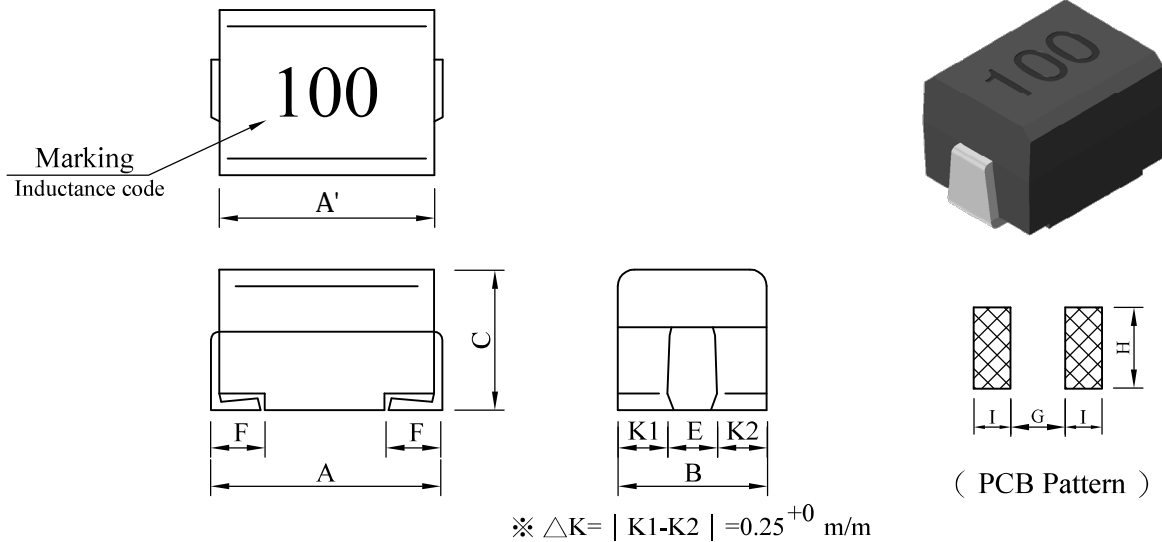


# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CM3225□□□□L□-□□□		
		REV.	20160715-P	PAGE	1

## I . Configuration and dimensions :



Unit : m/m

A	A'	B	C	E	F	G	H	I
3.20 ±0.4	2.90 ±0.2	2.50 ±0.2	2.20 ±0.2	1.00 ±0.2	0.60 $\begin{smallmatrix} +0.3 \\ -0.0 \end{smallmatrix}$	1.80	1.40	1.00

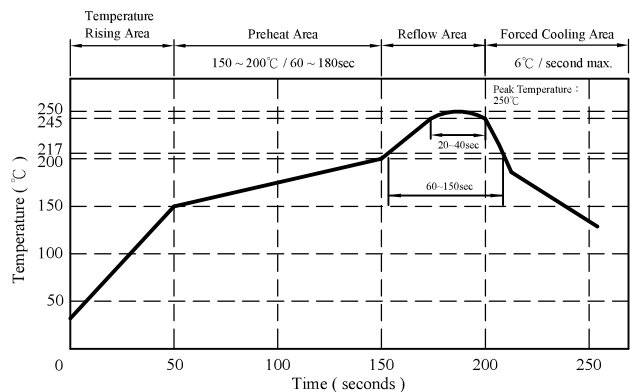
## II . Description :

- a . Ferrite drum core construction.
- b . Enamelled copper wire : H class
- c . Product weight : 0.05 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.



