

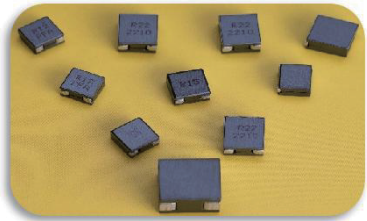
REACH & RoHS
COMPLIANT

1 Features

- ☆ High saturation characteristic core for large saturation current and low loss
- ☆ High precision DCR
- ☆ Closed magnetic circuit design reduces leakage flux
- ☆ Halogen free, RoHS compliant

Application

- ☆ Data center, Server, desktop computer, notebook
- ☆ Graphics, memory
- ☆ Industrial equipment, telecom base station

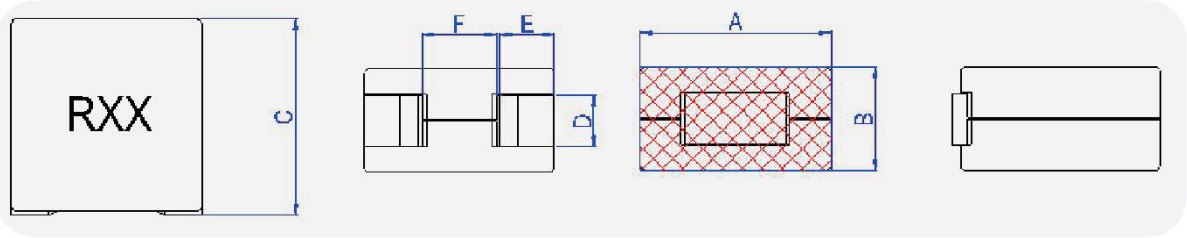


| Part number | Initial Inductance (nH) | Tolerance (±%) | DCR (mΩ) | 1-Saturation Current@ 25°C (Amps)(typ) | 2-Saturation Current@ 100°C (Amps)(typ) | Heating Current (Amps)(typ) |
|---------------------|-------------------------|----------------|-----------|--|---|-----------------------------|
| WHPBU-100710N-R10L0 | 100 | 15 | 0.18± 10% | 117 | 100 | 70 |
| WHPBU-100710N-R12L0 | 120 | 15 | 0.18± 10% | 90 | 80 | 70 |
| WHPBU-100710N-R15L0 | 150 | 15 | 0.18± 10% | 75 | 75 | 70 |
| WHPBU-100710N-R18L0 | 180 | 15 | 0.18± 10% | 75 | 65 | 70 |
| WHPBU-100710N-R22L0 | 220 | 15 | 0.18± 10% | 60 | 50 | 70 |
| WHPBU-100710N-R30M0 | 300 | 20 | 0.18± 10% | 43 | 33 | 70 |
| WHPBU-100710N-R33M0 | 330 | 20 | 0.18± 10% | 35 | 30 | 70 |
| WHPBU-100710N-R47M0 | 470 | 20 | 0.18± 10% | 20 | 15 | 70 |

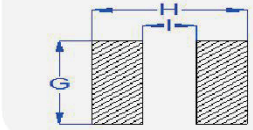
Notes:

Initial Inductance : Testing at 100KHz/1.0V
Saturation Current : DC current that will cause initial Inductance to drop approximately 20%.
Heating Current : DC current that will cause an approximate ΔT of 40 °C.
Note : All test data is referenced to 25 °C ambient.

2 Dimensions (mm)& recommend layout



Recommended Pad Layout



| P/N | A | B | C | D | E | F | G | I | H |
|---------------------|----------|---------|----------|------------|-----------|---------|---|-----|----|
| WHPBU-100710 Series | 10.0 Max | 7.0 Max | 10.0 Max | 2.4 ± 0.25 | 2.5 ± 0.5 | 4.4 Ref | 3 | 3.9 | 11 |

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TEL: +86 400 1048 018

WEB: WWW.WOHU-TEK.COM

TITLE:
Power Bead inductor

PART NO.:
WHPBU-100710N Series

REMARK: Surface Mount Package
Normal Applications

SIZE
A4

SACLE
1:1

SHEET
1/4

UNITS
MM[INCH]

