SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	SS1278□□□□F□-□□□		
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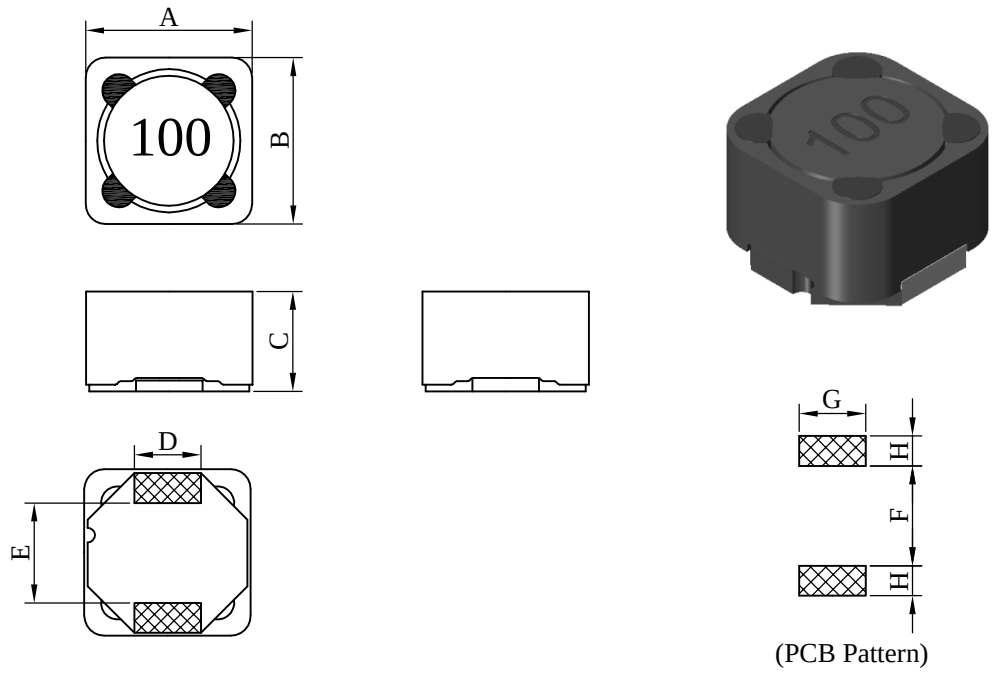
Ⅰ．Configuration and dimensions：



(PCB Pattern)

Unit：m/m

A	B	C	D	E	F	G	H
12.00 ±0.3	12.00 ±0.3	8.00 max.	5.00 typ.	5.70 typ.	4.50 ref.	5.50 ref.	4.00 ref.

Ⅱ．Description：

a．Ferrite drum core construction.

b．Magnetically shielded.

