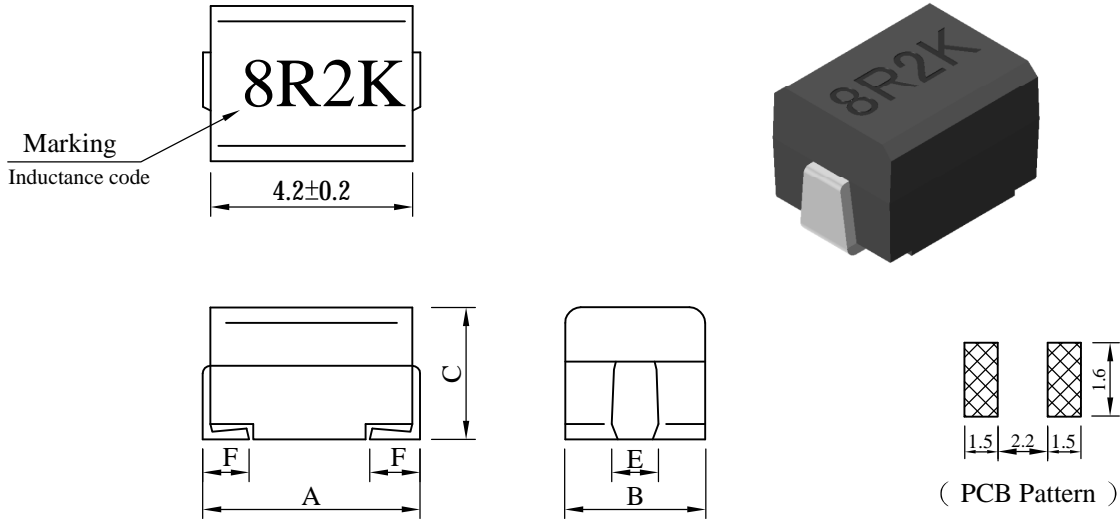


# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□L□-□□□		
		REV.	20160715-K	PAGE	1

## I . Configuration and dimensions :



Unit : m/m

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

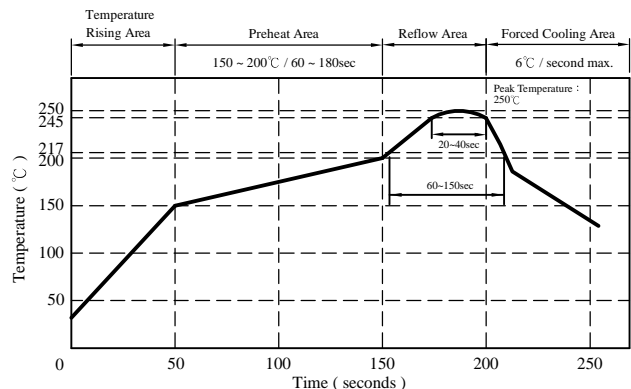
## II . Description :

- a . Ferrite drum core construction.
- b . Enamelled copper wire : H class
- c . Product weight : 0.110 g ( ref. )
- d . Moisture sensitivity Level 3
- 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 : 250°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.



AR-001C

# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□L□-□□□		
		REV.	20160715-K	PAGE	2

IV . Electrical characteristics :

