



# Small Power Choke Coil

## PCMC(B) series, PW.PS series



Low DCR, small size with high current capability, high efficiency and low loss.

### Applications

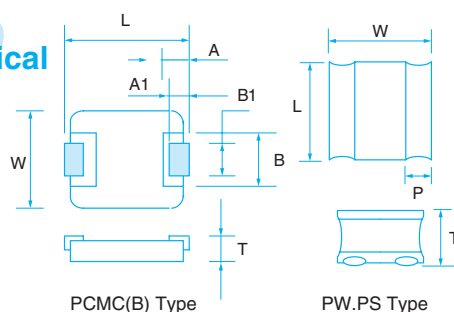
Small electronics equipment for communication, information, imaging, audio etc.

RoHS compliant

Completely lead free

## SPECIFICATIONS

### Mechanical



PCMC(B) Type

| Dimension (mm) | PCMC(B)042T | PCMC053T |
|----------------|-------------|----------|
| L              | 4.5max.     | 5.2max.  |
| W              | 4.0±0.3     | 4.7±0.2  |
| T              | 2.0max.     | 3.0max.  |
| A              | 1.0±0.1     | 1.5±0.1  |
| A1             | 0.8±0.3     | 1.0±0.3  |
| B              | 2.2±0.2     | 1.8±0.2  |
| B1             | 1.5±0.3     |          |

PW.PS Type

| Dimension (mm) | PW        |             | PS031     |           | PS041B  |
|----------------|-----------|-------------|-----------|-----------|---------|
|                | 021T Type | 25201B Type | 031T Type | 031B Type |         |
| L              | 1.9±0.2   | 1.95±0.1    | 2.9±0.2   |           | 3.8±0.2 |
| W              | 1.9±0.2   | 2.45±0.1    | 2.9±0.2   |           | 3.8±0.2 |
| P              | 0.4±0.2   |             | 0.75±0.2  |           | 1.0±0.2 |
| T              | 1.0±0.1   | 1.2±0.1     | 1.0±0.1   | 1.2±0.1   | 1.2±0.1 |

### Electrical

PW type

| PW021T-***MS | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|--------------|----------------------|---------|------|----------------------|---------------------------|
|              |                      | Typical | MAX. |                      |                           |
| R50          | 0.5                  | 85      | 100  | 1.50                 | 2.40                      |
| 1R0          | 1.0                  | 120     | 150  | 1.20                 | 1.80                      |
| 2R2          | 2.2                  | 300     | 350  | 0.85                 | 1.20                      |
| 3R3          | 3.3                  | 430     | 500  | 0.75                 | 0.98                      |
| 4R7          | 4.7                  | 600     | 700  | 0.65                 | 0.80                      |
| 6R8          | 6.8                  | 780     | 900  | 0.55                 | 0.73                      |
| 100          | 10.0                 | 1200    | 1400 | 0.45                 | 0.61                      |

| PW25201BT-***MS | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|-----------------|----------------------|---------|------|----------------------|---------------------------|
|                 |                      | Typical | MAX. |                      |                           |
| R47             | 0.47                 | 47      | 56   | 2.20                 | 3.70                      |
| 1R0             | 1.0                  | 73      | 88   | 1.80                 | 2.70                      |
| 1R5             | 1.5                  | 105     | 126  | 1.50                 | 2.10                      |
| 2R2             | 2.2                  | 129     | 155  | 1.30                 | 1.70                      |
| 3R3             | 3.3                  | 227     | 272  | 1.00                 | 1.30                      |
| 4R7             | 4.7                  | 338     | 406  | 0.80                 | 1.15                      |

