SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	CS1205□□□□L□-□□□		
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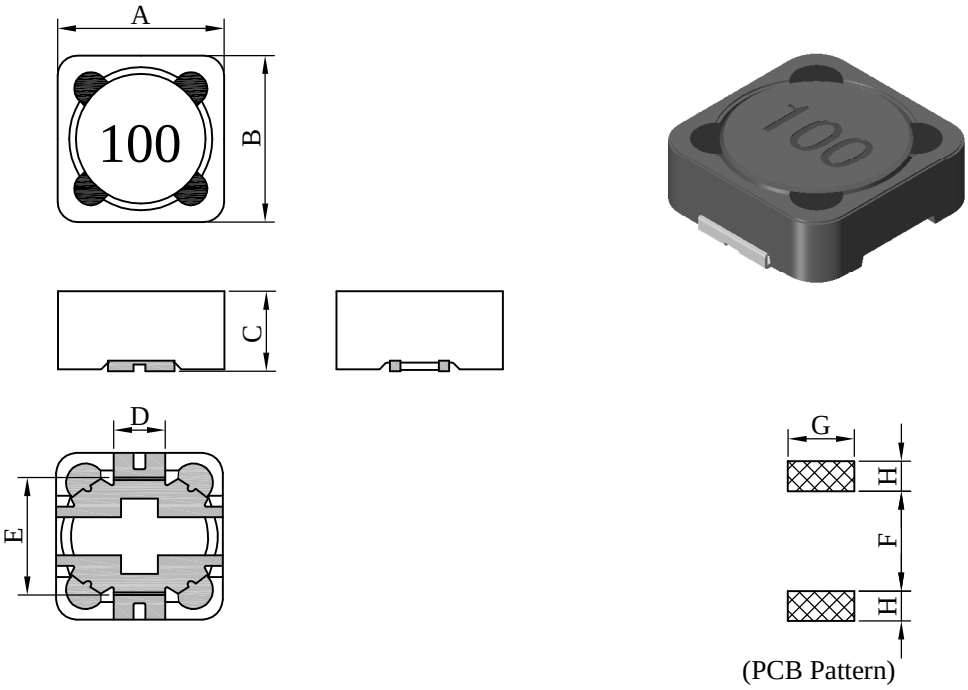
Ⅰ．Configuration and dimensions：



(PCB Pattern)

Unit：m/m

A	B	C	D	E	F	G	H
12.0±0.3	12.0±0.3	5.00 max.	4.90 typ.	7.90 typ.	7.30 typ.	5.30 ref.	2.80 ref.

Ⅱ．Description：

a．Ferrite drum core construction.

b．Magnetically shielded.

c．Enamelled copper wire：H & F class

d．Product weight： 2.90 g（ref.）

e．Moisture sensitivity Level 1

f．Products comply with RoHS' requirements

g．Halogen free available

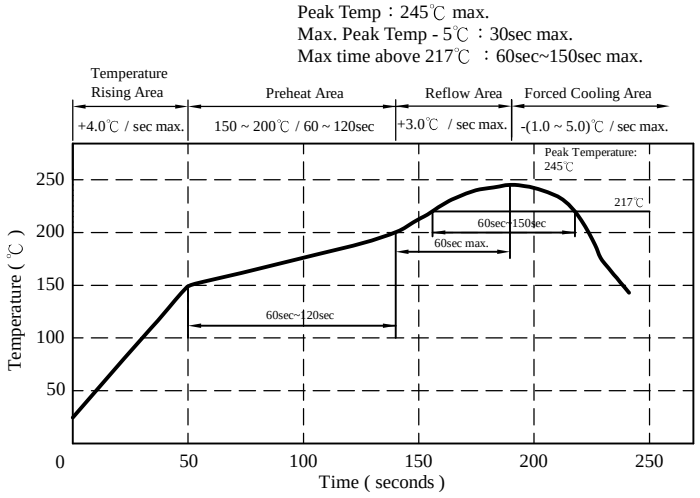
Ⅲ．General specification：

a．Storage temp.：-40℃ ----+125℃

b．Operating temp.：-40℃----+125℃

(Temp. rise included)

c．Resistance to solder heat：245℃.10 secs.



