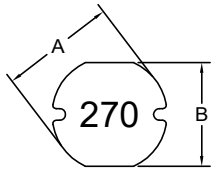
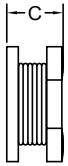
# P/N: FASDR1004-270M1R44

RoHS

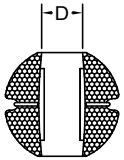
## Outline Dimensions(Unit:mm)



Orthographic view



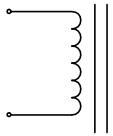
Side view



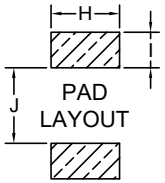
Bottom view


| A | B | C | D |
|---|---|---|---|
| ±0.30 | ±0.30 | ±0.30 | REF |
| 10.0 | 9.00 | 4.00 | 3.30 |

## Electronical Schematic

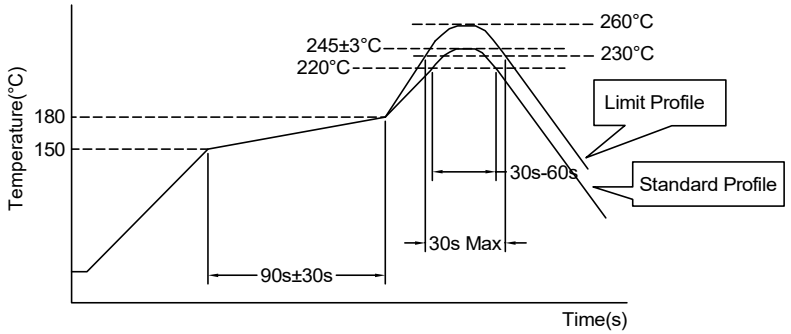


## Suggested Pad layout




| | |
|---|---|
| H | 9.50 REF |
| I | 3.75 REF |
| J | 2.50 REF |

## Recommended Soldering Temperature Graph.




| | 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(at 25°C)

| Inductance 1KHz,0.25V | DC Resistor | Isat (A Max) |
|---|---|---|
| 27.0uH±20% | 0.100Ω Max | L(1.44A)≥90%*L0A |

***Operating Temperature: -40°C~+125°C
(Temperature rise included)
***Storage Temperature: -40°C~+125°C
***Storage Humidity:RH10%~70%
***Weight:Approx 1.35g.

| 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 NON-SHIELDED POWER INDUCTORS

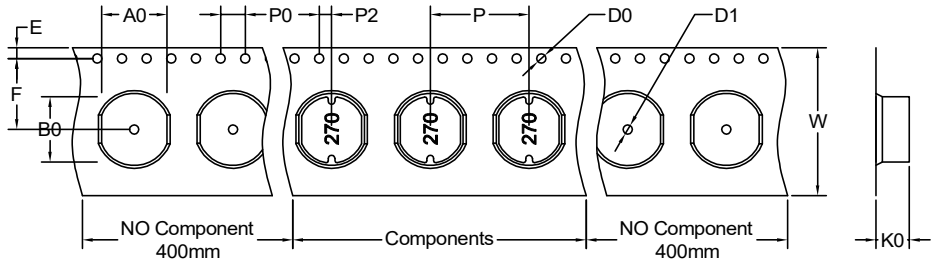
Material Number: A341004XS160

Customer Name:
Document/Rev: 00
Specification Sheet: 1 of 4
Date of Recognition: July./21/2020

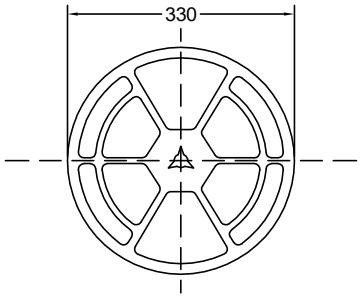
# P/N: FASDR1004-270M1R44

RoHS

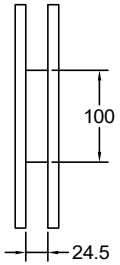
## Packing Specfications(Unit:mm):

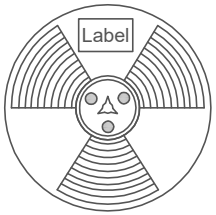



| | | | | | |
|---|---|---|---|---|---|
| A0 | 9.50 | | F | 7.50 |
| B0 | 10.4 | | D0 | 1.50 |
| P | 12.0 | | D1 | 1.50 |
| P0 | 4.00 | | K0 | 4.70 |
| P2 | 2.00 | | W | 24.0 |
| E | 1.75 | | | |

