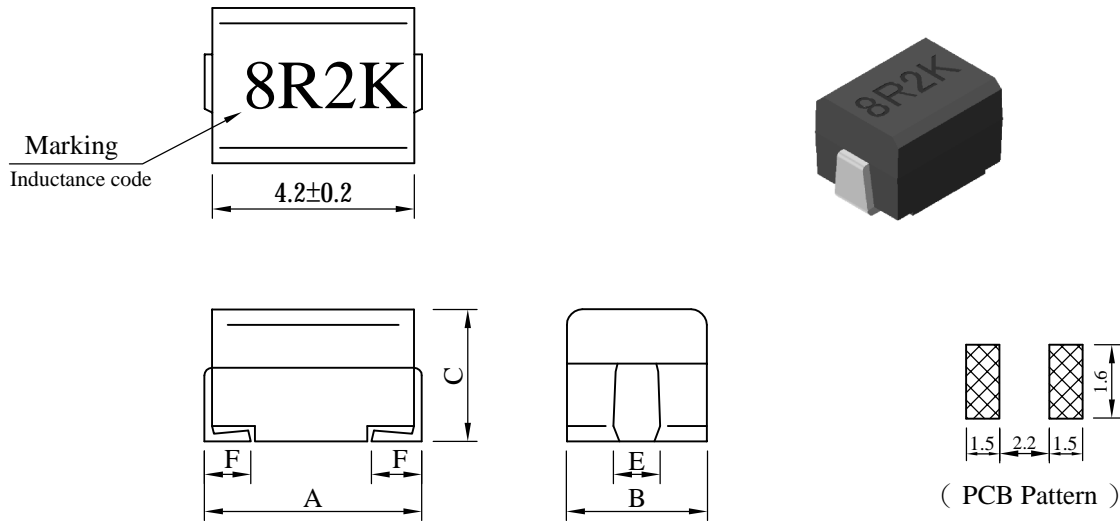


# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□S□-□□□		
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## I . Configuration and dimensions :



Unit : mm

A	B	C	E	F
$4.50 \pm 0.3$	$3.20 \pm 0.2$	$3.20 \pm 0.2$	1.20	$1.00^{+0.3}_{-0.0}$

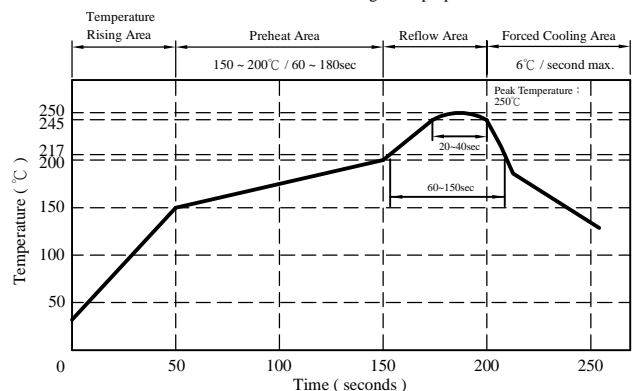
## II . Description :

- a . Ferrite drum core construction.
- b . Enamelled copper wire : H class
- c . Product weight : 0.110 g ( ref. )
- d . Moisture sensitivity Level 1
- e . Products comply with RoHS' requirements

## III . General specification :

- a . Temp. rise : 20°C max.
- b . Ambient temp. : 100°C max.
- c . Storage temp. : -40°C ----+125°C
- d . Operating temp. : -40°C ----+125°C  
(Temp. rise included)
- e . Terminal pull strength : 1.5 kg min.
- f . Rated current : Current cause  
inductance drop within 10%
- g . Resistance to solder heat : 260°C .10 secs.
- h . Resistance to solvent : Per MIL-STD-202F

Reflow profile  
 Peak Temp : 250°C max.  
 Max time above 245°C : 20~40sec max.  
 Max time above 217°C : 60~150sec max.  
 200°C ~250°C Average Ramp-up Rate : 3°C/second max.