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# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CM3225□□□□L□-□□□		
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## IV . Electrical characteristics :

DWG No.	Inductance (μH)	Q min.	Test Freq (MHz)	SRF (MHz) min.	RDC (Ω) max.	IDC (mA) max.
CM3225R12ML□-□□□	0.120±20%	30	25.2	500	0.22	450
CM3225R15ML□-□□□	0.150±20%	30	25.2	450	0.25	450
CM3225R18ML□-□□□	0.180±20%	30	25.2	400	0.28	450
CM3225R22ML□-□□□	0.220±20%	30	25.2	350	0.32	450
CM3225R27ML□-□□□	0.270±20%	30	25.2	320	0.36	450
CM3225R33ML□-□□□	0.330±20%	30	25.2	300	0.40	450
CM3225R39ML□-□□□	0.390±20%	30	25.2	250	0.45	450
CM3225R47ML□-□□□	0.470±20%	30	25.2	220	0.50	450
CM3225R56ML□-□□□	0.560±20%	30	25.2	180	0.55	450
CM3225R68ML□-□□□	0.680±20%	30	25.2	160	0.60	450
CM3225R82ML□-□□□	0.820±20%	30	25.2	140	0.65	450
CM32251R0KL□-□□□	1.000±10%	30	7.96	120	0.70	400
CM32251R2KL□-□□□	1.200±10%	30	7.96	100	0.75	390
CM32251R5KL□-□□□	1.500±10%	30	7.96	85	0.85	370
CM32251R8KL□-□□□	1.800±10%	30	7.96	80	0.90	350
CM32252R2KL□-□□□	2.200±10%	30	7.96	75	1.00	320
CM32252R7KL□-□□□	2.700±10%	30	7.96	70	1.10	290
CM32253R3KL□-□□□	3.300±10%	30	7.96	60	1.20	260
CM32253R9KL□-□□□	3.900±10%	30	7.96	55	1.30	250
CM32254R7KL□-□□□	4.700±10%	30	7.96	50	1.50	220
CM32255R6KL□-□□□	5.600±10%	30	7.96	45	1.60	200
CM32256R8KL□-□□□	6.800±10%	30	7.96	40	1.80	180
CM32258R2KL□-□□□	8.200±10%	30	7.96	35	2.00	170
CM3225100KL□-□□□	10.000±10%	30	2.52	30	2.10	150
CM3225120KL□-□□□	12.000±10%	30	2.52	20	2.50	140
CM3225150KL□-□□□	15.000±10%	30	2.52	20	2.80	130
CM3225180KL□-□□□	18.000±10%	30	2.52	20	3.30	120
CM3225220KL□-□□□	22.000±10%	30	2.52	20	3.70	110
CM3225270KL□-□□□	27.000±10%	30	2.52	20	5.00	80
CM3225330KL□-□□□	33.000±10%	30	2.52	17	5.60	70
CM3225390KL□-□□□	39.000±10%	30	2.52	16	6.40	65
CM3225470KL□-□□□	47.000±10%	30	2.52	15	7.00	60
CM3225560KL□-□□□	56.000±10%	30	2.52	13	8.00	55
CM3225680KL□-□□□	68.000±10%	30	2.52	12	9.00	50
CM3225820KL□-□□□	82.000±10%	30	2.52	11	10.00	45
CM3225101KL□-□□□	100.000±10%	20	0.796	10	11.00	40
CM3225121KL□-□□□	120.000±10%	20	0.796	10	11.00	70
CM3225151KL□-□□□	150.000±10%	20	0.796	8	15.00	65

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

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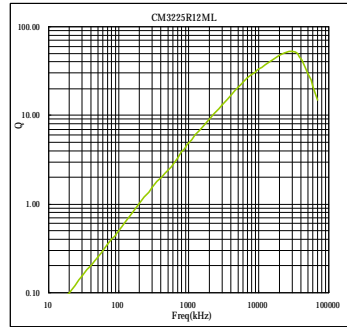
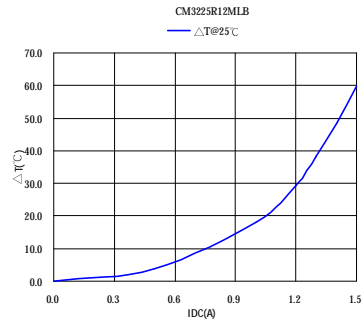
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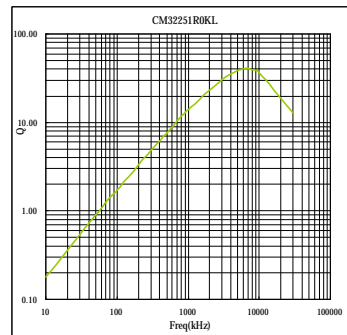
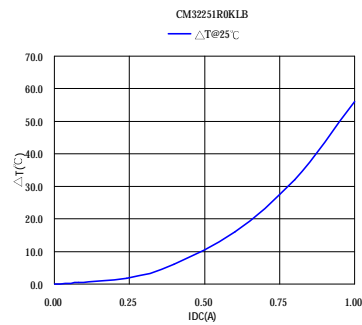
PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CM3225□□□□L□-□□□		
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V . Curve :