DWG No.	Inductance ( $\mu$ H)	Q min.	Test Freq. ( MHz )	SRF ( MHz ) min.	RDC ( $\Omega$ ) max.	IDC ( mA ) max.
CC45321R0KL□ -□□□	1.00 $\pm$ 10%	10	7.96	180.0	0.11	1050
CC45321R2KL□ -□□□	1.20 $\pm$ 10%	10	7.96	160.0	0.12	1000
CC45321R5KL□ -□□□	1.50 $\pm$ 10%	10	7.96	130.0	0.15	950
CC45321R8KL□ -□□□	1.80 $\pm$ 10%	10	7.96	100.0	0.16	900
CC45322R2KL□ -□□□	2.20 $\pm$ 10%	10	7.96	80.0	0.18	850
CC45322R7KL□ -□□□	2.70 $\pm$ 10%	10	7.96	60.0	0.20	800
CC45323R3KL□ -□□□	3.30 $\pm$ 10%	10	7.96	45.0	0.22	750
CC45323R9KL□ -□□□	3.90 $\pm$ 10%	10	7.96	40.0	0.24	700
CC45324R7KL□ -□□□	4.70 $\pm$ 10%	10	7.96	35.0	0.27	650
CC45325R6KL□ -□□□	5.60 $\pm$ 10%	10	7.96	30.0	0.30	650
CC45326R8KL□ -□□□	6.80 $\pm$ 10%	10	7.96	28.0	0.35	600
CC45328R2KL□ -□□□	8.20 $\pm$ 10%	10	7.96	25.0	0.40	600
CC4532100KL□ -□□□	10.00 $\pm$ 10%	10	2.52	22.0	0.50	550
CC4532120KL□ -□□□	12.00 $\pm$ 10%	10	2.52	21.0	0.60	500
CC4532150KL□ -□□□	15.00 $\pm$ 10%	10	2.52	20.0	0.70	450
CC4532180KL□ -□□□	18.00 $\pm$ 10%	10	2.52	19.0	0.80	400
CC4532220KL□ -□□□	22.00 $\pm$ 10%	10	2.52	18.0	0.90	370
CC4532270KL□ -□□□	27.00 $\pm$ 10%	10	2.52	16.0	1.20	330
CC4532330KL□ -□□□	33.00 $\pm$ 10%	10	2.52	14.0	1.40	300
CC4532390KL□ -□□□	39.00 $\pm$ 10%	10	2.52	12.0	1.60	280
CC4532470KL□ -□□□	47.00 $\pm$ 10%	10	2.52	11.5	1.90	260
CC4532560KL□ -□□□	56.00 $\pm$ 10%	10	2.52	11.0	2.20	240
CC4532680KL□ -□□□	68.00 $\pm$ 10%	10	2.52	10.0	2.60	220
CC4532820KL□ -□□□	82.00 $\pm$ 10%	10	2.52	9.0	3.50	200
CC4532101KL□ -□□□	100.00 $\pm$ 10%	20	0.796	8.0	4.00	180
CC4532121KL□ -□□□	120.00 $\pm$ 10%	20	0.796	7.5	4.50	160
CC4532151KL□ -□□□	150.00 $\pm$ 10%	20	0.796	7.0	6.50	140
CC4532181KL□ -□□□	180.00 $\pm$ 10%	20	0.796	6.5	7.50	120
CC4532221KL□ -□□□	220.00 $\pm$ 10%	20	0.796	5.5	9.00	120
CC4532271KL□ -□□□	270.00 $\pm$ 10%	20	0.796	5.0	11.00	100
CC4532331KL□ -□□□	330.00 $\pm$ 10%	20	0.796	4.0	13.00	90
CC4532391KL□ -□□□	390.00 $\pm$ 10%	20	0.796	3.0	14.00	85
CC4532471KL□ -□□□	470.00 $\pm$ 10%	20	0.796	3.0	16.00	75
CC4532561KL□ -□□□	560.00 $\pm$ 10%	20	0.796	3.0	21.00	70
CC4532681KL□ -□□□	680.00 $\pm$ 10%	20	0.796	2.5	24.20	65

- 1). □ : Packaging information : □ Code
- 2). "-□□□" : Reference code
- 3). Electrical specifications at 25°C

AR-001C

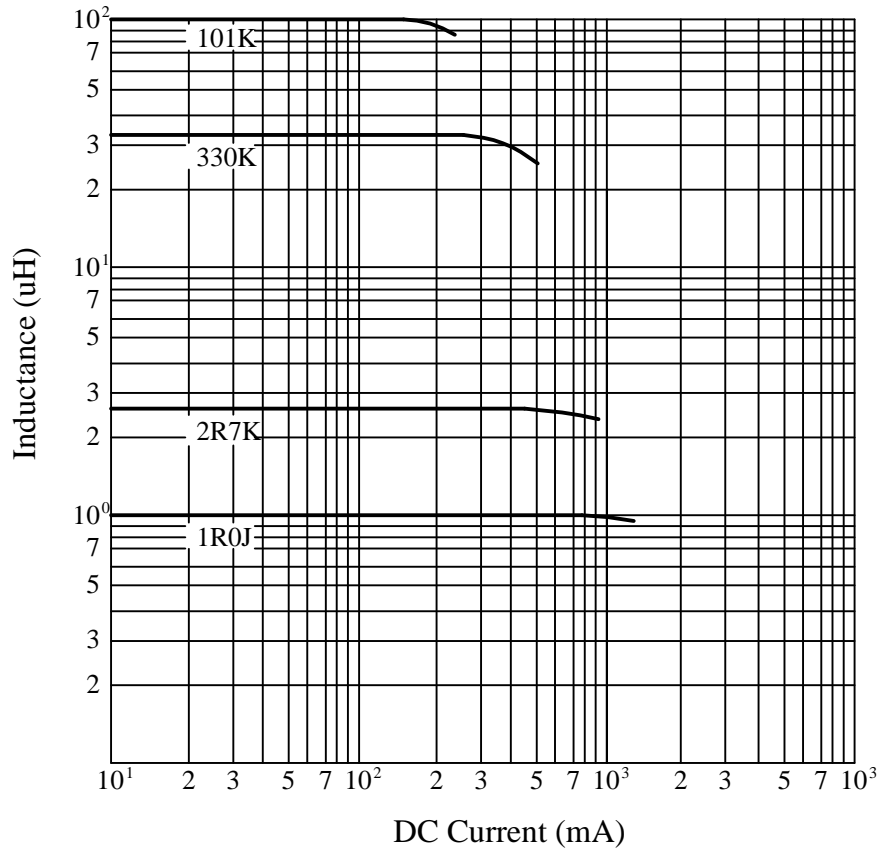
# SPECIFICATION FOR APPROVAL

REF. :