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**IV . Electrical characteristics :**

DWG. No.	Inductance ( μH )	Tolerance	Q min.	Test Freq. ( MHz )	SRF ( MHz ) typ.	RDC ( Ω ) max.	IDC ( mA ) max.
CC45321R0□S□-□□□	1.0	J, K, M	10	7.960	265.0	0.11	1050
CC45321R2□S□-□□□	1.2	J, K, M	10	7.960	180.0	0.12	1000
CC45321R5□S□-□□□	1.5	J, K, M	10	7.960	170.0	0.15	950
CC45321R8□S□-□□□	1.8	J, K, M	10	7.960	105.0	0.16	900
CC45322R2□S□-□□□	2.2	J, K, M	10	7.960	80.0	0.18	850
CC45322R7□S□-□□□	2.7	J, K, M	10	7.960	60.0	0.20	800
CC45323R3□S□-□□□	3.3	J, K, M	10	7.960	55.0	0.22	750
CC45323R9□S□-□□□	3.9	J, K, M	10	7.960	45.0	0.24	700
CC45324R7□S□-□□□	4.7	J, K, M	10	7.960	43.0	0.27	650
CC45325R6□S□-□□□	5.6	J, K, M	10	7.960	40.0	0.30	650
CC45326R8□S□-□□□	6.8	J, K, M	10	7.960	35.0	0.35	600
CC45328R2□S□-□□□	8.2	J, K, M	10	7.960	30.0	0.40	600
CC4532100□S□-□□□	10.0	J, K, M	10	2.520	27.0	0.50	550
CC4532120□S□-□□□	12.0	J, K, M	10	2.520	25.0	0.60	500
CC4532150□S□-□□□	15.0	J, K, M	10	2.520	20.0	0.70	450
CC4532180□S□-□□□	18.0	J, K, M	10	2.520	19.0	0.80	400
CC4532220□S□-□□□	22.0	J, K, M	10	2.520	18.0	0.90	370
CC4532270□S□-□□□	27.0	J, K, M	10	2.520	16.0	1.20	330
CC4532330□S□-□□□	33.0	J, K, M	10	2.520	15.0	1.40	300
CC4532390□S□-□□□	39.0	J, K, M	10	2.520	13.0	1.60	280
CC4532470□S□-□□□	47.0	J, K, M	10	2.520	12.0	1.90	260
CC4532560□S□-□□□	56.0	J, K, M	10	2.520	10.0	2.20	240
CC4532680□S□-□□□	68.0	J, K, M	10	2.520	9.5	2.60	220
CC4532820□S□-□□□	82.0	J, K, M	10	2.520	8.5	3.50	200
CC4532101□S□-□□□	100.0	J, K, M	20	0.796	8.0	4.00	180
CC4532121□S□-□□□	120.0	J, K, M	20	0.796	7.0	4.50	160
CC4532151□S□-□□□	150.0	J, K, M	20	0.796	6.5	6.50	140
CC4532181□S□-□□□	180.0	J, K, M	20	0.796	6.0	7.50	120
CC4532221□S□-□□□	220.0	J, K, M	20	0.796	5.5	9.00	120
CC4532271□S□-□□□	270.0	J, K, M	20	0.796	5.0	11.00	100
CC4532331□S□-□□□	330.0	J, K, M	20	0.796	4.5	13.00	90
CC4532391□S□-□□□	390.0	J, K, M	20	0.796	4.0	14.00	85
CC4532471□S□-□□□	470.0	J, K, M	20	0.796	3.5	16.00	75
CC4532561□S□-□□□	560.0	J, K, M	20	0.796	3.0	21.00	70
CC4532681□S□-□□□	680.0	J, K, M	20	0.796	2.5	24.20	65

- 1). Electrical specifications at 25°C
- 2). Tolerance : J = ±5%, K = ±10%, M = ±20%