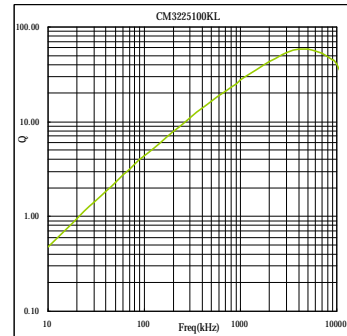
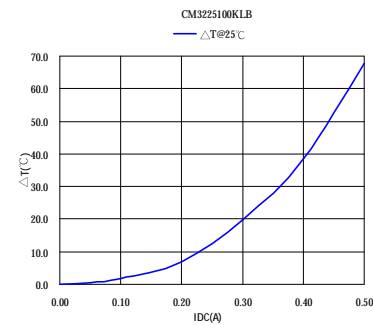
CM3225R12ML□



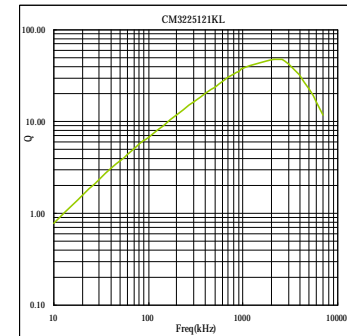
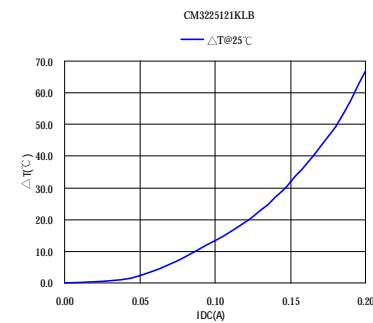
CM32251R0KL□



