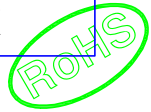
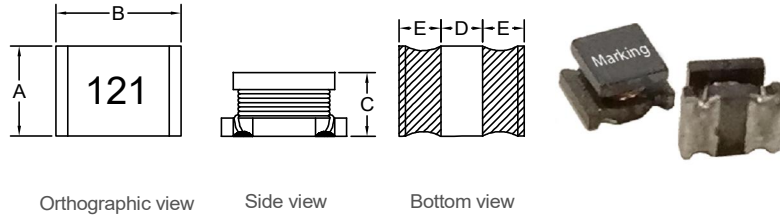


P/N: FALQH-1812-121K



Outline Dimensions(Unit:mm)



| A     | B     | C     | D    | E    |
|-------|-------|-------|------|------|
| ±0.30 | ±0.30 | ±0.30 | REF  | REF  |
| 3.20  | 4.50  | 2.60  | 1.00 | 1.75 |

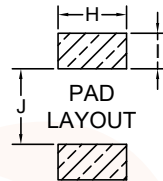
Recommended Soldering Temperature Graph.



Electrical Schematic



Suggested Pad layout



|   |          |
|---|----------|
| H | 3.50 REF |
| I | 2.45 REF |
| J | 1.00 REF |

|                  | Standard Profile    | Standard Profile    |
|------------------|---------------------|---------------------|
| Pre-heating      | 150~180°C,90s±30s   |                     |
| Heating          | above 220°C,30s-60s | above 240°C,30s Max |
| Peak temperature | 245°C±3°C           | 260°C,10s           |
| Cycle of reflow  | 2 times             | 2 times             |

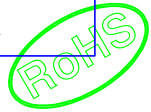
Electrical Characteristics(@25°C)

| Inductance<br>1KHz,0.25V | Q<br>(Min)0.796MHz | DC Resistor | Isat<br>(A)      |
|--------------------------|--------------------|-------------|------------------|
| 120uH±10%                | 40                 | 3.00Ω Max   | L(165mA)≥90%*L0A |

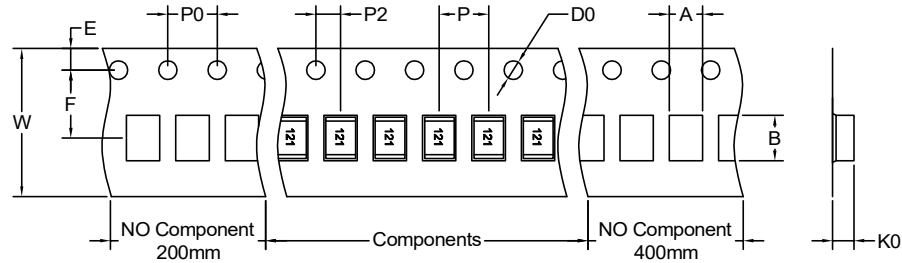
- \*\*\*Operating Temperature: -40°C~+125°C (Including temperature Rise)
- \*\*\*Storage Temperature: -40°C~+125°C
- \*\*\*Storage Humidity:RH10%~70%
- \*\*\*Temperature Rise:40°C typ.at Irms.

|     |             |   |      |   |  |   |  |  |  |  |  |
|-----|-------------|---|------|---|--|---|--|--|--|--|--|
|     |             | Tianchang Fuan Electronic Co Ltd<br>www.fuantronics.net<br>TEL: +86-550-7814888<br>FAX: +86-550-7831133 |      | <br>Tolerances unless otherwise specified:<br>(.X)±0.50 (.XX)±0.25<br>Unit of measurement: mm |  | Make: Qiumei.Liu<br>Checked: Beson. zhan<br>Approved: Anson. zhan |  | <b>DRAWING TITLE</b><br>SMD POWER WOUND INDUCTORS<br>Material Number: A341812XS250 |  | Customer Name:<br>Document/Rev: 00<br>Specification Sheet: 1 of 4<br>Date of Recognition: Jan./02/2020 |  |
| REV | DESCRIPTION | APPD  | DATE |   |  |   |  |  |  |  |  |

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Packing Specifications(Unit:mm):



|    |      |    |      |
|----|------|----|------|
| A0 | 3.45 | F  | 5.50 |
| B0 | 4.70 | D0 | 1.50 |
| P  | 8.00 | K0 | 3.15 |
| P0 | 4.00 | W  | 12.0 |
| P2 | 2.00 |    |      |
| E  | 1.75 |    |      |



Quantity:500pcs/Reel



Quantity: 500pcs



PE bag



Outer cases: 20000pcs/box  
Insufficient boxes filled with inner boxes or fillers



Inner box  
Quantity: 2000 pcs/box

|     |             |      |      |
|-----|-------------|------|------|
| REV | DESCRIPTION | APPD | DATE |
|-----|-------------|------|------|

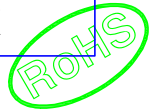
Tianchang Fuan Electronic Co Ltd  
www.fuantronics.net  
TEL: +86-550-7814888  
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Tolerances unless otherwise specified:  
(.X)±0.50 (.XX)±0.25  
Unit of measurement: mm

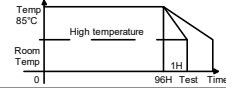
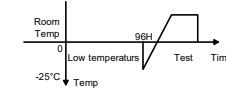
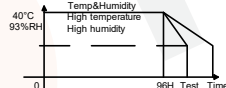
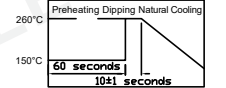
Make: Qiumei.Liu  
Checked: Beson. zhan  
Approved: Anson. zhan