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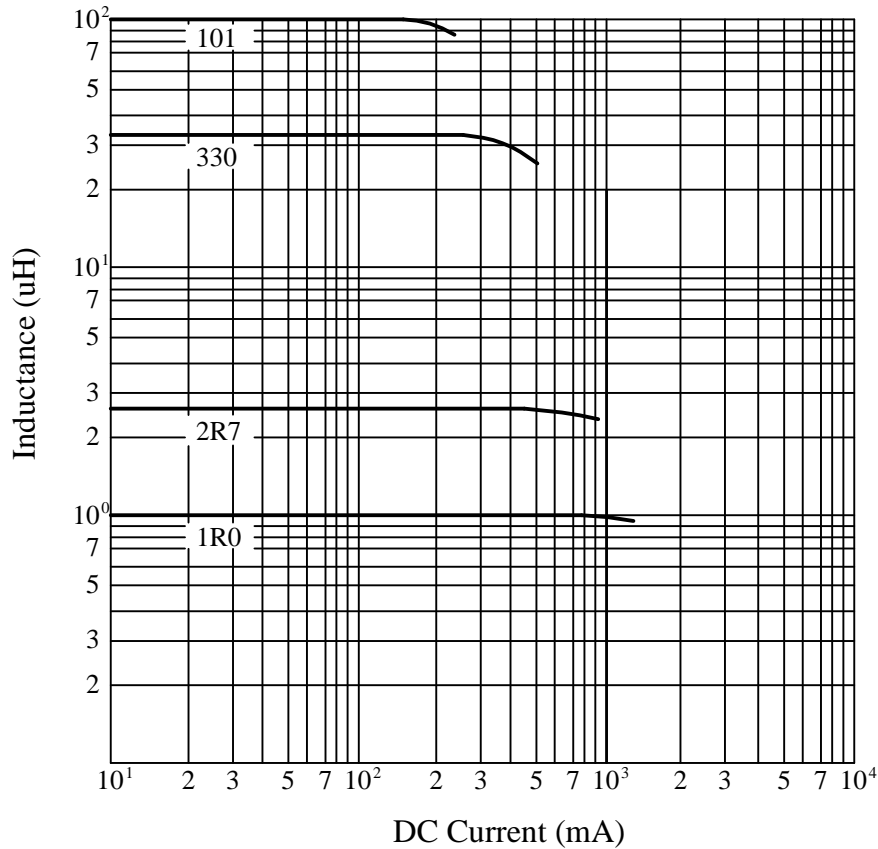
# SPECIFICATION FOR APPROVAL

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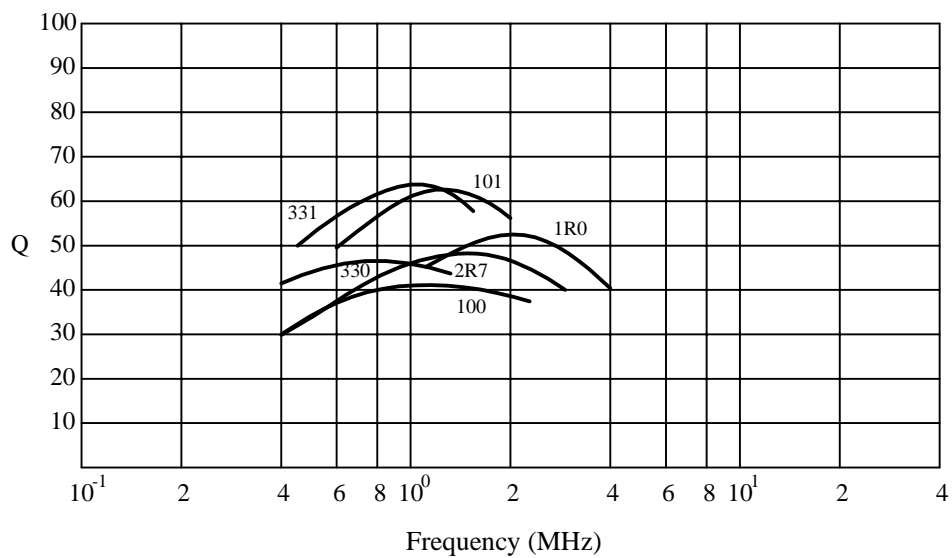
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V . Curve :