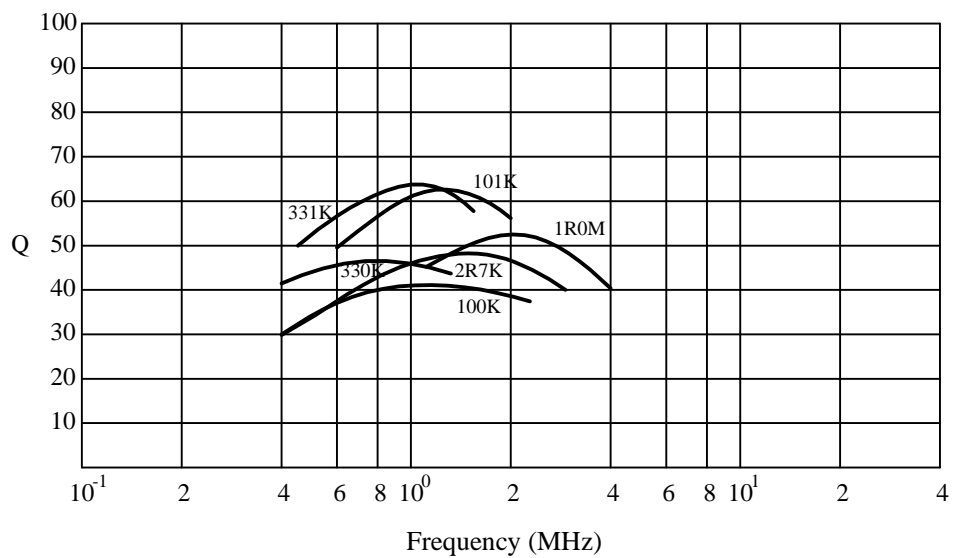
PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□L□-□□□		
		REV.	20160715-K	PAGE	3

V . Curve :

@ Inductance VS. DC Superposition Characteristics



@ Q VS. Frequency Response



AR-001C

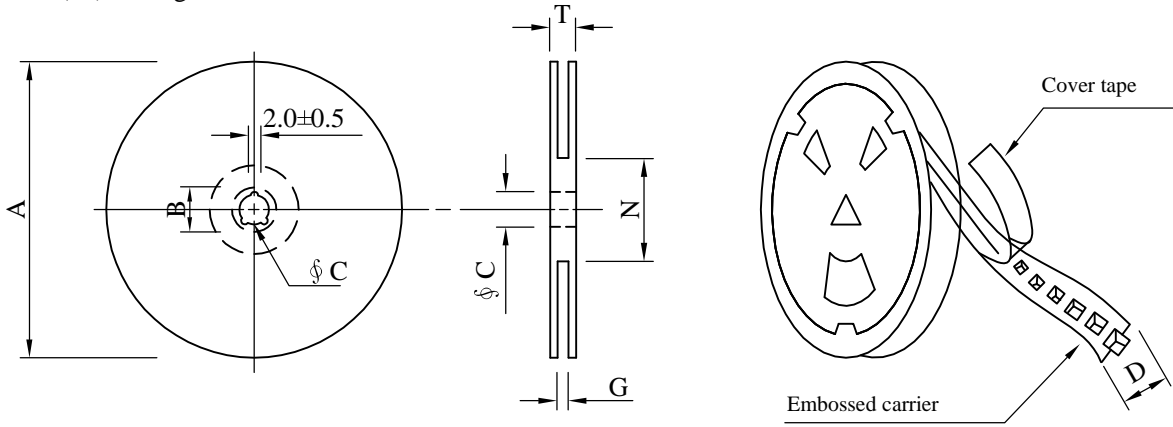
# SPECIFICATION FOR APPROVAL

REF. :