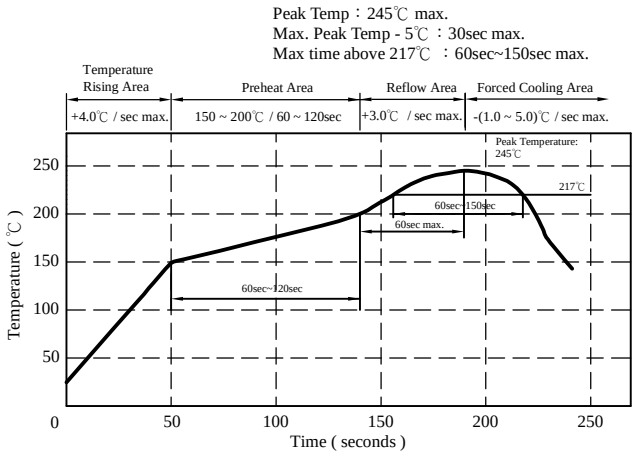
c．Enamelled copper wire：F & H class

d．Product weight： 4.25g（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)	SRF (MHz) typ.	RDC (mΩ) max.	Irms (A) typ.	Isat (A) max.
SS12781R4MF□-□□□	1.4±20%	80.0	11	10.00	18.00
SS12784R7MF□-□□□	4.7±20%	30.0	20	6.20	11.00
SS12786R0MF□-□□□	6.0±20%	21.0	24	6.00	10.00
SS12788R2MF□-□□□	8.2±20%	20.0	28	5.90	8.50
SS1278100MF□ -□□□	10.0±20%	17.0	30	5.70	8.00
SS1278120MF□ -□□□	12.0±20%	15.0	32	5.20	7.50
SS1278150MF□ -□□□	15.0±20%	13.0	38	4.90	6.80
SS1278180MF□ -□□□	18.0±20%	12.0	43	4.50	6.30
SS1278220MF□ -□□□	22.0±20%	11.0	50	4.00	5.70
SS1278270MF□ -□□□	27.0±20%	10.0	60	3.60	5.00
SS1278330MF□ -□□□	33.0±20%	9.5	80	3.10	4.70
SS1278390MF□ -□□□	39.0±20%	8.5	85	3.00	4.60
SS1278470MF□ -□□□	47.0±20%	7.5	100	2.90	3.80
SS1278560MF□ -□□□	56.0±20%	7.0	110	2.70	3.50
SS1278680MF□ -□□□	68.0±20%	6.5	120	2.60	3.20
SS1278820MF□ -□□□	82.0±20%	5.0	150	2.30	3.00
SS1278101MF□ -□□□	100.0±20%	4.5	180	2.00	2.60
SS1278121KF□ -□□□	120.0±10%	4.3	230	1.90	2.50
SS1278151KF□ -□□□	150.0±10%	4.1	270	1.80	2.20
SS1278181KF□ -□□□	180.0±10%	4.0	300	1.70	2.00
SS1278221KF□ -□□□	220.0±10%	3.4	400	1.60	1.80
SS1278271KF□ -□□□	270.0±10%	3.1	530	1.20	1.60
SS1278331KF□ -□□□	330.0±10%	2.9	600	1.00	1.50
SS1278391KF□ -□□□	390.0±10%	2.7	680	1.00	1.30
SS1278471KF□ -□□□	470.0±10%	2.2	880	0.90	1.20
SS1278561KF□ -□□□	560.0±10%	2.0	960	0.80	1.10
SS1278681KF□ -□□□	680.0±10%	1.7	1300	0.75	1.00
SS1278821KF□ -□□□	820.0±10%	1.4	1500	0.70	0.95
SS1278102KF□ -□□□	1000.0±10%	1.3	1700	0.68	0.85

1). □：Packaging information：□ Code

2). "-□□□"：Reference code

3). Electrical specifications at 25℃

4). L Test Freq.：100kHz / 0.1V

5). Irms Base on temp rise 40℃ typ.

6). Isat Base on △L/L0A=20% max.

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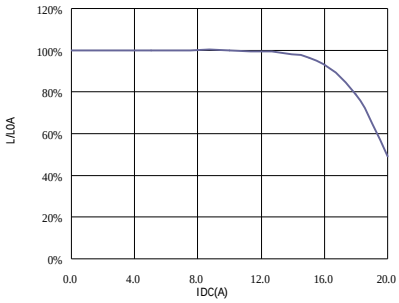
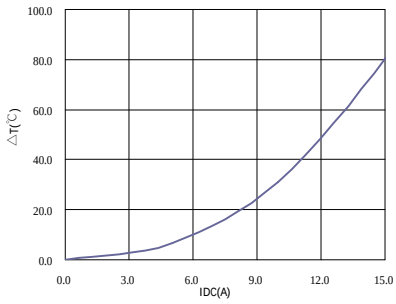
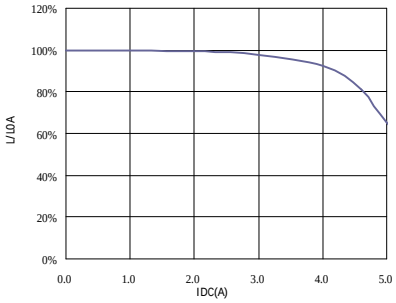
V ．Curve：