REV
A0



GENERAL TOLERANCES
UNLESS SPECIFIED

x±0.35
.x±0.30

.xx±0.25
.xxx±0.10

APPROVED BY:
Geoffrey.Song

CHECKED BY:
Elvis.Song

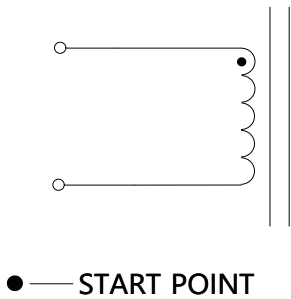
DESIGND BY:
Sunny.Xu

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7
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REACH & RoHS
COMPLIANT

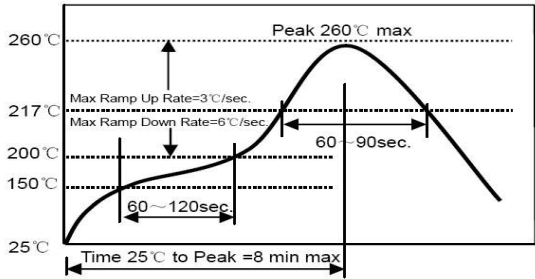
H
G
F
E
D
C
B
A

3 Schematics



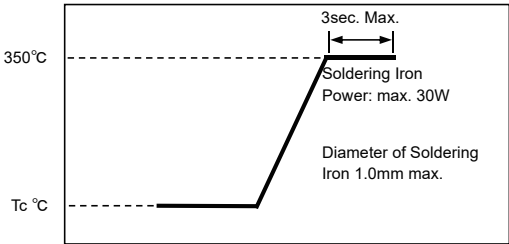
4 Recommended Solder Profile

a. Reflow Profile



Preheat condition: 150 ~200°C/60~120sec.
Allowed time above 217°C: 60~90sec.
Max temp: 260°C
Max time at max temp: 10 sec.
Solder paste: Sn/3.0Ag/0.5Cu
Allowed Reflow time: 2x max

b. Iron Soldering Profile



Iron soldering power: Max. 30W
Pre-heating: 150°C/60sec.
Soldering Tip temperature: 350°C Max.
Soldering time: 3sec. Max.
Solder paste: Sn/3.0Ag/0.5Cu
Max.1 times for iron soldering

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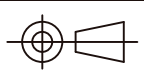
SIZE
A4

SACLE
1:1

SHEET
2/4

UNITS
MM[INCH]

REV
A0



GENERAL TOLERANCES
UNLESS SPECIFIED

$x \pm 0.35$
 $.x \pm 0.30$

$.xx \pm 0.25$
 $.xxx \pm 0.10$

$x^\circ \pm 3.0^\circ$
 $.x^\circ \pm 2.0^\circ$

$.xx^\circ \pm 1.5^\circ$
 $.xxx^\circ \pm 1.0^\circ$

APPROVED BY:
Geoffrey.Song

CHECKED BY:
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REACH & RoHS COMPLIANT

