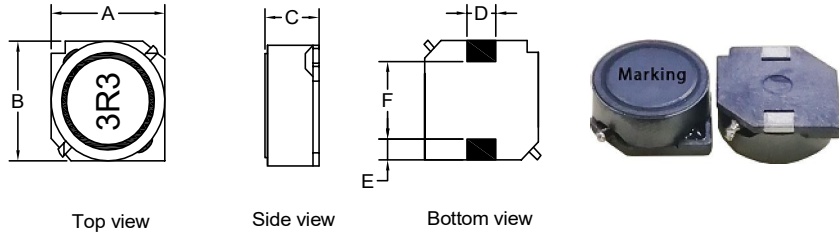


P/N: FASDRH12575-3R3N9R5

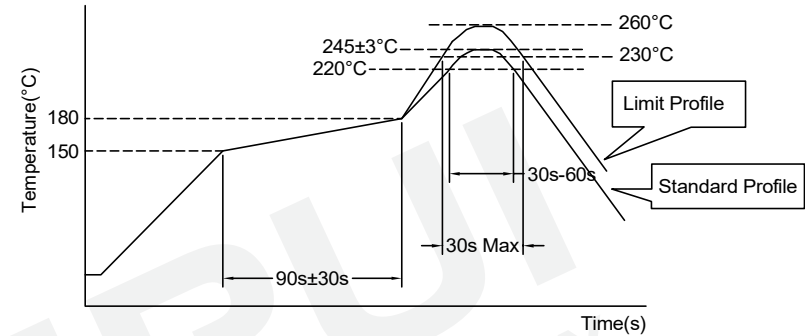


Outline Dimensions(Unit:mm)

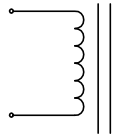


| A     | B     | C     | D    | E    | F    |
|-------|-------|-------|------|------|------|
| ±0.30 | ±0.30 | ±0.30 | REF  | REF  | REF  |
| 12.5  | 12.5  | 7.50  | 3.00 | 2.00 | 8.50 |

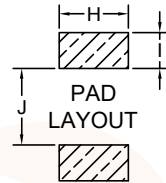
Recommended Soldering Temperature Graph.



Electronical Schematic



Suggested Pad layout



|   |          |
|---|----------|
| H | 3.20 REF |
| I | 2.80 REF |
| J | 8.00 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>100KHz,0.25V | DC Resistor | Isat<br>(A Max)  | Irms<br>(A)ΔT≤40°C |
|----------------------------|-------------|------------------|--------------------|
| 3.30uH±30%                 | 12.3mΩ Max  | L(9.50A)≥65%*L0A | 8.60A              |

\*\*\*Operating Temperature: -40°C~+125°C  
(Temperature rise included)

\*\*\*Storage Temperature: -40°C~+125°C

\*\*\*Storage Humidity:RH10%~70%

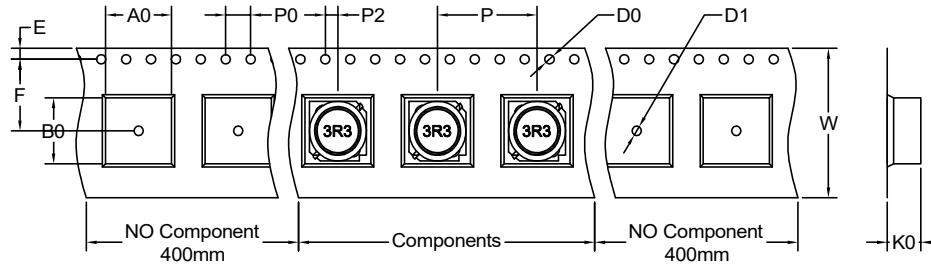
\*\*\*Weight:Approx 2.60g.