@ Inductance VS. DC Superposition Characteristics



@ Q VS. Frequency Response



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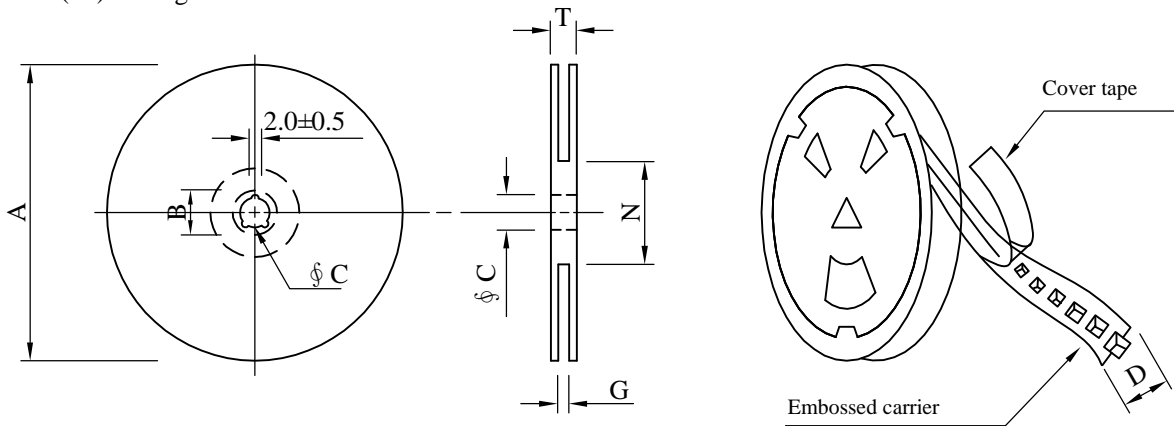
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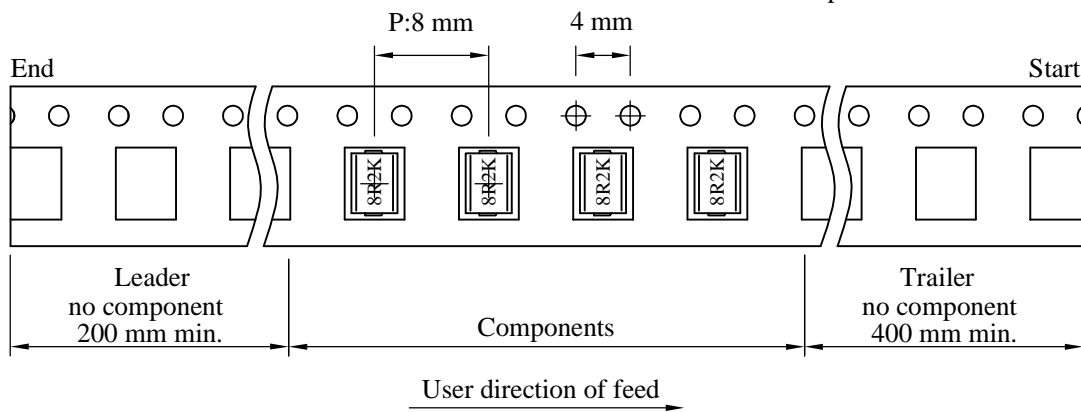
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## VI . Packaging information :

### ( 1 ) Configuration



※Carrier tape width : D



※ There is no differentiation or directions of polarity ( marking ) in the packaging method.

### ( 2 ) Dimensions

Unit:mm

Style	A	B	C	D	G	N	T
07 - 12	178	21±0.8	13	12	14 <sup>+0</sup>	50 <sup>-0</sup>	16.5
13 - 12	330	21±0.8	13±0.5	12	14 <sup>+0</sup>	50 <sup>-0</sup>	18.4

### ( 3 ) Q'TY & G.W. Per package

Series	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (g)	Style	Q'TY (pcs)	G.W. (kg)	Size (cm)
B · D	500	140	07 - 12	20,000	8.00	39.5 x 39.5 x 23.0
C · E	2,000	550	13 - 12	18,000	8.50	37.5 x 36.5 x 19.0

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# SPECIFICATION FOR APPROVAL

REF. :

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## VIII . Reliability test :

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125±2℃ 2.Time:96±2 hours.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
2.Temperature Cycling	JESD22-A 104	1.Temperature: -40℃ ~ +125℃ 2.Number of cycle:100 cycles. 3.Dwell time:30 minutes	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
3.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature : 85±2 ℃ 2.Humidity: 85% RH. 3.Time:96±2 Hours	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
4.Operational Life	JESD22-A 108	1.Temperature: 125℃ (Temp. rise included) 2.Time:96±2 hours. 3.Rated current	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
5.External Visual	JESD22-B 101 & MIL-STD-883 Method 2009	Inspect product constructions, marking and workmanship.	1.No pollution on the surface of products. 2.Clear marking. 3.No crack.
6.Physical Dimensions	JESD22-B 100	Verify physical dimensions to the applicable product detail specification.	Per product specification standard
7.Resistance to solvents	MIL-STD-202 Method 215	Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles.	1.No body change in apperance. 2.No marking blurred. 3.Inductance shall not change more than ±10%.
8.Vibration Test	MIL-STD-202 Method 204	1.Frequency and Amplitud : 10-2000-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210 & J-STD020D.1	1.Highest temperature : 250±5℃. 2.Time ( temp. ≥ 217℃ ) : 60~150 Seconds. 3.IR reflow times : 3 times.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
10.Saturation Current	JIS C 6436 & User SPEC.	1.Applied rated current for 5 second. 2.Rated current	Inductance shall not drop more than 10% max.
11.Over load	JIS C 6436 & User SPEC.	1.Applied one and half rated current for a period of 5 minutes. 2.Rated current	No electrical or mechanical damage
12.Temperature Rise Current	JIS C 6436 & User SPEC.	1.Applied rated current for 10 minutes. 2.Temperature measure by digital surface thermometer. 3.Irms current	Surface temperature rise is less than 20℃ max.
13.Solderability Test	J-STD-002 & JESD22-B 102	1.Baking in pre-testing : 150±5℃ / 16Hours±30 min. 2.Peak temperature : 240±5℃ 3.Time ( temp. ≥ 217℃ ) : 60~150 seconds. 4.IR reflow times : 1 time.	More than 95% soldering coverage min on terminations.
14.Electrical Characteriazation	MIL-STD-202 Method 304 & User SPEC.	1.Operating temperature : -40℃~125℃ 2.Room temperature : 25℃.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
15.Withstanding Voltage Test	MIL-STD-202 Method 301 & User SPEC.	1.DC: 500 V (Terminal to Coating) 2.Time : 1minute.	1.During the test no breakdown. 2.No mechanical or electrical damage.
16.Insulation Resistance	MIL-STD-202 Method 302	DC voltage 100V applied between inductor terminal and coating for 1 minute.	1.IR = 1000MΩ Min. 2.No mechanical or electrical damage.
17.Drop	CNS-C6354 & GB/T 2423.8	1.Products shall be mounted on SPEC. pcb and dropped down from a heigh of 1m 2.Drop total time : 6 times. (Every side ofsample drop 2 time)	1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage.
18.Terminal Strength Test	IEC 60068-2-21	1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60±1 seconds.	After test, inductors shall be no mechanical damage.

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