5 Reliability test

| NO. | Test Item | Specification and Requirement | Test Condition |
|-----|--------------------------|--|--|
| 1 | Solderability | 1. No case deformation or change in visual 2. New solder coverage More than 95% | 1.Preheat: 155℃±5℃ , 60S±2S 2.Tin: lead-free. 3.Temperature:240℃±5℃ , flux 3.0S±0.5S. |
| 2 | Mechanical shock | 1. No case deformation or change in visual 2. ΔL/Lo ≧ ±10% | 1. Acceleration: 100G 2. Pulse time: 6ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions |
| 3 | Mechanical vibration | 1. No case deformation or change in visual 2. ΔL/Lo ≧ ±10% | 1. Reflow: 2times 2. Frequency: 10HZ~55HZ~10HZ, 20 Min/Cycles 3. Amplitude: 1.52 mm±10% 4. Directions: X,Y,Z 5. Time: 12 cycle / direction |
| 4 | Thermal Shock | Inductance change: Within ± 10% Without distinct damage in visual | 1. First -55℃ for 30 minutes, last 125℃ for 30 minutes as 1 cycle. Go through 1000 cycles. 2. Max transfer time is 3 minutes. 3. Measured at room temperature after placing for 24±2 hours |
| 5 | Biased Humidity | Inductance change: Within ± 10% Without distinct damage in visual | 1.Reflow 2 times, 2.85℃±3℃,85%±3%RH,1000 hours 3.Measured at room temperature after placing for 24±2 hours |
| 6 | Low temperature storage | Inductance change: Within ± 10% Without distinct damage in visual | 1. Temperature: -55 ± 2℃ 2. Time: 1000 hours 3. Measured at room temperature after placing for 24±2 hours |
| 7 | High temperature storage | Inductance change: Within ± 10% Without distinct damage in visual | 1. Temperature: +125 ± 2℃ 2. Time: 1000 hours 3. Measured at room temperature after placing for 24±2 hours |

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GENERAL TOLERANCES

UNLESS SPECIFIED

x±0.35

.x±0.30

.xx±0.25

.xxx±0.10

x°±3.0°

.x°±2.0°

.xx°±1.5°

.xxx°±1.0°

APPROVED BY:

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|---|---|---|--|---|--------------|---|--|--|-------------------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| H | REACH & RoHS COMPLIANT | | | | | | | | H |
| | <div><div></div><div>REMINDERS</div></div> | | | | | | | | |
| G | <div><div>☆ The best assembly quality guarantee period of product: 12 months (From shipment date) Storage condition : seal in packaging, (temperature: 5 to 40°C, humidity: 10 to 75% RH or less).</div></div> | | | | | | | | G |
| | <div><div>☆ If taking out for use, the remaining products should be sealed in plastic bags and preserved in accordance with the above conditions, to avoid oxidation of electrodes and affect soldering status.</div></div> | | | | | | | | |
| F | <div><div>☆ Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).</div></div> | | | | | | | | F |
| | <div><div>☆ Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.</div></div> | | | | | | | | |
| E | <div><div>☆ Always handle products with care to avoid damage.</div></div> | | | | | | | | E |
| | <div><div>☆ Do not touch electrodes with bare hands directly, as oil secretions may inhibit soldering. Always ensure optimum conditions for soldering.</div></div> | | | | | | | | |
| D | <div><div>☆ Soldering corrections after mounting should be within the range of the conditions determined in the specifications.If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.</div></div> | | | | | | | | D |
| | <div><div>☆ Use a wrist band to discharge static electricity in your body through the grounding wire.</div></div> | | | | | | | | |
| C | <div><div>☆ Do not expose the products to magnets or magnetic fields.</div></div> | | | | | | | | C |
| | <div><div>☆ Do not use for a purpose outside of the contents regulated in the delivery specifications.</div></div> | | | | | | | | |
| B | | | | | | | | | B |
| A | <div><div></div><div>苏州沃虎电子科技有限公司 Su Zhou Voohu Electronic Tech.Co.Ltd</div></div> | | TITLE: Power Bead inductor | | SIZE A4 | UNITS MM[INCH] | GENERAL TOLERANCES UNLESS SPECIFIED | | APPROVED BY: Geoffrey.Song |
| | | | PART NO.: WHPBU-100710N Series | | SACLE 1:1 | REV A0 | <div><div>.xx±0.35</div><div>.x±0.30</div></div> | <div><div>x°±3.0°</div><div>.x°±2.0°</div></div> | CHECKED BY: Elvis.Song |
| | TEL: +86 400 1048 018 WEB: WWW.WOHU-TEK.COM | | REMARK: Surface Mount Package Normal Applications | | SHEET 4/4 |  | <div><div>.xx±0.25</div><div>.xxx±0.10</div></div> | <div><div>.xx°±1.5°</div><div>.xxx°±1.0°</div></div> | DESIGND BY: Sunny.Xu |
| | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |