

MOLDED WIREWOUND CHIP INDUCTORS

WI453232 SERIES

1. PART NO. EXPRESSION :

WI453232-R10JF

(a) (b) (c) (d)(e)

(a) Series code

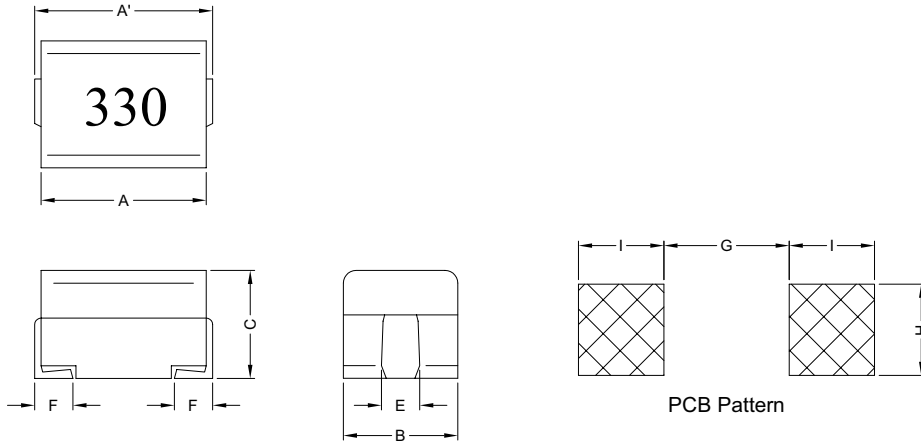
(b) Dimension code

(c) Inductance code : R10 = 0.10uH

(d) Tolerance code : J = ±5%, K = ±10%, M = ±20%

(e) F : Lead Free

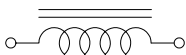
2. CONFIGURATION & DIMENSIONS :



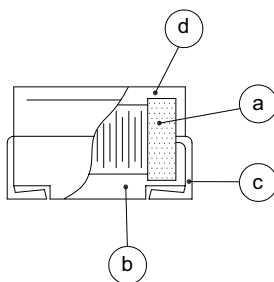
Unit:m/m

| A' | A | B | C | E | F | G | H | I |
|---------|---------|---------|---------|---------|---------|----------|----------|----------|
| 4.5±0.3 | 4.2±0.2 | 3.2±0.2 | 3.2±0.2 | 1.2±0.2 | 1.0±0.2 | 2.2 Ref. | 1.6 Ref. | 1.5 Ref. |

3. SCHEMATIC :



4. MATERIALS :



(a) Core : DR Ferrite Core

(b) Wire : Enamelled Copper Wire

(c) Terminal : Tinned Copper Plate

(d) Capsulate : Epoxy Novolac Molding Compound



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NOTE : Specifications subject to change without notice. Please check our website for latest information.

26.02.2009



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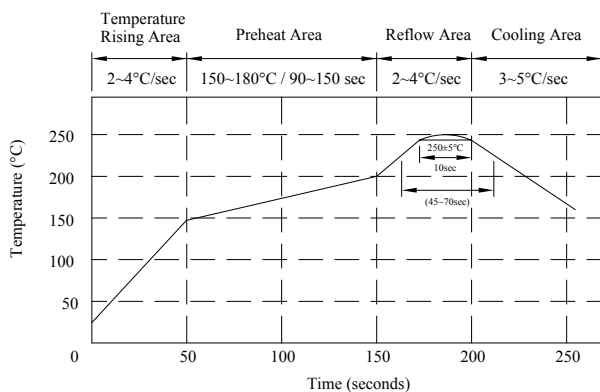
PG. 1

5. GENERAL SPECIFICATION :

- a) Temp. rise : 20°C Max.
- b) Ambient temp. : 100°C Max.
- c) Storage temp. : -40°C to +125°C
- d) Operating temp. : -40°C to +125°C
- e) Terminal strength : 0.5Kg Min.
- f) Rated current : Current cause inductance drop within 10%
- g) Resistance to solder heat : 260°C for 10secs
- h) Resistance to solvent : Per MIL-STD-202F

6. CHARACTERISTICS CURVES :

Peak Temp : 250°C Max.
 Max time above 230°C : 40sec Max.
 Max time above 200°C : 70sec Max.