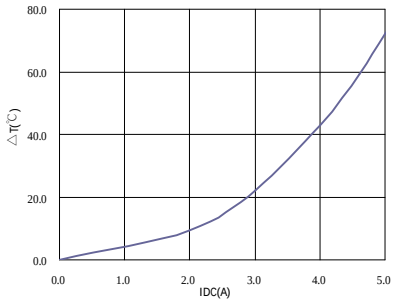
SS12781R4MF□



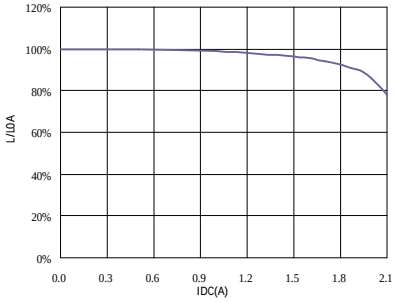


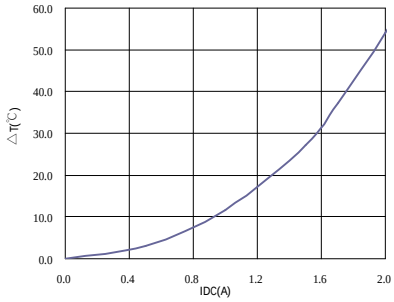
SS1278390MF□



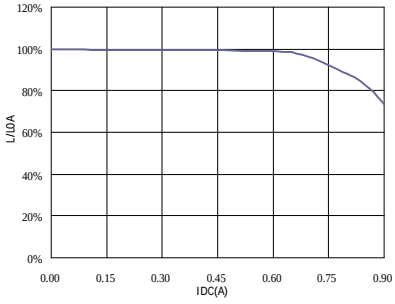


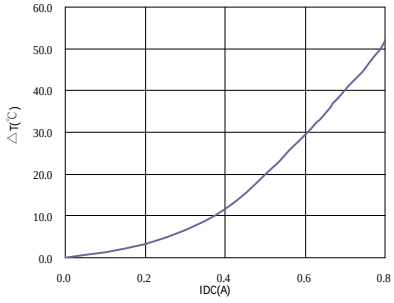
SS1278181KF□





SS1278102KF□





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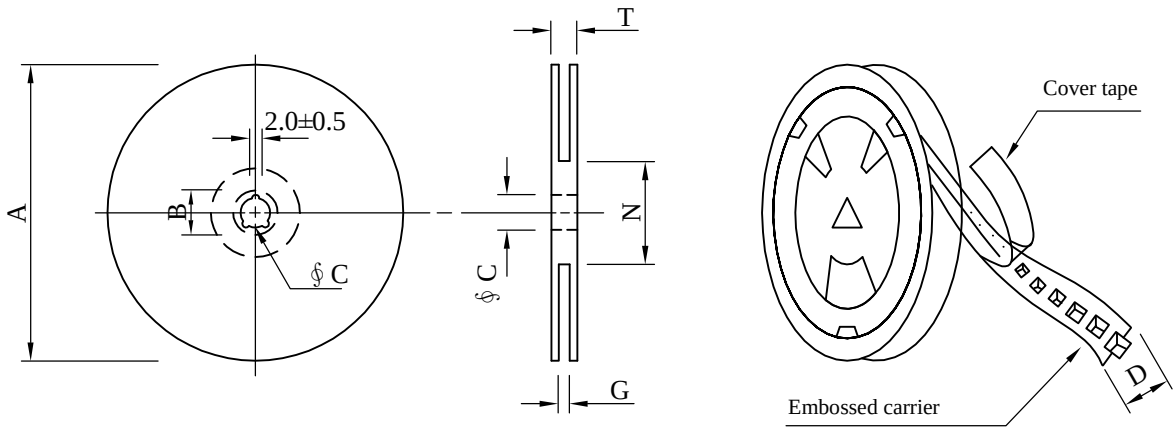
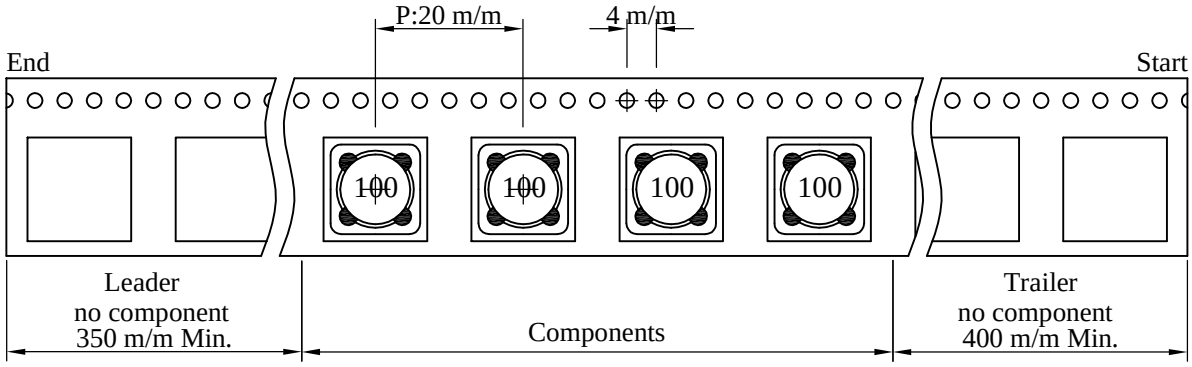
Ⅵ．Packaging information：

