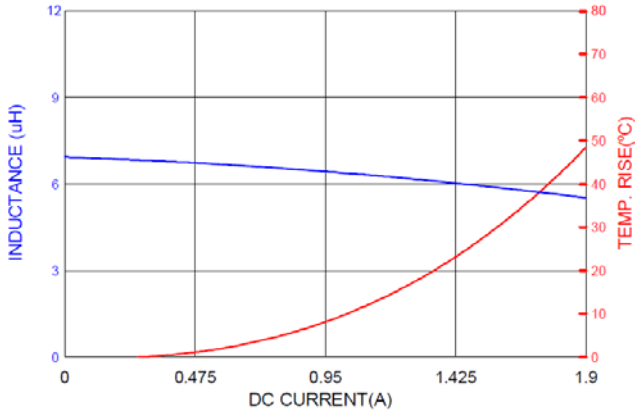
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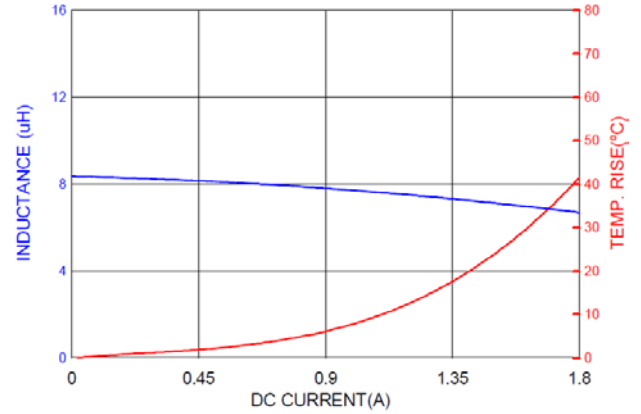
WSI04012-4R7M