PCMC(B) type

| PCMC042T-***MN | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|----------------|----------------------|---------|------|----------------------|---------------------------|
|                |                      | Typical | MAX. |                      |                           |
| R10            | 0.10                 | 4.5     | 5.0  | 11                   | 30                        |
| R22            | 0.22                 | 7.3     | 8.0  | 9                    | 17                        |
| R47            | 0.47                 | 14.0    | 15.5 | 6                    | 11.5                      |
| 1R0            | 1.00                 | 32.0    | 36.0 | 3.8                  | 8.5                       |

| PCMB042T-***MS | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|----------------|----------------------|---------|------|----------------------|---------------------------|
|                |                      | Typical | MAX. |                      |                           |
| R10            | 0.10                 | 3.5     | 4.0  | 12                   | 22                        |
| R22            | 0.22                 | 6.0     | 6.6  | 9                    | 13                        |
| R47            | 0.47                 | 12.5    | 12.0 | 7                    | 9.5                       |
| 1R0            | 1.00                 | 24.0    | 27.0 | 4.5                  | 7.0                       |
| 1R5            | 1.50                 | 38.0    | 46.0 | 4.0                  | 6.0                       |
| 2R2            | 2.20                 | 52.0    | 58.0 | 3.0                  | 5.0                       |

| PCMC053T-***MN | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|----------------|----------------------|---------|------|----------------------|---------------------------|
|                |                      | Typical | MAX. |                      |                           |
| R68            | 0.68                 | 11.0    | 12.0 | 8.5                  | 14.0                      |
| 1R0            | 1.0                  | 13.0    | 14.0 | 7.0                  | 11.0                      |
| 1R2            | 1.2                  | 15.0    | 16.0 | 6.5                  | 11.0                      |
| 1R5            | 1.5                  | 18.0    | 20.0 | 6.0                  | 10.0                      |
| 2R2            | 2.2                  | 29.0    | 35.0 | 5.5                  | 9.0                       |
| 3R3            | 3.3                  | 32.0    | 38.0 | 5.0                  | 7.0                       |

PS type

| PS031B-***MS | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|--------------|----------------------|---------|------|----------------------|---------------------------|
|              |                      | Typical | MAX. |                      |                           |
| 2R2          | 2.2                  | 75      | 90   | 1.40                 | 1.10                      |
| 4R7          | 4.7                  | 120     | 140  | 1.20                 | 0.77                      |
| 6R8          | 6.8                  | 160     | 190  | 1.00                 | 0.67                      |
| 100          | 10.0                 | 260     | 300  | 0.90                 | 0.54                      |

| PS031T-***MS | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|--------------|----------------------|---------|------|----------------------|---------------------------|
|              |                      | Typical | MAX. |                      |                           |
| 2R2          | 2.2                  | 90      | 105  | 1.30                 | 1.10                      |
| 3R3          | 3.3                  | 130     | 150  | 1.20                 | 0.90                      |
| 4R7          | 4.7                  | 170     | 200  | 1.00                 | 0.75                      |
| 6R8          | 6.8                  | 200     | 230  | 0.90                 | 0.65                      |
| 100          | 10.0                 | 300     | 340  | 0.80                 | 0.52                      |

| PS041B-***MS | L0(μH)<br>Inductance | Rdc(mΩ) |      | Rated current<br>(A) | Saturation current<br>(A) |
|--------------|----------------------|---------|------|----------------------|---------------------------|
|              |                      | Typical | MAX. |                      |                           |
| 2R2          | 2.2                  | 80      | 95   | 1.30                 | 1.70                      |
| 3R3          | 3.3                  | 100     | 120  | 1.10                 | 1.40                      |
| 4R7          | 4.7                  | 120     | 145  | 1.00                 | 1.15                      |
| 6R8          | 6.8                  | 180     | 216  | 0.84                 | 1.00                      |

Rated current : Current that will increase temperature by 40°C  
 Saturating current : The current that decreases inductance by 30%  
 for PS and PW. 20% for PCMC (B)

Packaging : 2,000 piece reel for PW, PS031T(B),  
 1000 piece reel for PCMC042T, PCMC053T

## PART NUMBER

PS 031\* - \*\*\* M (S)

Materials : Materials; refer to electrical characteristics table.  
 Resistance Tolerance ±20%  
 Inductance value  
 Dimensions : B (2.9mm\*2.9mm\*1.2mm)  
 : T (2.9mm\*2.9mm\*1.0mm)  
 Part Code