(1) Configuration



※Carrier tape width : D



User direction of feed

(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	400	2100	13 - 24	1,600	9.7	38 x 37 x 22

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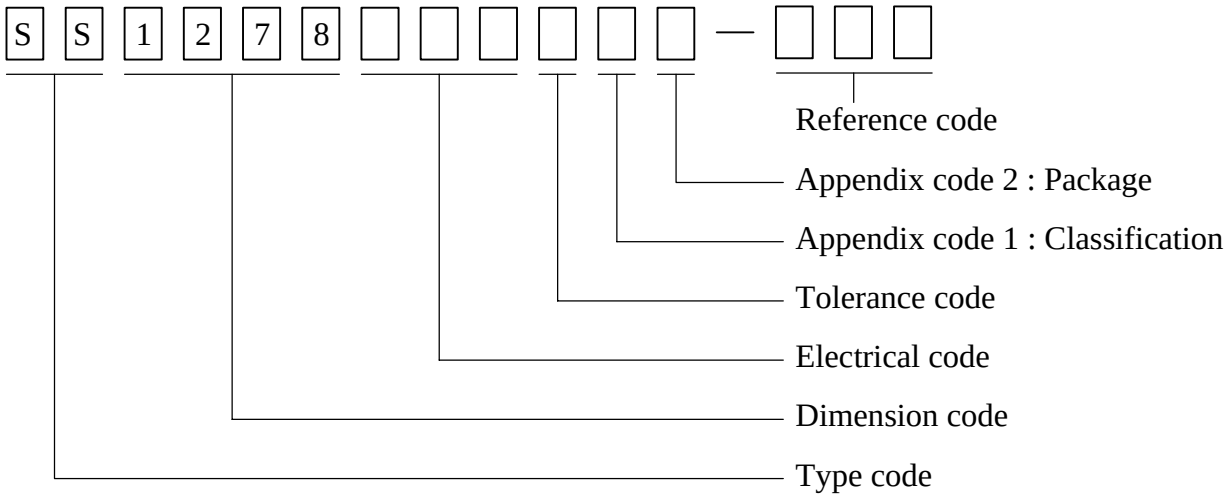
Ⅵ．Drawing number expression：



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)	UCT	Antistatic	Antistatic	400 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 20% 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 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 heigh of 1m 2.Drop total time：6 times (Every side ofsample 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.

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Ⅸ．Change history：

DATE/REV.	DISCRIPTION	DRAWN	CHECKED	APPROVED
20130116-A	1. Modify the specification form 2. Modify the package size： Dimension N from 50 change to 60 min. 3. Modify the 2D drawing	Miz Hsieh	Nick Chen	Nick Chen
20140212-B	Add the current curve			
20150818-C	Modify the Reliability test and the Package weight			
20160901-D	1. Modify the package code B leader direction from 200m/m min. change to 350m/m min. 2. Add Change history and Drawing number expression 3. Change the current curve format	Miz Hsieh	Nick Chen	Nick Chen