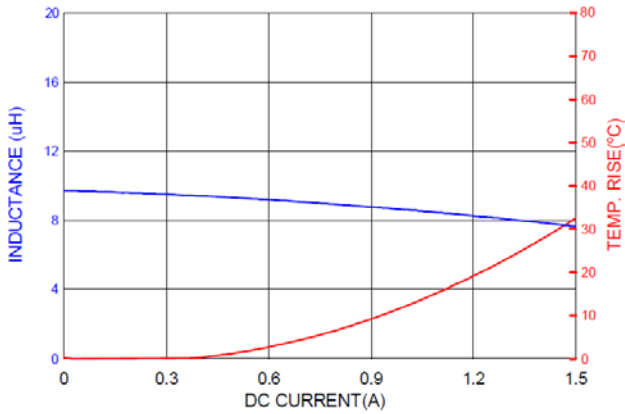
WSI04012-6R8M



WSI04012-8R2M

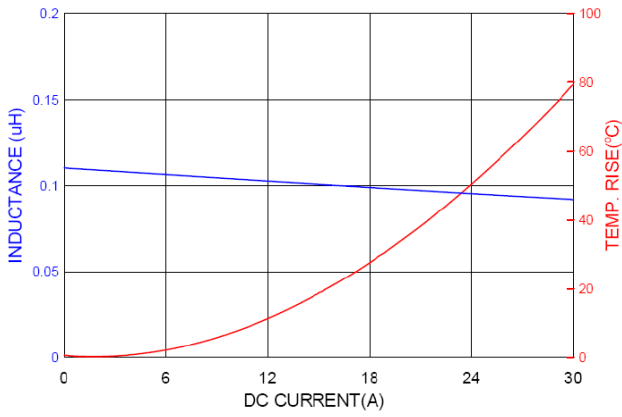


WSI04012-100M

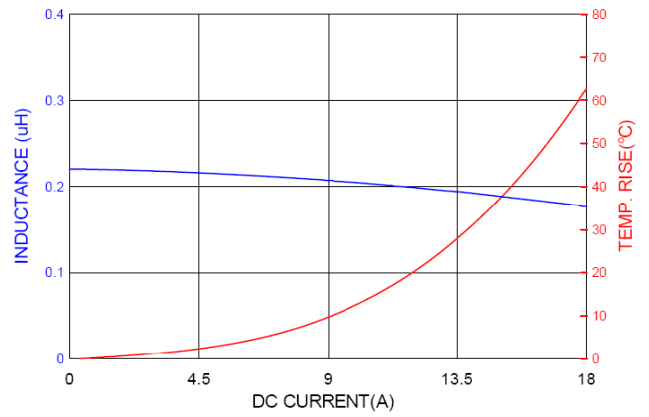




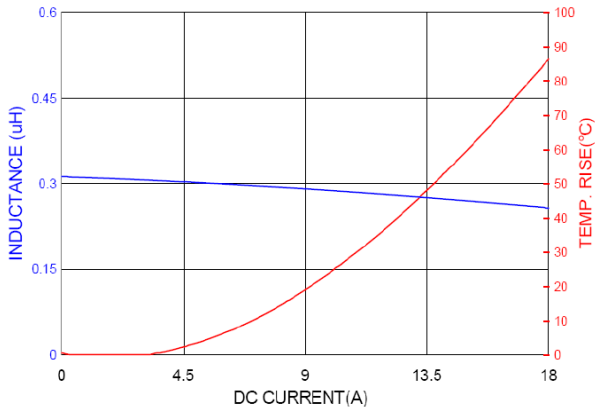
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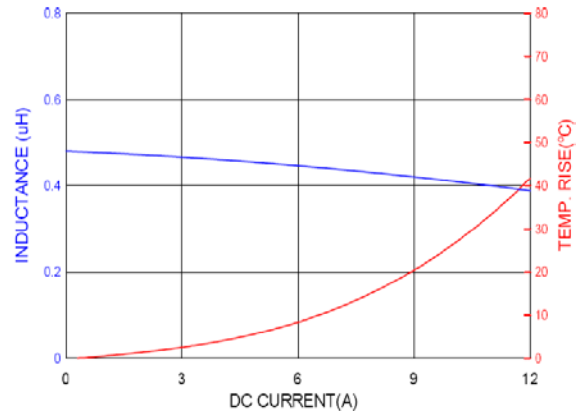
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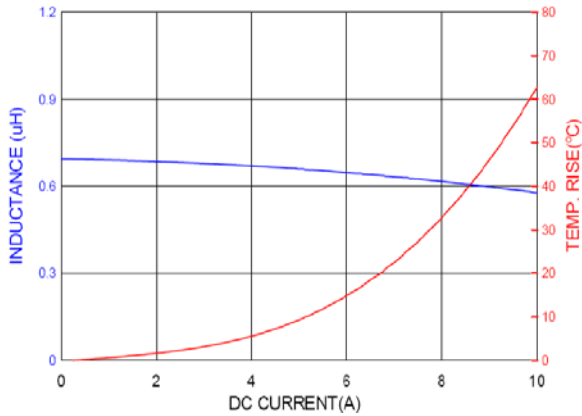
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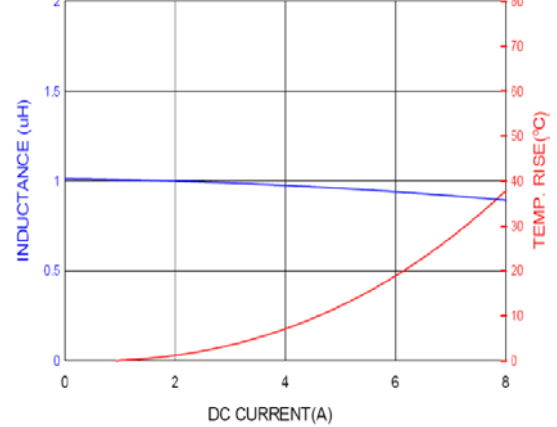
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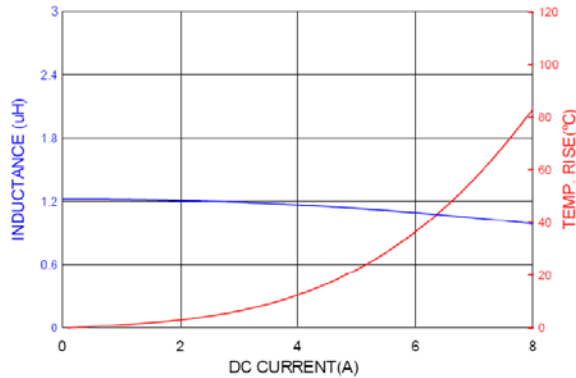
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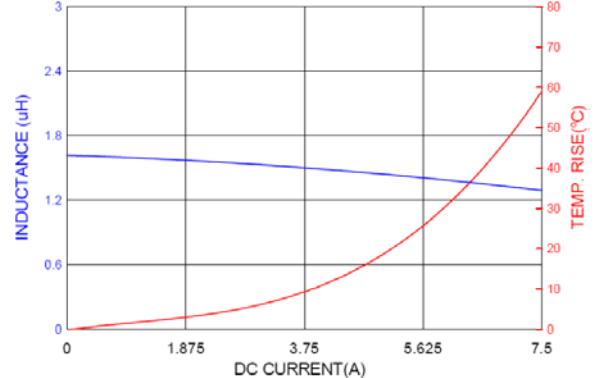
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WSI04020-1R2M

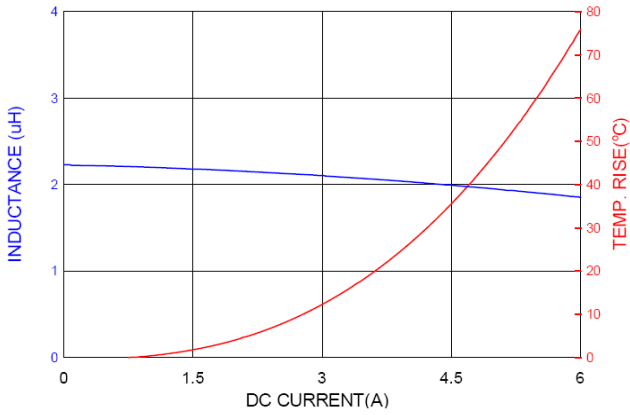


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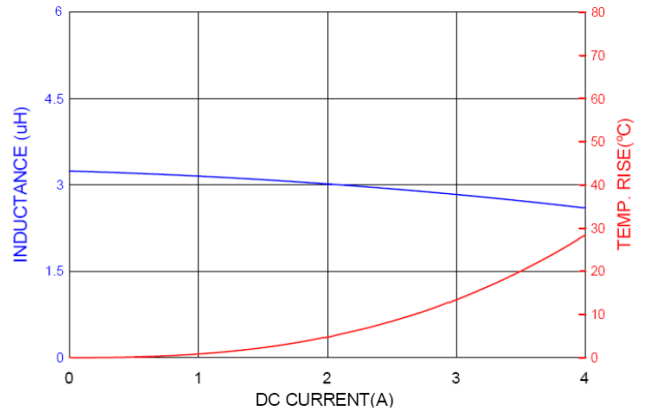




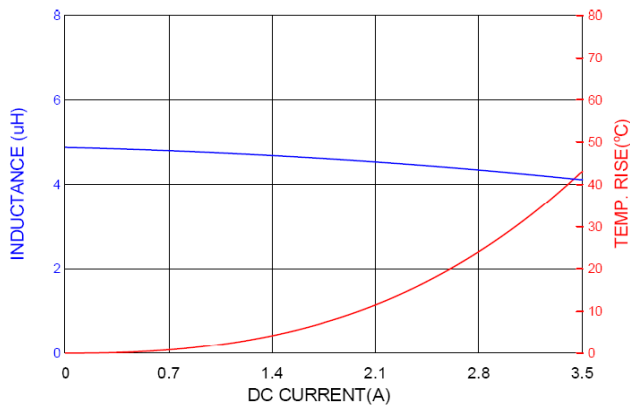
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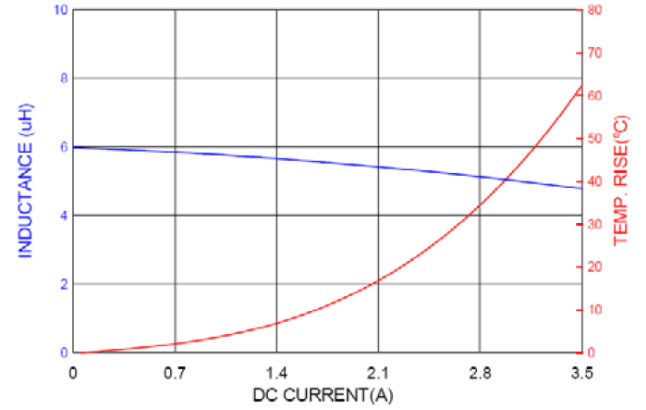
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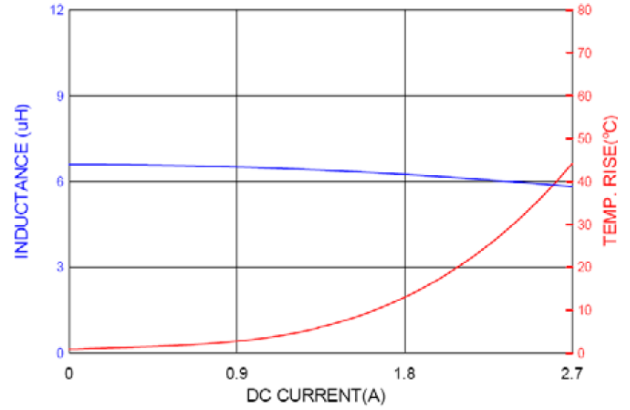
WSI04020-4R7M