CM3225100KL□



CM3225121KL□



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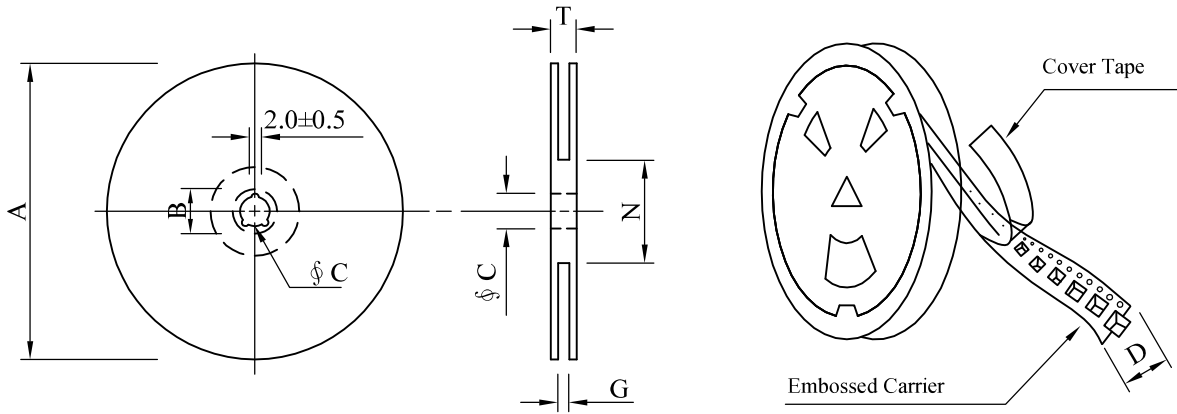
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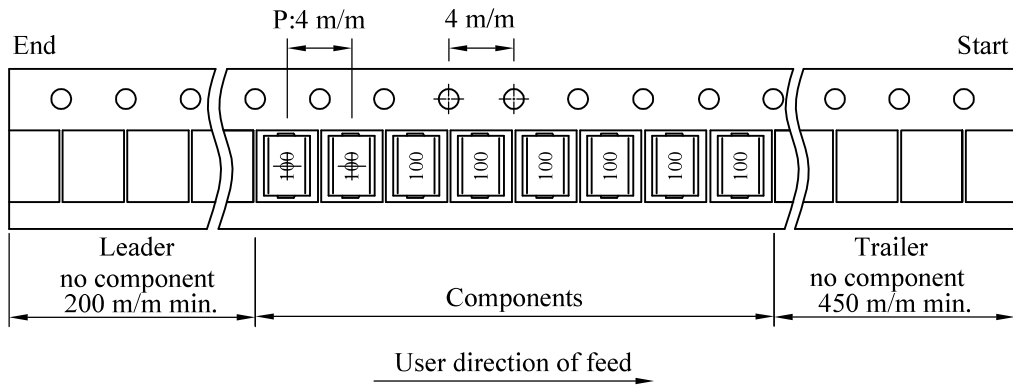
PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.		CM3225□□□□L□-□□□	
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VI-1 . Packaging information :

( 1 ) Configuration



※Carrier Tape Width : D



( 2 ) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
07 - 08	178	21±0.8	13	8	10 <sup>+0</sup>	50 <sup>-0</sup>	12.5
07(S) - 08	183	21±0.8	13	8	10 <sup>+0</sup>	50 <sup>-0</sup>	12.5

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

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B	1,000	110	07 - 08	50,000	7.50	41 x 39 x 22
C	2,000	220	07(S) - 08	100,000	15.00	41 x 39 x 22
E	1,000	110	07 - 08	50,000	7.50	41 x 39 x 22

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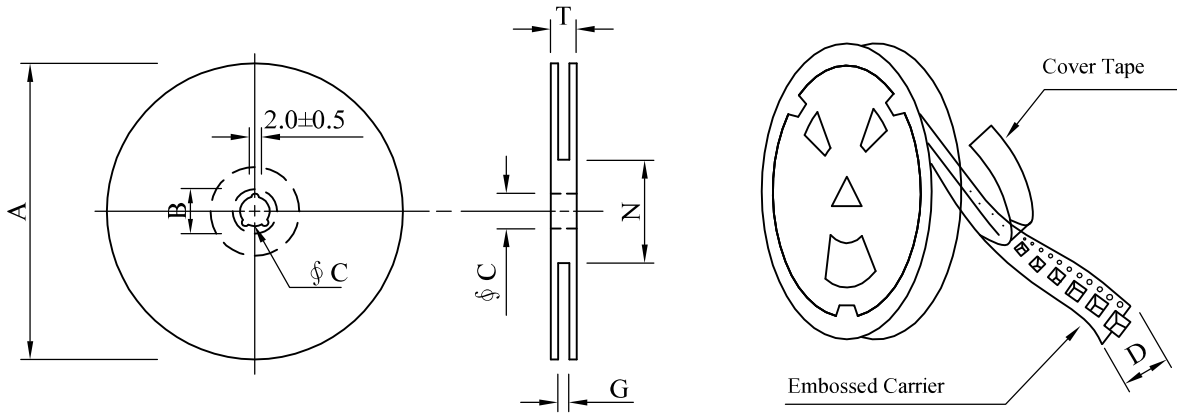
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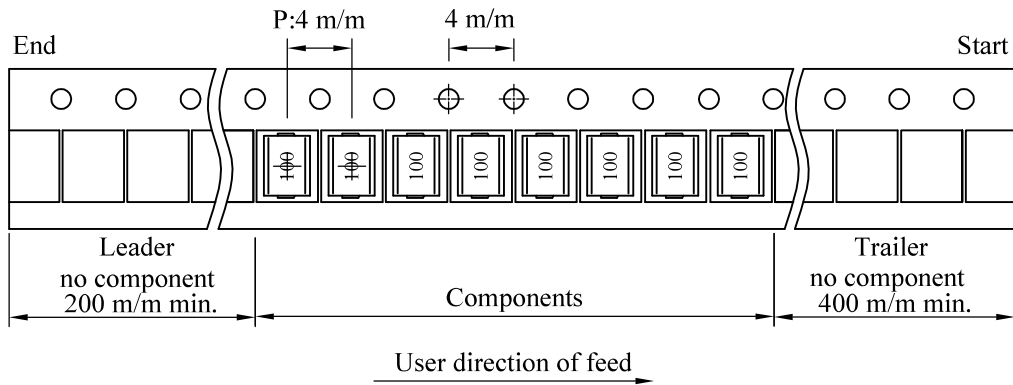
PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CM3225□□□□L□-□□□		
		REV.	20160715-P	PAGE	4-2