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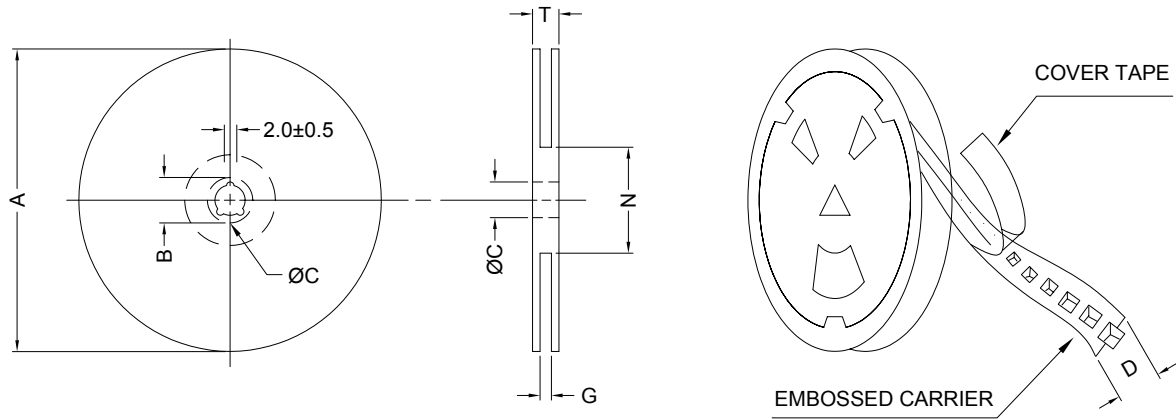
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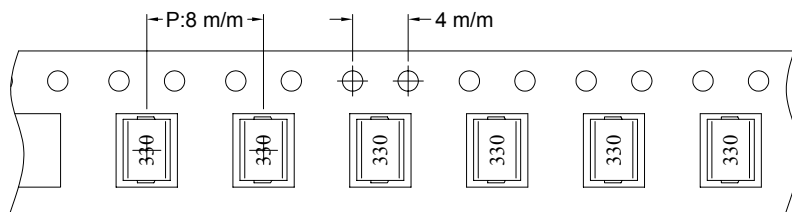
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8. PACKAGING INFORMATION :

(1) CONFIGURATION



* CARRIER TAPE WIDTH : D



(2) DIMENSIONS

Unit:m/m

| A | B | C | D | G | N | T |
|-----|--------|----|----|------------------|------------------|------|
| 178 | 21±0.8 | 13 | 12 | 14 ⁺⁰ | 50 ⁻⁰ | 16.5 |

(3) Q'TY & G.W. PER PACKAGE

Packing : 500pcs/reel



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9. RELIABILITY TEST :