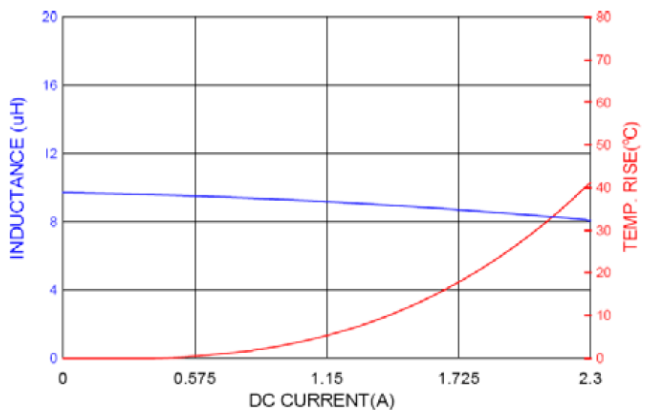
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WSI04020-6R8M



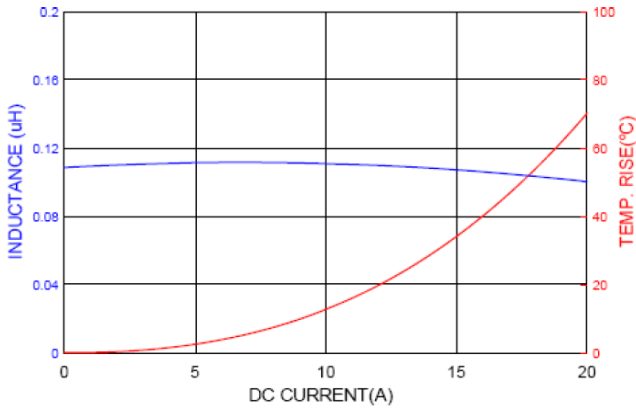
WSI04020-100M



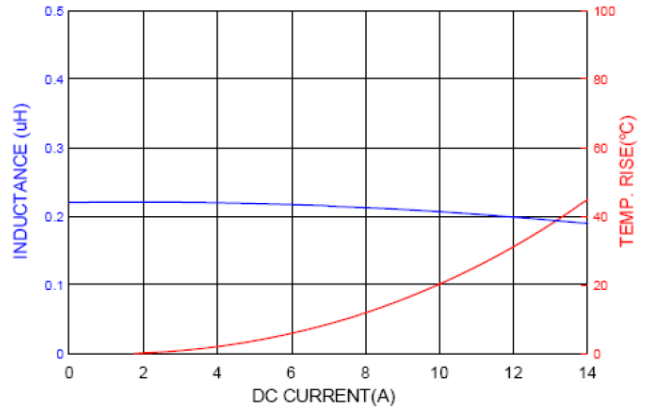




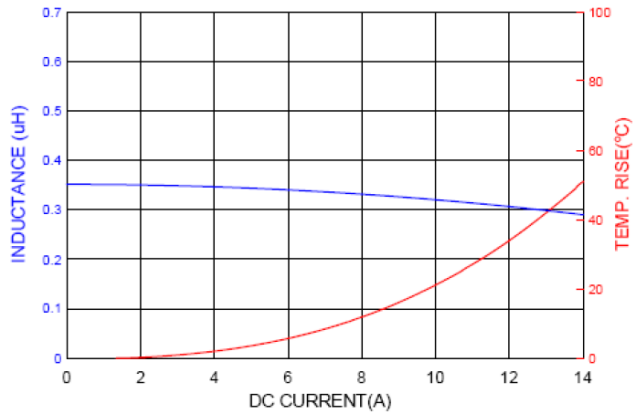
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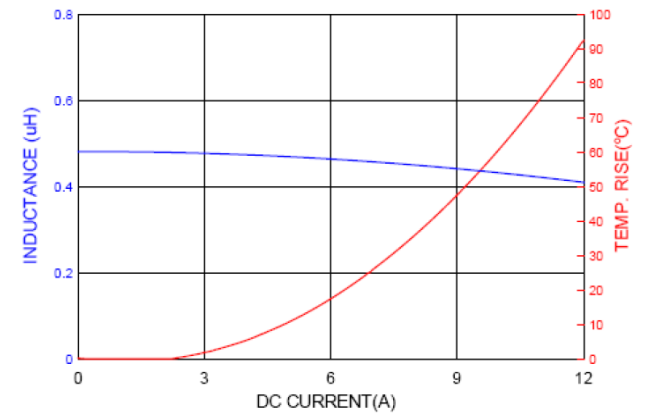
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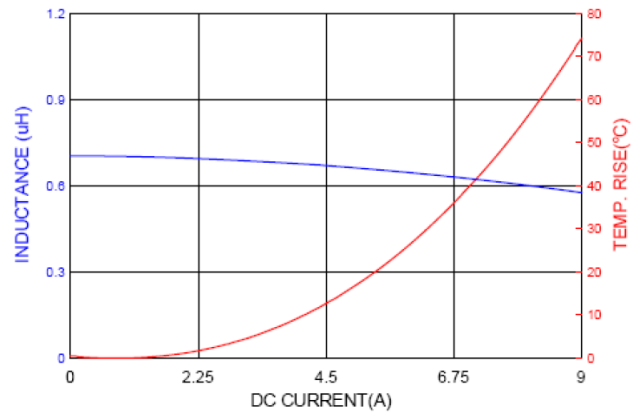
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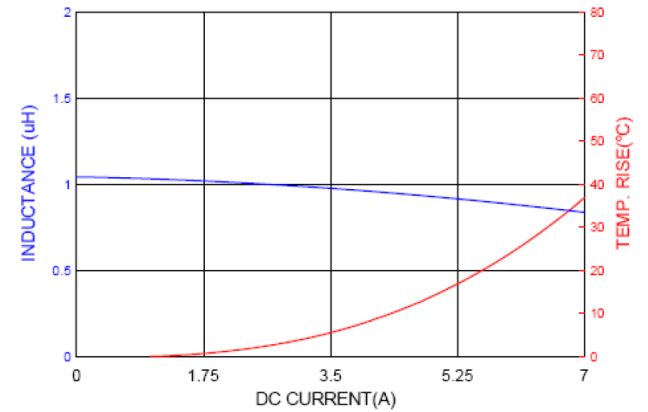
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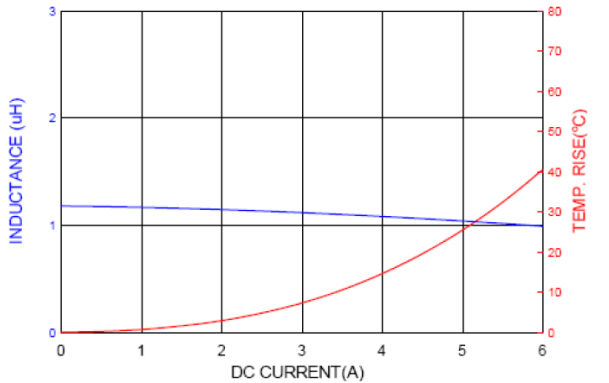
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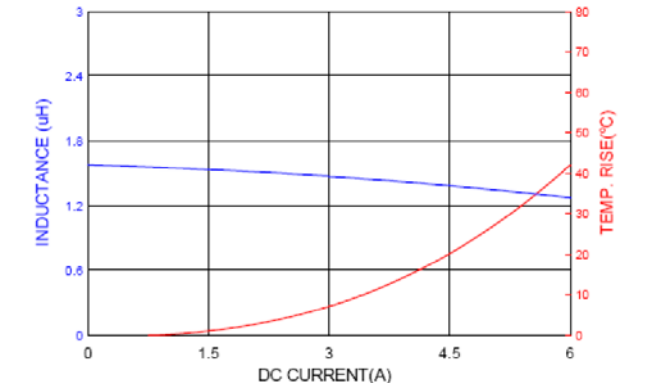
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WSI05012-1R2M