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Ⅳ . Electrical characteristics：

DWG No.	Inductance (μH)	RDC(mΩ)		Isat (A)	Irms (A)
		ref.	max.		
CS1205100ML□-□□□	10.0±20%	29.9	42	5.6	4.9
CS1205120ML□-□□□	12.0±20%	33.4	47	5.2	4.0
CS1205150ML□-□□□	15.0±20%	38.6	55	4.7	3.6
CS1205180ML□-□□□	18.0±20%	46.0	65	4.3	3.4
CS1205220ML□-□□□	22.0±20%	58.1	80	3.8	3.0
CS1205270ML□-□□□	27.0±20%	66.1	92	3.5	2.7
CS1205330ML□-□□□	33.0±20%	79.6	112	3.1	2.4
CS1205390ML□-□□□	39.0±20%	93.0	120	2.9	2.1
CS1205470ML□-□□□	47.0±20%	124.0	160	2.5	1.8
CS1205560ML□-□□□	56.0±20%	138.0	180	2.4	1.6
CS1205680ML□-□□□	68.0±20%	161.0	122	2.3	1.5
CS1205820ML□-□□□	82.0±20%	188.0	210	2.1	1.3
CS1205101ML□-□□□	100.0±20%	232.0	300	1.9	1.2
CS1205121KL□-□□□	120.0±10%	263.0	340	1.7	1.1
CS1205151KL□-□□□	150.0±10%	325.0	420	1.6	1.1
CS1205181KL□-□□□	180.0±10%	416.0	540	1.4	1.0
CS1205221KL□-□□□	220.0±10%	501.0	650	1.2	0.9
CS1205271KL□-□□□	270.0±10%	605.0	785	1.1	0.9
CS1205331KL□-□□□	330.0±10%	688.0	890	1.0	0.8
CS1205391KL□-□□□	390.0±10%	858.0	1100	1.0	0.7
CS1205471KL□-□□□	470.0±10%	1012.0	1310	0.9	0.6
CS1205561KL□-□□□	560.0±10%	1231.0	1600	0.8	0.6
CS1205681KL□-□□□	680.0±10%	1535.0	2000	0.7	0.5
CS1205821KL□-□□□	820.0±10%	1917.0	2500	0.6	0.4
CS1205102KL□-□□□	1000.0±10%	2303.0	3000	0.6	0.4

1). □：Packaging information：□ Code

2). "-□□□"：Reference code

3). Electrical specifications at 25℃

4). Irms base on Temp. rise 40℃ typ.

5). Isat base on △L/L0A=25% typ.

6). L Test Condition：100 kHz / 0.1V

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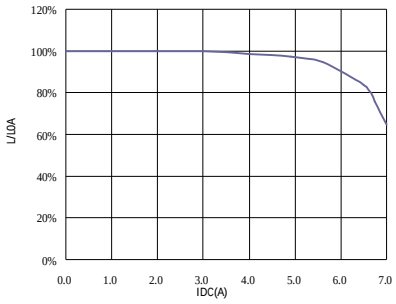
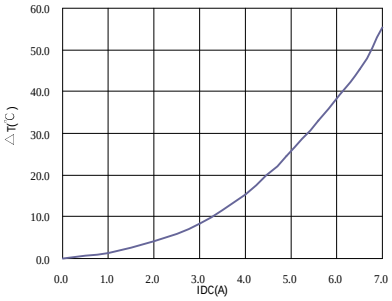
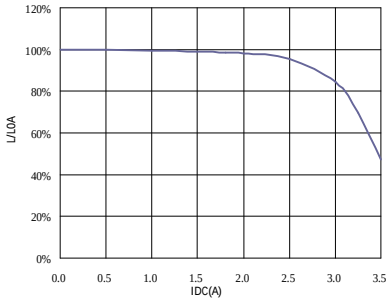
V ． Curve：