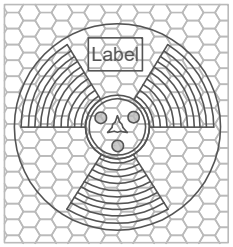



Quantity:500pcs/Reel

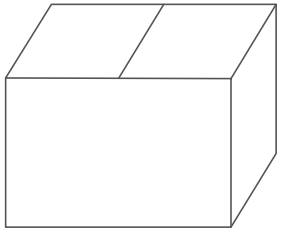


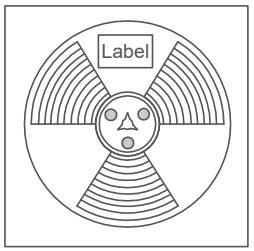

Quantity: 500pcs




PE bag



Outer cases: 3000pcs/box
Insufficient boxes filled with inner boxes or fillers




Inner box
Quantity: 1500 pcs/box

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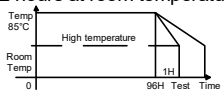
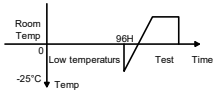
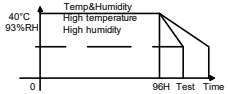
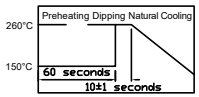
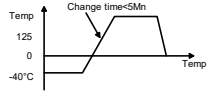
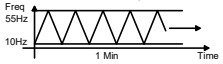
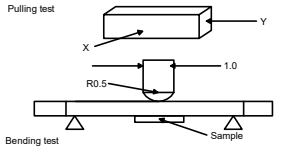
Customer Name:
Document/Rev: 00
Specification Sheet: 2 of 4
Date of Recognition: July./21/2020

# P/N: FASDR1004-270M1R44

ROHS

## Reliability Testing:

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

| Ltem | Specified value | Test methods |
|---|---|---|
| Thermal shock test Reference documents: MIL-STD-202G Method 107G | 1.No case deformation or change in appearance. 2.ΔL/L≤10%. 3.ΔQ/Q≤30%. 4.ΔDCR/DCR≤10%. For T:weighe≤28g:15 Min 28g≤weight≤136g:30 Min | First-40°C for T time,next+125°C Ttime as 1 cycle. Go through 20 cycles.   |
| Solderability test Reference documents: MIL-STD-202G Method 208H IPC J-STD-002B | Terminals area must have 95% Min. Solder coverage. | Dip pads in flux then dip in solder pot at 245±5°C for 5 second. Soler:Sn(93.5)Ag(3.5). Flux:Rosin flux. |
| Vibration test Reference documents: MIL-STD-202G Method 201A | 1.No case deformation or change in appearance. 2.ΔL/L≤10%. 3.ΔQ/Q≤30%. 4.ΔDCR/DCR≤10%. | Apply frequency 10~55Hz. 0.75mm amplitude in each of perpendicular direction for 2 hours.(total 6 hours).   |
| Drop test Reference documents: MIL-STD-202G Method 203G | 1.No case deformation or change in appearance. 2.ΔL/L≤10%. 3.ΔQ/Q≤30%. 4.ΔDCR/DCR≤10%. For T:weighe≤28g:15 Min 28g≤weight≤136g:30 Min | Packaged & Drop down from 1m with 981m/s2(100G)attitude in 1 angle 1 ridges & 2 surfaces orientations. |
| Terminal strength push test Reference documents: JIS C 5321:1997 | Pulling test: DEFINE:A:sectional area of terminal A≤8(Sq M) Force≥5N time:30sec 8(Sq M)<A≤20(Sq M) Force≥10N time:10sec 20(Sq M)<A force≥20N time:10sec Bending test: 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   |

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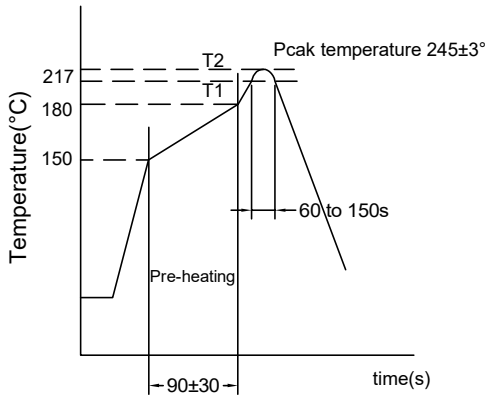
| Ltem | Specified value | Test methods |
|---|---|---|
| Resistance to solvent test<br>Reference documents:<br>IEC 68-2-45:1993 | No case deformation or change in appearance,or obliteration of marking | To dip parts into IPA solvent for 5±0.5Min, then drying them atroom temp for 5 Min,at last,to brushing 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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