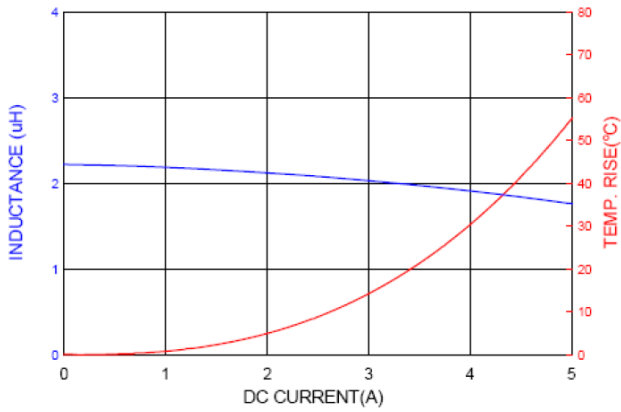


WSI05012-1R5M

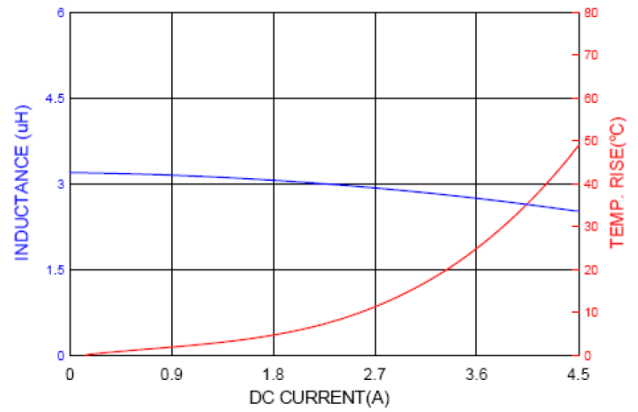




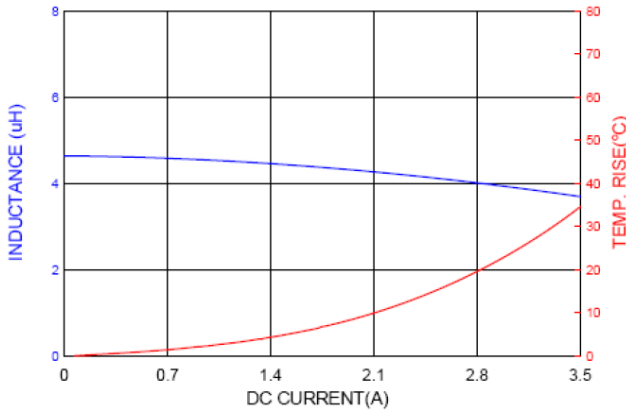
WSI05012-2R2M



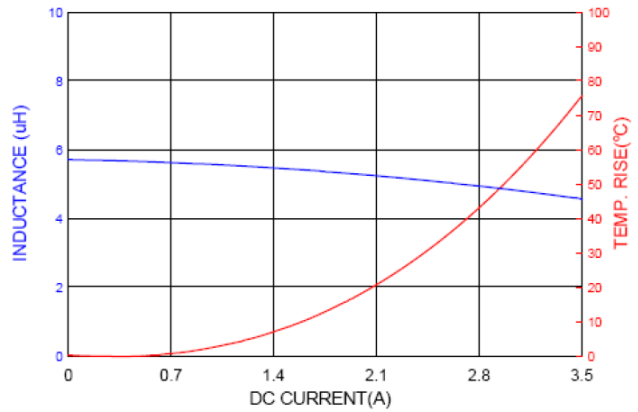
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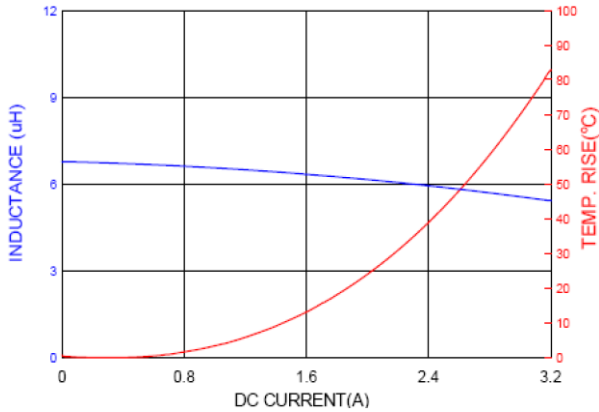
WSI05012-4R7M



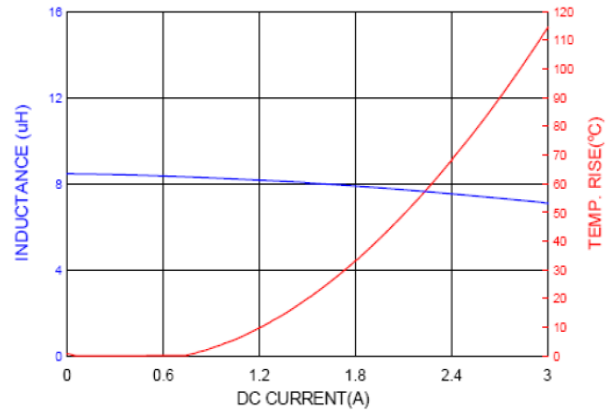
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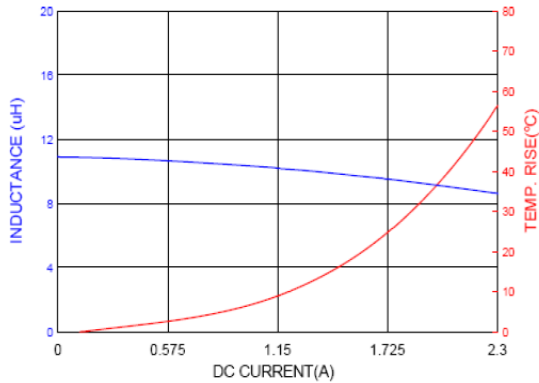
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WSI05012-8R2M