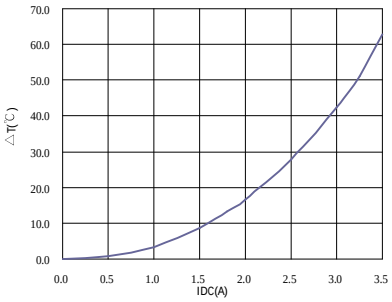
CS1205100ML□



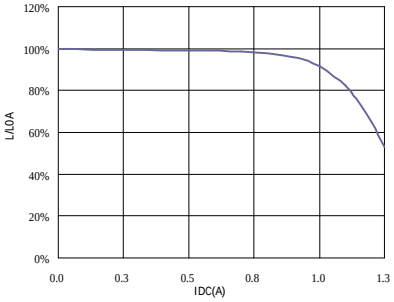


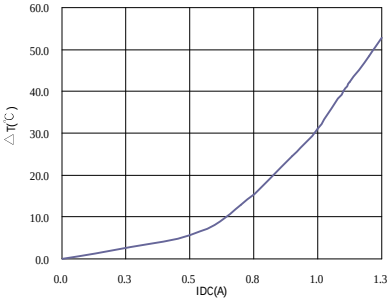
CS1205470ML□



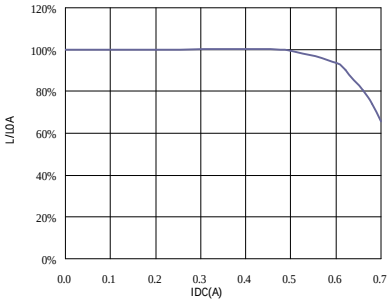


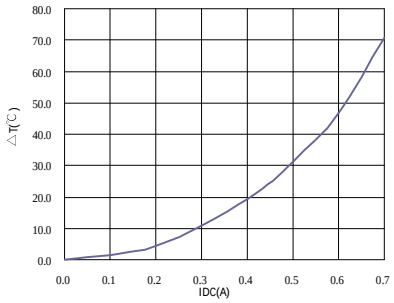
CS1205391KL□





CS1205102KL□





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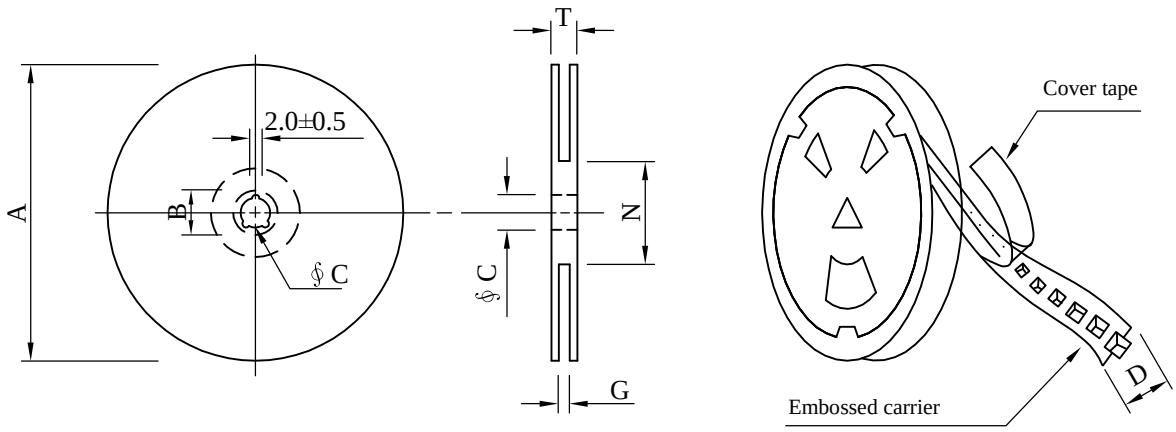
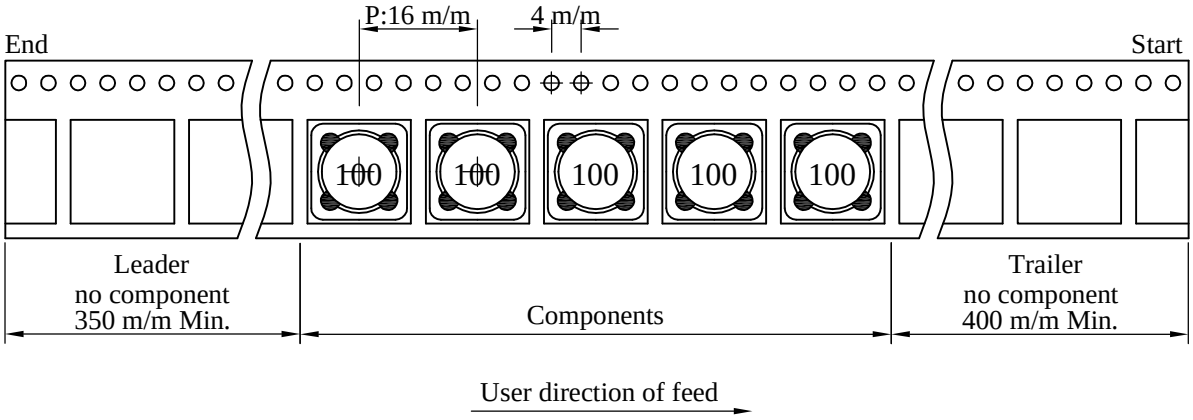
Ⅵ．Packaging information：