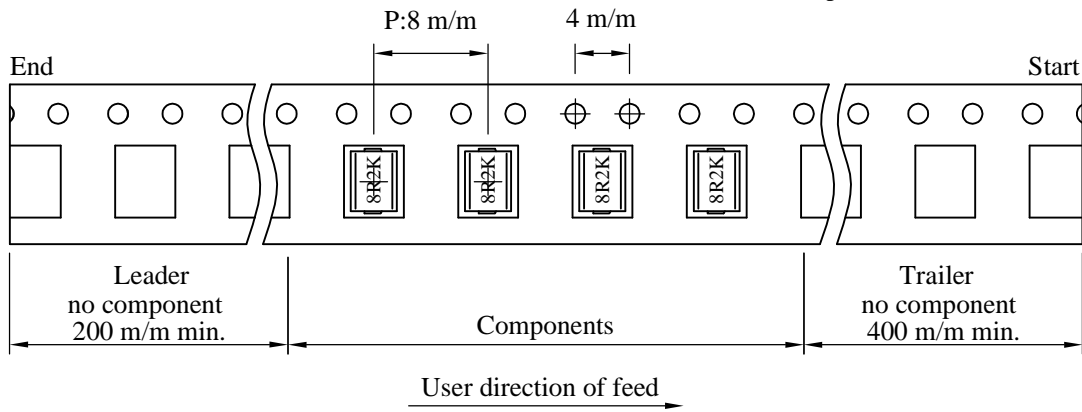
PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□L□-□□□		
		REV.	20160715-K	PAGE	4

## 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:m/m

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. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B、D	500	140	07 - 12	20,000	8.00	41 x 39 x 22
C、E、F	2,000	550	13 - 12	12,000	5.70	38 x 37 x 22
G	1,000	270	13 - 12	6,000	2.80	38 x 37 x 22

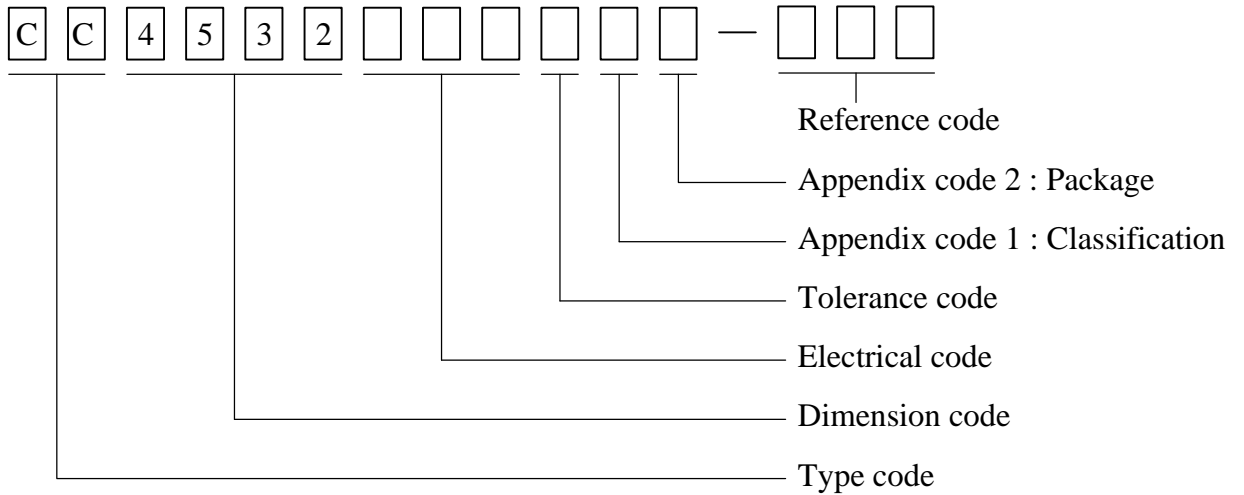
AR-001C

# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□L□-□□□		
		REV.	20160715-K	PAGE	5

VI . Drawing number expression :

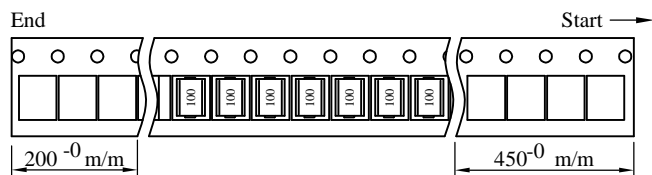


Appendix code 1 : Product Classification

Appendix code 2 : Package Information

Code	Inner package	Cover tape	Carrier tape	Bag	Package Q'TY	Remark
B	T /R (Reel package)	UCT	Non-antistatic	Antistatic	500 pcs	
C	T /R (Reel package)	UCT	Non-antistatic	Antistatic	2000 pcs	
D	T /R (Reel package)	UCT	Non-antistatic	Antistatic	500 pcs	
E	T /R (Reel package)	UCT	Non-antistatic	Antistatic	2000 pcs	
F	T /R (Reel package)	UCT	Non-antistatic	Antistatic	2000 pcs	
G	T /R (Reel package)	UCT	Non-antistatic	Antistatic	1000 pcs	

Note : ① package code "E" :



# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CC4532□□□□L□-□□□		
		REV.	20160715-K	PAGE	6

## 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.

AR-001C