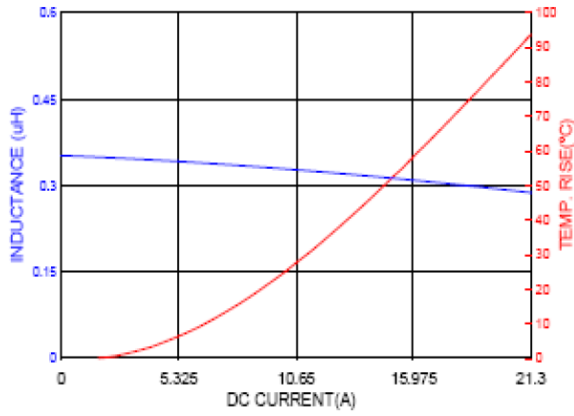


WSI05012-100M

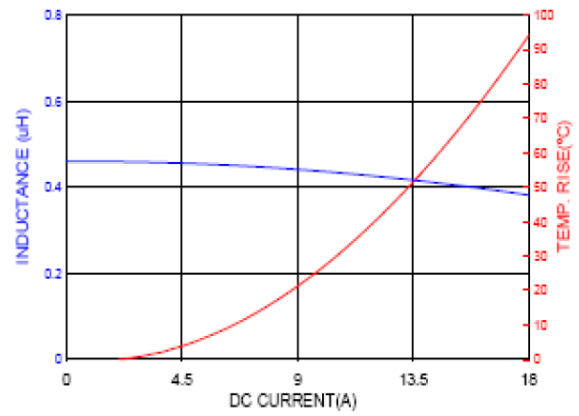




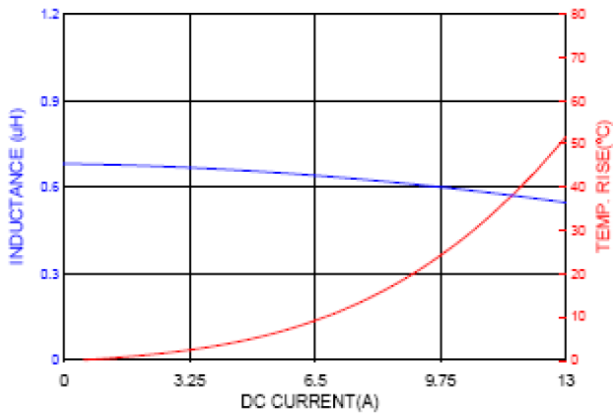
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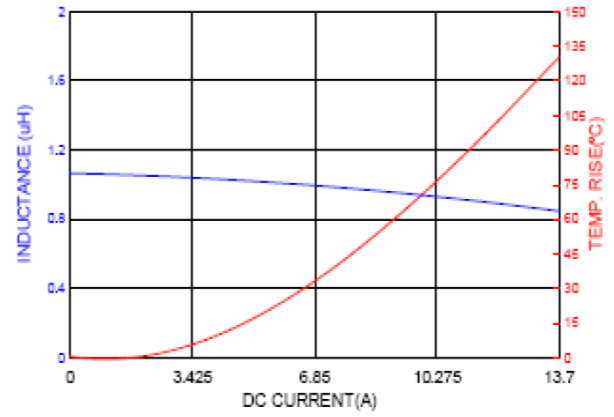
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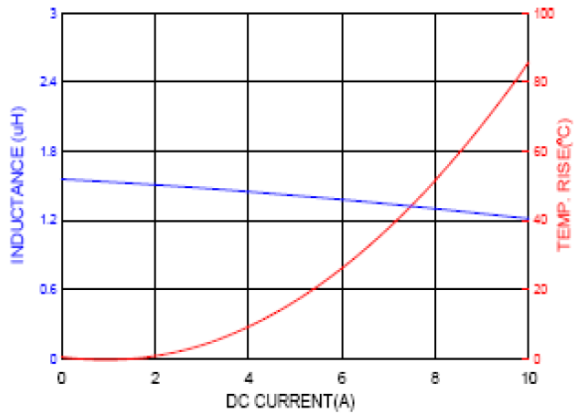
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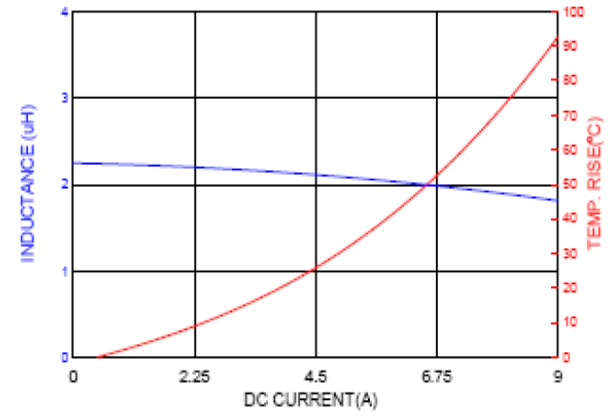
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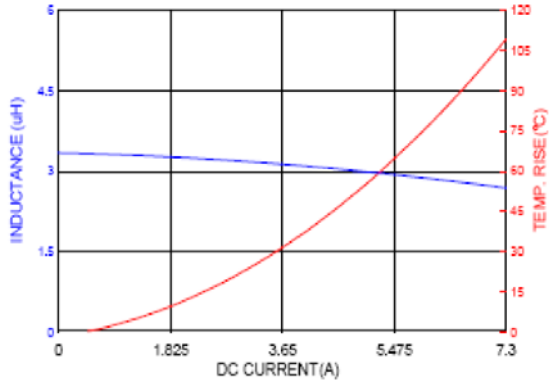
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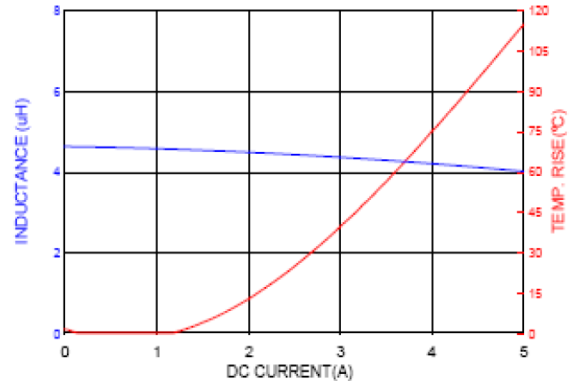
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WSI05020-3R3M

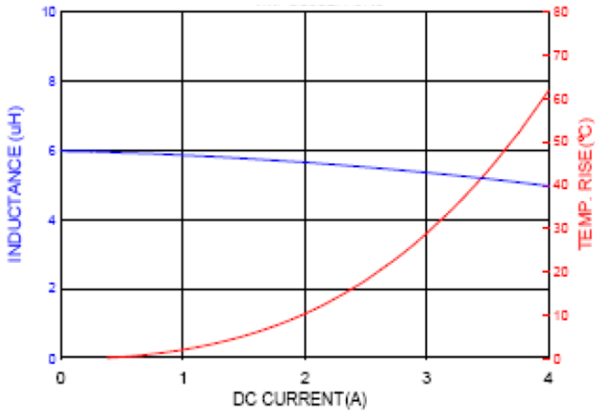


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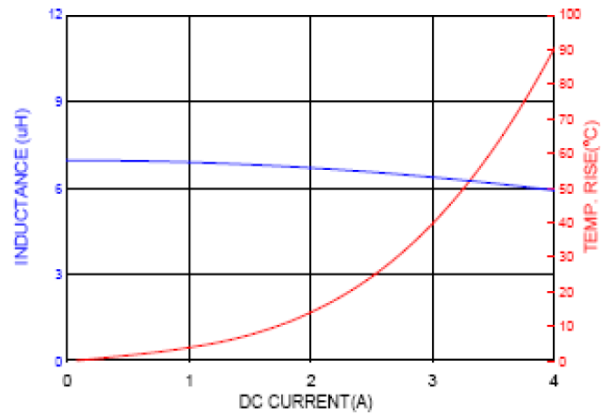




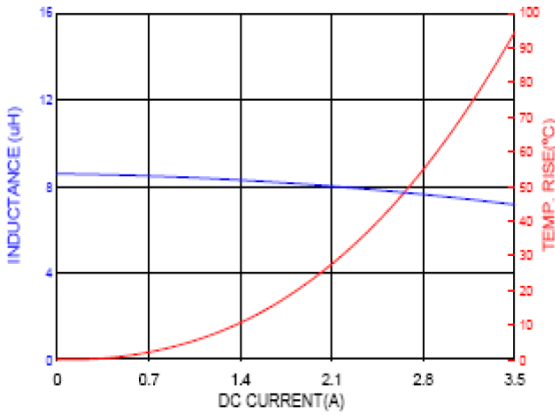
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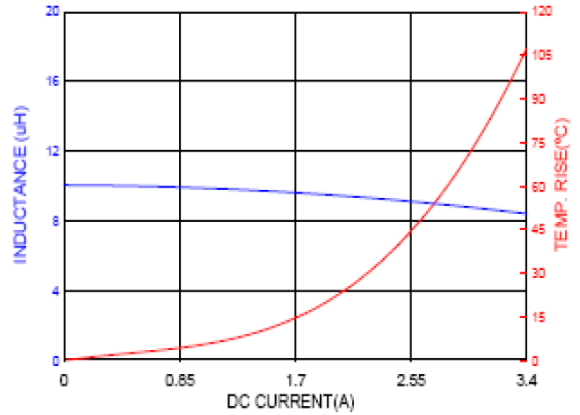
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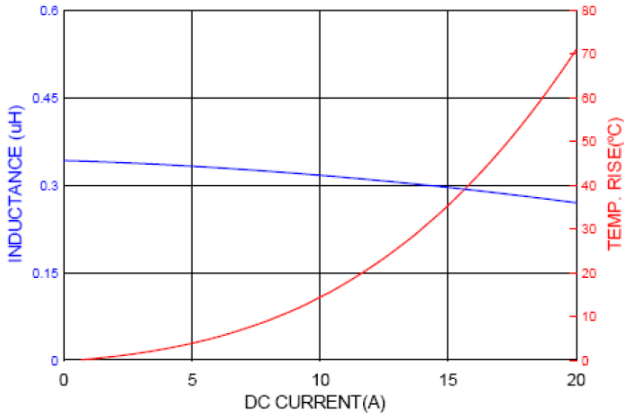
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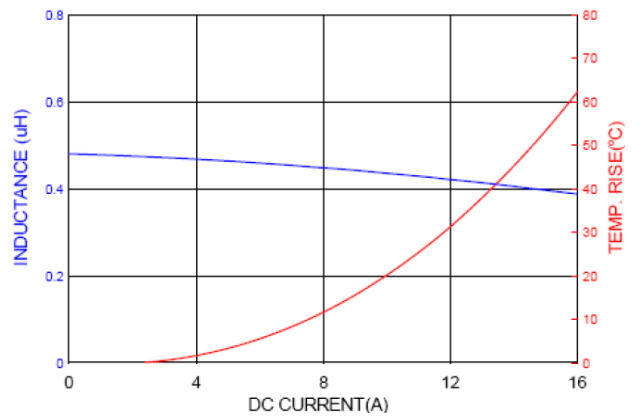
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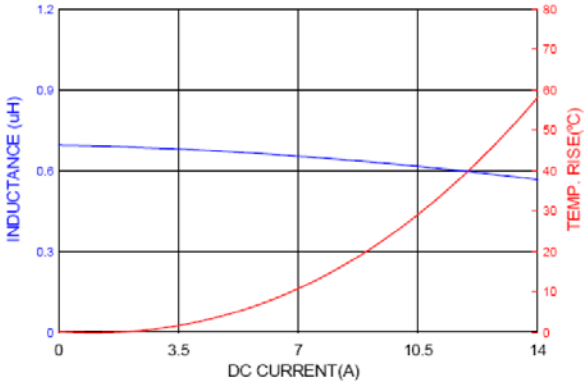
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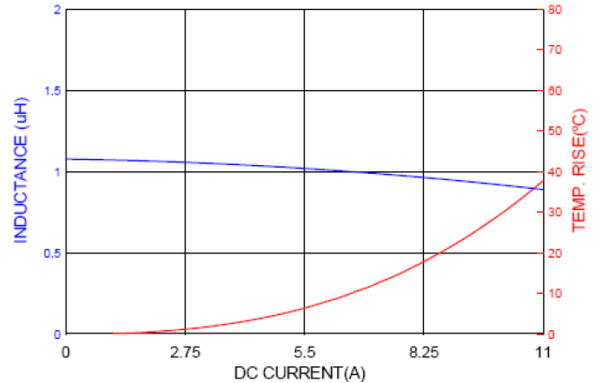
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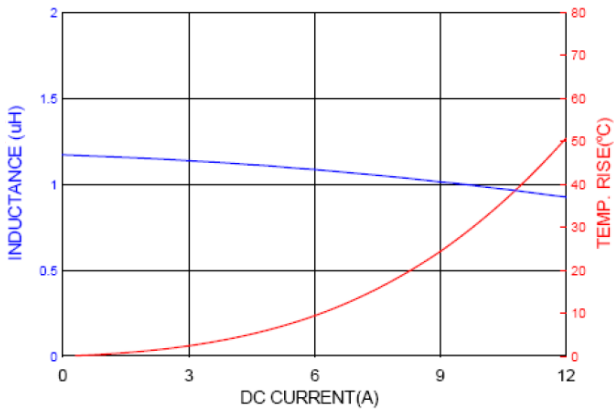


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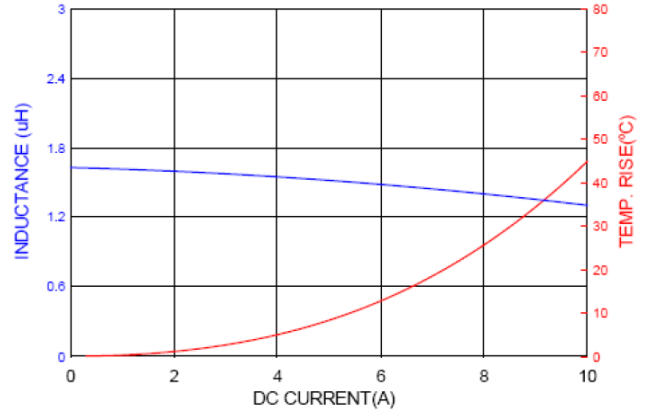




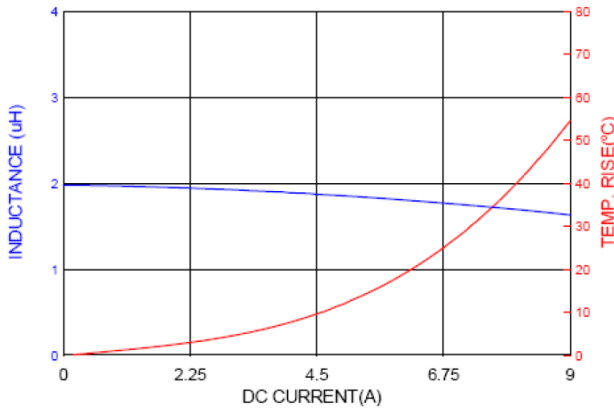
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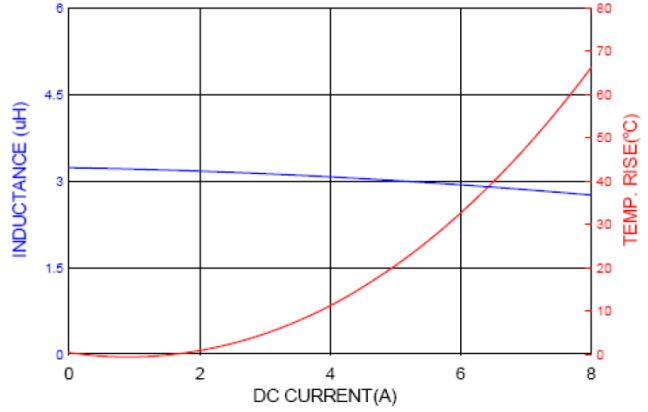
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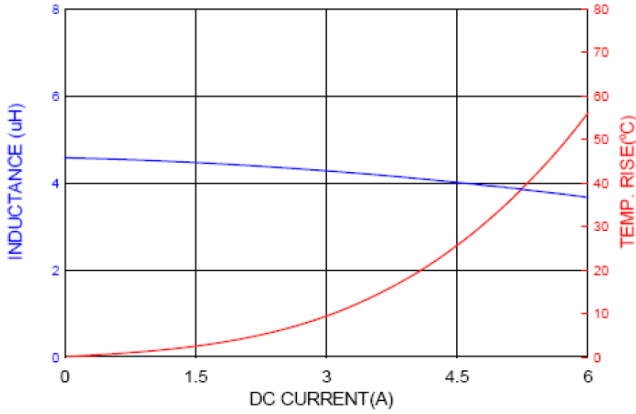
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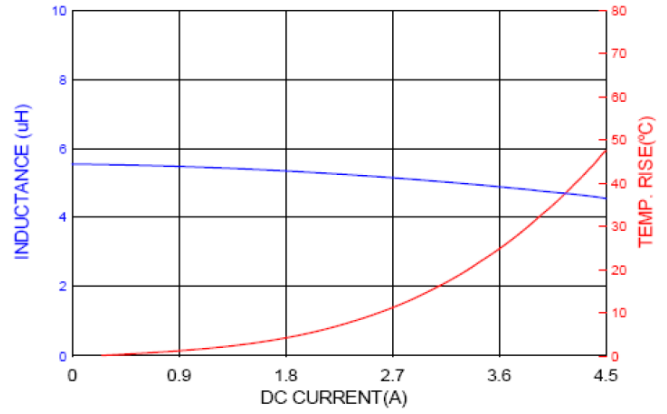
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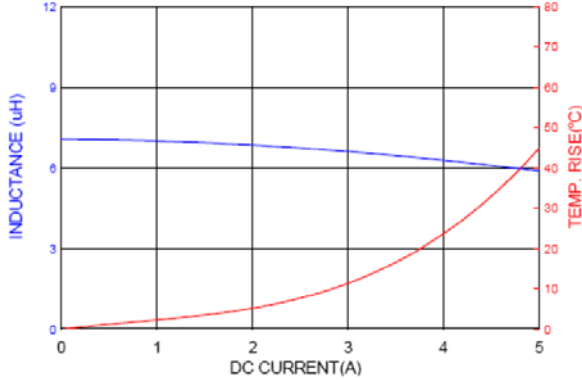
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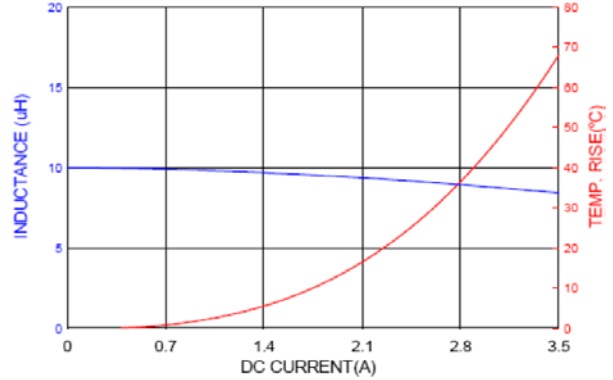
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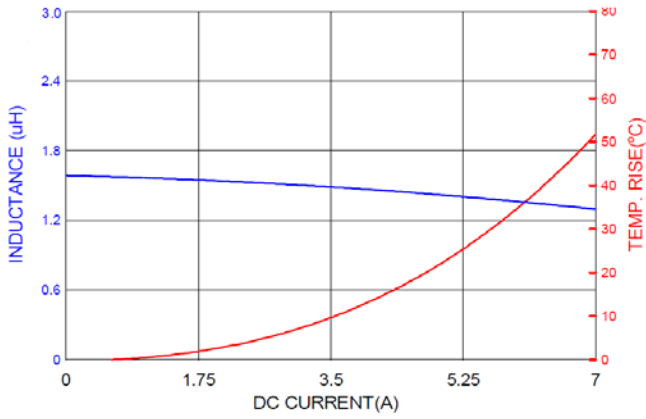


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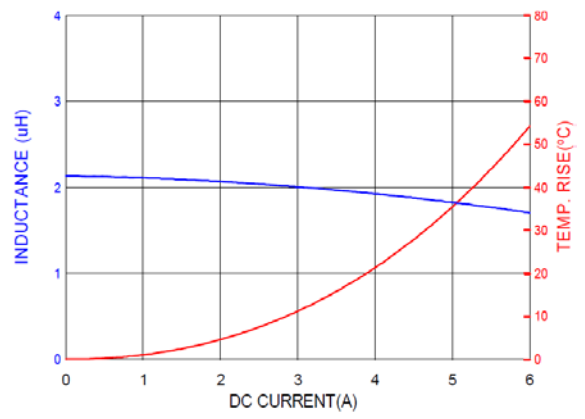




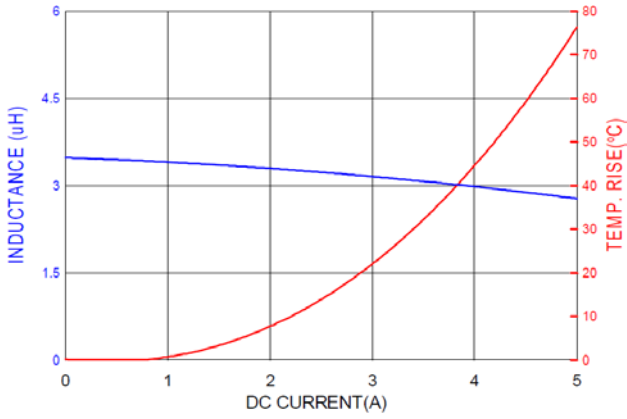
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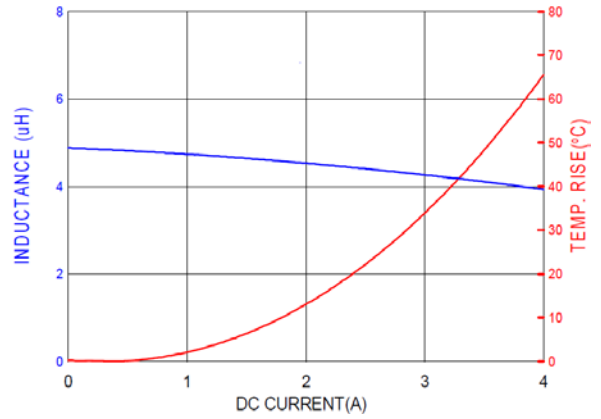
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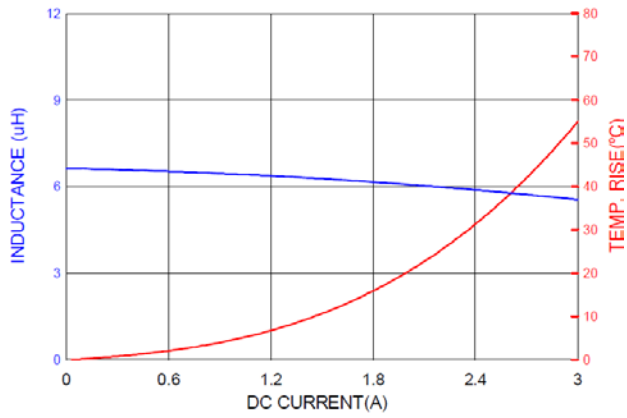
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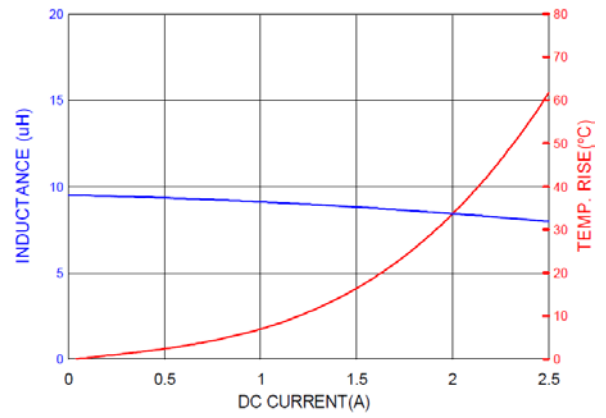
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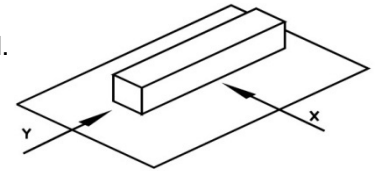
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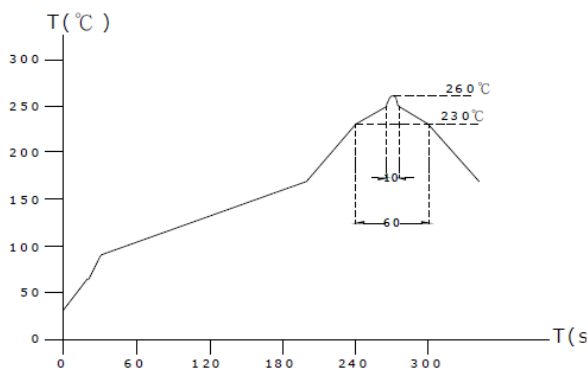


●GENERAL CHARACTERISTICS

1. Operating temperature range: -55 TO + 125°C (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil.  
Push in two directions of X.Y withstanding at below conditions.  
Terminal should not peel off. (refer to figure at right)  
Applied force: 5N; Duration: 60sec.
4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient  $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$  (-25~+80°C) inductance deviation within  $\pm 5\%$ , after 96 hours
7. Humidity characteristics(Moisture Resistance): Inductance deviation within  $\pm 5\%$ , after 96 hours in 90~95% relative humidity at  $40 \pm 2^{\circ}\text{C}$  and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within  $\pm 5\%$ , after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within  $\pm 5\%$ , after being dropped once with 981m/s<sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C, 10 seconds(See attached recommend reflow)
11. Storage environment  
Storage condition:  
Temperature Range: 10°C ~ 35°C (Generally: 21°C ~ 31°C)  
Humidity Range: 50% ~ 80% RH (Generally: 65% ~ 75%)  
Transportation condition:  
Temperature Range: -35°C ~ 85°C, Humidity Range: 50% ~ 95% RH
12. Use components within 6 months. If 6 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:



Lead - free heat endurance test



Lead-free the recommended reflow condition