(1) Configuration



※Carrier tape width : D



(2) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
13 - 24	330	21±0.8	13±0.5	24	26^{+0}	60^{-0}	30.4

(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	800	2,390	13 - 24	3,200	10.8	38 x 37 x 22

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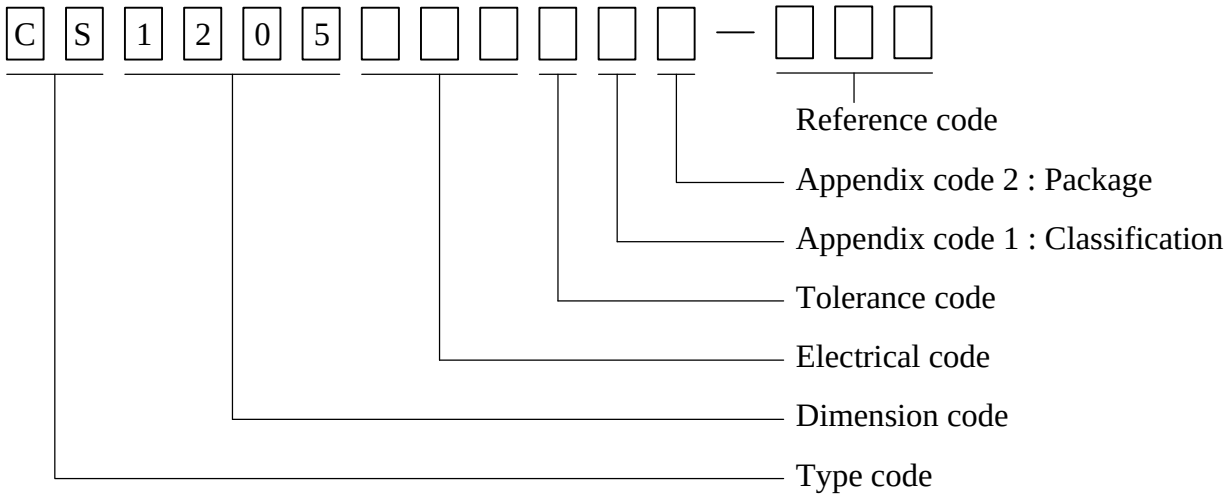
Ⅶ．Drawing number expression：



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	Antistatic	Antistatic	800 pcs	

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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 ±20%.
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 ±20%.
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 ±20%.
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 ±20%.
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 apperarance. 2.No marking blurred. 3.Inductance shall not change more than ±20%.
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 ±20%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210 & J-STD020D.1	1.Highest temperature：245±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 ±20%.
10.Saturation Current	JIS C 6436 & User SPEC.	1.Applied rated current for 5 seconds. 2.Saturation current	Inductance shall not drop more than 25% typ.
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 40℃ typ.
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 ±20%.
15.Drop	CNS-C6354 & GB/T 2423.8	1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m 2.Drop total time：6 times (Every side of sample drop 2 times)	1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage.
16.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.