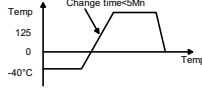
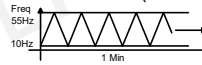
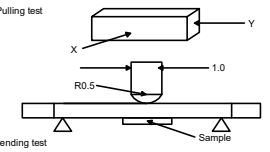
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SMD POWER WOUND INDUCTORS  
Material Number: A341812XS250

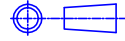
Customer Name:  
Document/Rev: 00  
Specification Sheet: 2 of 4  
Date of Recognition: Jan./02/2020



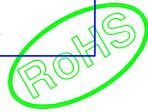
Reliability Testing:

| Ltem  | Specified value   | Test methods  |
|---|---|---|
| High temperature Storage test<br>Reference documents:<br>MIL-STD-202G Method 108A | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ . | Temperature: $85 \pm 2^\circ\text{C}$ Time: $96 \pm 2$ hours.<br><br>Tested not less than 1 hour, not more than 2 hours at room temperature.<br>   |
| Low temperature Storage test.<br>Referencedocuments:<br>IEC 68-2-1A 6.1 6.2       | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ . | Temperature: $25 \pm 2^\circ\text{C}$ Time: $96 \pm 2$ hours.<br><br>Tested not less than 1 hour, not more than 2 hours at room temperature.<br>   |
| Humidity test Reference Documents:<br>MIL-STD-202G Method 103B                    | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ . | 1.Dry oven at a temperature of $40^\circ \pm 5^\circ\text{C}$ for 24 hours.<br>2.Measurements At the end of this period<br>3.Exposure:Temperature: $40 \pm 2^\circ\text{C}$ ,Humidity: $93 \pm 3\% \text{RH}$ Time: $96 \pm 2$ hours.<br>4.Tested while the specimens are still in the chamber.<br>5.Tested not less than 1 hour, nor more than 2 hours at room temperature.<br> |
| Heat endurance of Reflow soldering  | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ . | Preheat: $150^\circ\text{C}$ ,60 second.<br>Solder:Sn/Ag/Cu.<br>Solder:Temperature: $260 \pm 5^\circ\text{C}$ .<br>Flux:Rosin flux.<br>Reflow peak time 10 second at $260^\circ\text{C}$<br>   |

| Ltem   | Specified value   | Test methods   |
|--|---|--|
| Thermal shock test<br>Reference documents:<br>MIL-STD-202G Method 107G                   | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ .<br>For T:weiges $\leq 28\text{g}$ :15 Min<br>28g $\geq$ weights $\leq 136\text{g}$ :30 Min  | First- $40^\circ\text{C}$ for T time,next+ $125^\circ\text{C}$ Ttime as 1 cycle. Go through 20 cycles.<br>    |
| Solderability test<br>Reference documents:<br>MIL-STD-202G Method 208H<br>IPC J-STD-002B | Terminals area must have 95% Min. Solder coverage.  | Dip pads in flux then dip in solder pot at $245 \pm 5^\circ\text{C}$ for 5 second.<br>Soler:Sn(93.5)Ag(3.5).<br>Flux:Rosin flux.   |
| Vibration test<br>Reference documents:<br>MIL-STD-202G Method 201A                       | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ .   | Apply frequency 10~55Hz. 0.75mm amplitude in each of perpendicular direction for 2 hours.(total 6 hours).<br> |
| Drop test<br>Reference documents:<br>MIL-STD-202G Method 203G                            | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ .<br>For T:weiges $\leq 28\text{g}$ :15 Min<br>28g $\geq$ weights $\leq 136\text{g}$ :30 Min  | Packaged & Drop down from 1m with $981\text{m/s}^2$ (100G)attitude in 1 angle 1 ridges & 2 surfaces orientations.  |
| Terminal strength push test<br>Reference documents:<br>JIS C 5321:1997                   | Pulling test:<br>DEFINE:A:sectional area of terminal<br>$A \leq 8(\text{Sq M})$<br>$8(\text{Sq M}) < A \leq 20(\text{Sq M})$<br>Force $\geq 5\text{N}$ time:30sec<br>$8(\text{Sq M}) < A \leq 20(\text{Sq M})$<br>Force $\geq 10\text{N}$ time:10sec<br>$20(\text{Sq M}) < A$ force $\geq 20\text{N}$ time:10sec<br>Bending test:<br>Soldering the products on PCB,after the pulling testand bending test, terminal should not pull off | Bend the testing PCB at middle point, the deflection shall be 2mm<br>                                       |

|     |             |      |      |   |  |   |  |  |
|-----|-------------|------|------|---|--|---|--|--|
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|-----|-------------|------|------|---|--|---|--|--|

P/N: FALQH-1812-121K

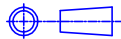


| Ltem   | Specified value   | Test methods   |
|--|---|--|
| Resistance to solvent test<br>Reference documents:<br>IEC 68-2-45:1993 | No case deformation or change in appearance, or obliteration of marking | To dip parts into IPA solvent for 5±0.5Min, then drying them at room temp for 5 Min, at last, to brushing making 10 times. |
| Electronic characteristic test of major products                       | Refer to catalogue of specific products                                 | Refer to catalogue of specific products  |
| Overload test<br>Reference documents:                                  | 1. During the test no smoke, no peculiar smell, no fire                 | Apply twice as rated current for 5 minutes.  |

Recommended solderability temperature profile:



Use rosin-based flux  
Don't use high acidic flux with halide content exceeding 0.2(wt)% (chlorine conversion value).  
Use lead-free solder, use Sn-3.0Ag-0.5Cu solder  
Standard thickness of solder paste: 0.12-0.15mm

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|-----|-------------|------|------|---|--|---|--|--|
| REV | DESCRIPTION | APPD | DATE |   |  |   |  |  |