VI-2 . Packaging information :

( 1 ) Configuration



※Carrier Tape Width : D



( 2 ) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
13 - 08	330	21±0.8	13±0.5	8	10 <sup>+0</sup>	50 <sup>-0</sup>	12.5

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

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
D	7,000	770	13 - 08	84,000	9.80	41 x 39 x 22

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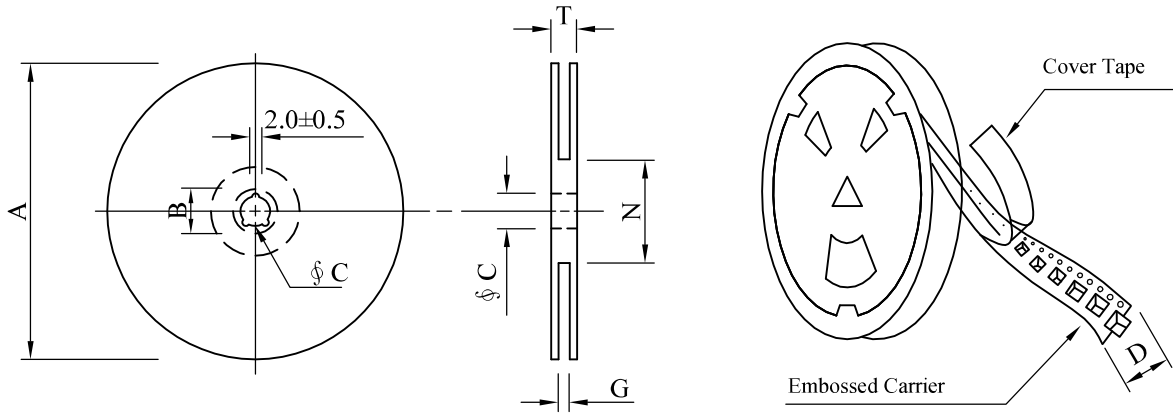
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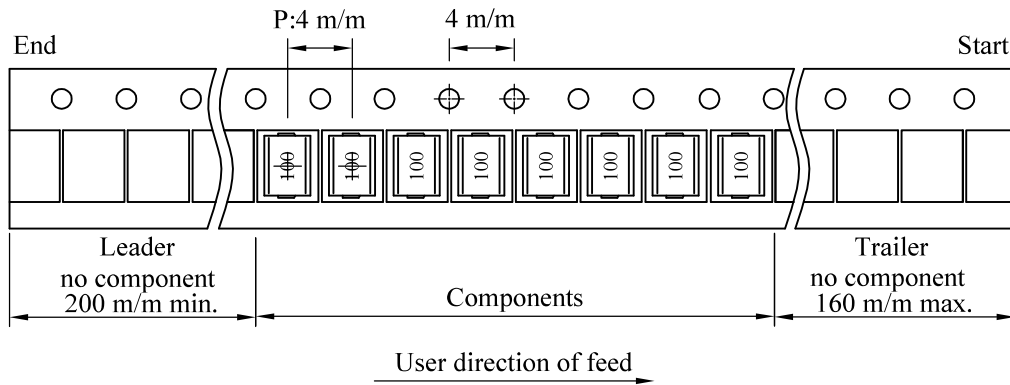
PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.		CM3225□□□□L□-□□□	
		REV.	20160715-P	PAGE	4-3

**VI-3 . Packaging information :**

( 1 ) Configuration



※Carrier Tape Width : D



( 2 ) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
07 - 08	178	21±0.8	13	8	10 <sup>+0</sup>	50 <sup>-0</sup>	12.5

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

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
F	2,000	220	07 - 08	100,000	15.00	41 x 39 x 22
G	2,000	220	07 - 08	100,000	15.00	41 x 39 x 22

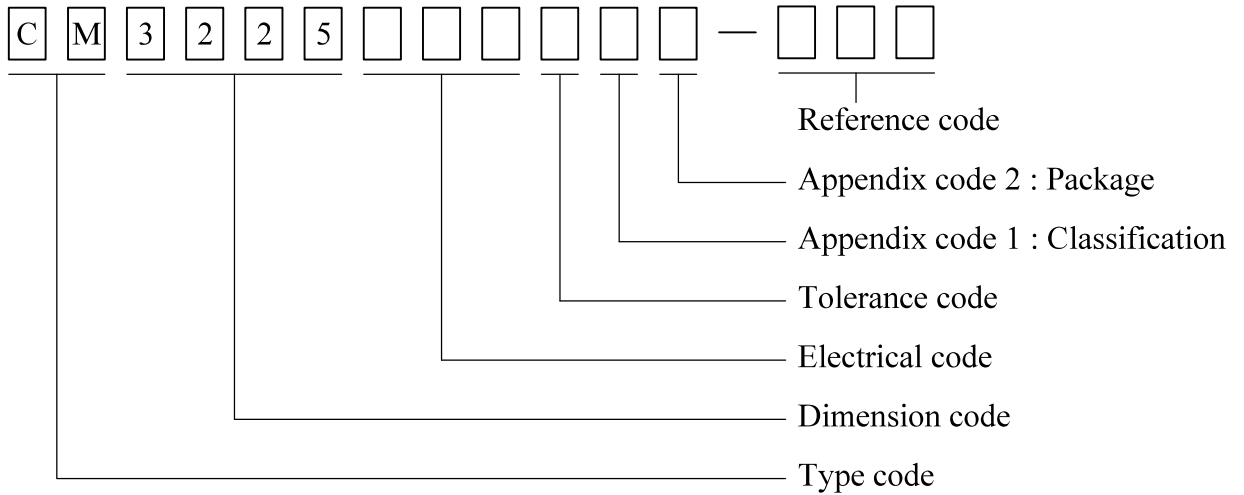
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# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CM3225□□□□L□-□□□		
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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)	Adhesive	Non-antistatic	Antistatic	1000 pcs	
C	T /R (Reel package)	Adhesive	Non-antistatic	Antistatic	2000 pcs	
D	T /R (Reel package)	Adhesive	Non-antistatic	Antistatic	7000 pcs	
E	T /R (Reel package)	Adhesive	Antistatic	Antistatic	1000 pcs	
F	T /R (Reel package)	Adhesive	Non-antistatic	Antistatic	2000 pcs	
G	T /R (Reel package)	Adhesive	Non-antistatic	MBB	2000 pcs	

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# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.	CM3225□□□□L□-□□□		
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## VII . 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 cycle 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 Amplitued : 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 Second. 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 second. 4.IR reflow times : 1 times.	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 : 1minutes	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 time (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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