| TEST ITEM | SPECIFICATION | TEST CONDITION / TEST METHOD |
|----------------------------------|--|--|
| ● ELECTRICAL PERFORMANCE TEST | | |
| INDUCTANCE L | REFER TO STANDARD ELECTRICAL CHARACTERISTIC LIST | HP4194A, HPE4991A, HP4285A |
| Q | | IMPEDANCE ANALYZER : HP4194A, HPE4991A |
| SELF RESONANCE FREQUENCY SRF | | DIGITAL MULTIMETER : 502BC |
| DC RESISTANCE RDC | | APPLIED THE CURRENT TO COILS, THE INDUCTANCE CHANGE SHALL BE LESS THAN 10% TO INITIAL VALUE & TEMPERATURE RISE SHALL NOT BE MORE THAN 20°C |
| RATED CURRENT IDC | | |
| TEMPERATURE RISE TEST | 20°C MAX | 1. APPLIED THE ALLOWED DC CURRENT FOR 10 MINUTES 2. TEMPERATURE MEASURE BY DIGITAL SURFACE THERMOMETER |
| OVER LOAD TEST | AFTER TEST, INDUCTORS SHALL BE NO EVIDENCE OF ELECTRICAL AND MECHANICAL DAMAGE | APPLIED 2 TIMES OF RATED ALLOWED DC CURRENT TO INDUCTOR FOR A PERIOD OF 5 MINUTES |
| WITHSTANDING VOLTAGE TEST | AFTER TEST, INDUCTORS SHALL BE NO EVIDENCE OF ELECTRICAL AND MECHANICAL DAMAGE | AC VOLTAGE OF 1000VAC APPLIED BETWEEN INDUCTORS TERMINAL AND CASE FOR 5 SECONDS |
| INSULATION RESISTANCE TEST | 1000 MOHM MIN. | 100 VDC APPLIED BETWEEN INDUCTOR TERMINAL AND COATING |
| ● MECHANICAL PERFORMANCE TEST | | |
| VIBRATION TEST (LOW FREQUENCY) | 1. INDUCTORS SHALL BE NO EVIDENCE OF ELECTRICAL AND MECHANICAL DAMAGE | 1. AMPLITUDE :1.5 m/m 2. FREQUENCY :10 -- 55 -- 10 HZ / 1MIN 3. DIRECTION :X, Y, Z 4. DURATION :2 HRS / X, Y, Z |
| SHOCK TEST | 2. INDUCTANCE SHALL NOT CHANGE MORE THAN ±5% | INDUCTORS SHALL BE DROPPED 10 TIMES FROM A HEIGHT OF 1m ONTO 3cm WOODEN BOARD |
| RESISTANCE TO SOLDERING HEAT | 3. Q SHALL NOT CHANGE MORE THAN ±20% | TEMP :260±5°C TIME :10±1.0 SEC |



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9. RELIABILITY TEST :

| | | |
|---------------------------------|--|--|
| TERMINAL STRENGTH-PULL TEST | TERMINAL SHALL NOT BE LOOSENED OR RUPTURED | A 0.5KG LOAD SHALL BE APPLIED TO BOTH TERMINALS IN THE AXIS DIRECTION FOR 1 MINUTE. |
| SOLDERABILITY TEST | THE TERMINAL SHALL BE AT LEAST 90% COVERED WITH SOLDER | AFTER FLUXING, INDUCTOR SHALL BE DIPPED IN A MELTED SOLDER BATH AT 240±5°C FOR 5 SECONDS. |
| RESISTANCE TO SOLVENT TEST | THERE SHALL BE NO CASE DEFORMATION CHANGE IN APPEARANCE OR OBLITERATION OF MARKING | MIL-STD-202F, METHOD 215D |
| ● CLIMATIC TEST | | |
| TEMPERATURE CHARACTERISTIC | 1. INDUCTORS SHALL BE NO EVIDENCE OF ELECTRICAL AND MECHANICAL DAMAGE 2. INDUCTANCE SHALL NOT CHANGE MORE THAN ±10% 3. Q SHALL NOT CHANGE MORE THAN ±20% | -40°C ----- +125°C |
| HUMIDITY TEST | | 1. TEMP :40±2°C 2. R.H. :90 ----- 95% 3. TIME :96±2 HOURS |
| COLD TEST | | 1. TEMP :-25±2°C 2. TIME :96±2 HOURS |
| THERMAL SHOCK TEST | | <pre> graph LR A[ROOM TEMP 15 MINS] --> B[-40±2°C 30 MINS] B --> C[ROOM TEMP 15 MINS] C --> D[125±2°C 30 MINS] </pre> |
| DRY HEAT TEST | | TOTAL :5 CYCLES 1. TEMP :85±2°C 2. TIME :96±2 HOURS |
| HIGH TEMPERATURE LOAD LIFE TEST | THERE SHALL BE NO EVIDENCE OF SHORT OR OPEN CIRCUITING | 1. TEMP :85±2°C 2. TIME :1000±12 HOURS 3. LOAD :ALLOWED DC CURRENT |
| HUMIDITY LOAD LIFE | | 1. TEMP :40±2°C 2. R.H. :90 ----- 95% 3. TIME :1000±12 HOURS 4. LOAD :ALLOWED DC CURRENT |

● Note :

Unless otherwise specified, allow the specimen to stand at room temperature for 1 hour or more but more than 2 hours, measure the electrical and mechanical performances



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