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

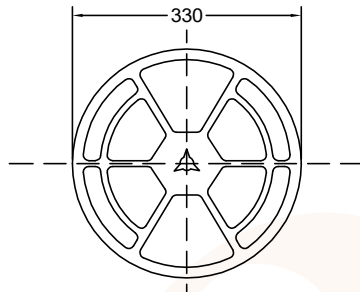
P/N: FASDRH12575-3R3N9R5

ROHS

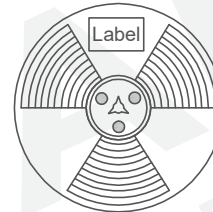
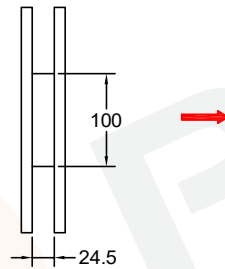
Packing Specifications(Unit:mm):



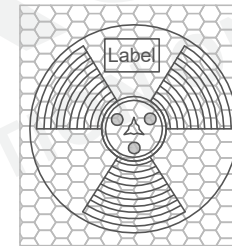
|    |      |    |      |
|----|------|----|------|
| A0 | 12.9 | F  | 11.5 |
| B0 | 12.9 | D0 | 1.50 |
| P  | 16.0 | D1 | 1.50 |
| P0 | 4.00 | K0 | 8.20 |
| P2 | 2.00 | W  | 24.0 |
| E  | 1.75 |    |      |



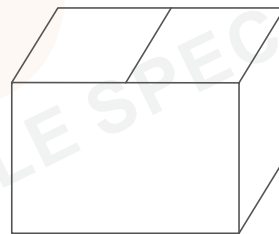
Quantity:350pcs/Reel



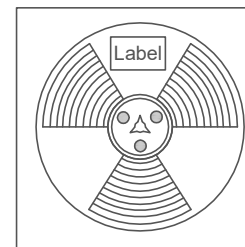
Quantity: 350pcs



PE bag




Outer cases: 1750pcs/box  
Insufficient boxes filled with inner boxes or fillers



Inner box  
Quantity: 350 pcs/box

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

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Tolerances unless otherwise specified:  
(.X)±0.50 (.XX)±0.25  
Unit of measurement: mm

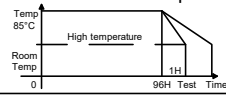
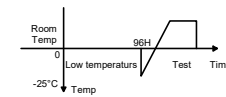
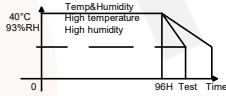
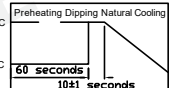
Make: Qiumei.Liu  
Checked: Beson. zhan  
Approved: Anson. zhan

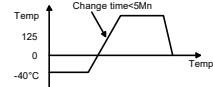
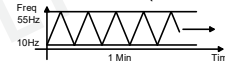
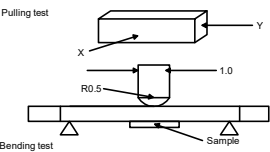
**DRAWING TITLE**  
SMD SHIELDED  
POWER INDUCTORS  
Material Number: A3412575S020

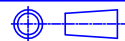
Customer Name:  
Document/Rev: 00  
Specification Sheet: 2 of 4  
Date of Recognition: Mar./31/2020



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>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>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 $40 \pm 5^\circ\text{C}$ 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>   |

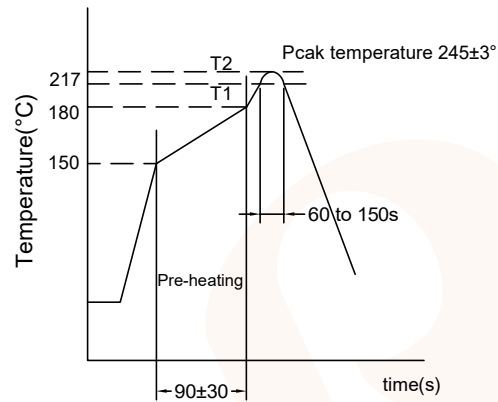
| Ltem   | Specified value   | Test methods   |
|--|---|--|
| Thermal shock test<br>Reference documents:<br>MIL-STD-202G Method 107G                   | 1.No case deformation or change in appearance.<br>2. $\Delta L/L \leq 10\%$ .<br>3. $\Delta Q/Q \leq 30\%$ .<br>4. $\Delta DCR/DCR \leq 10\%$ .<br>For T: $\text{weight} \leq 28\text{g}$ : 15 Min<br>$28\text{g} \leq \text{weight} \leq 136\text{g}$ : 30 Min   | First- $40^\circ\text{C}$ for T time, next+ $125^\circ\text{C}$ T time 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: $\text{weight} \leq 28\text{g}$ : 15 Min<br>$28\text{g} \leq \text{weight} \leq 136\text{g}$ : 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>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 test and bending test, terminal should not pull off | Bend the testing PCB at middle point, the deflection shall be 2mm<br>                                       |

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



| 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 |   |   |   |  |  |