SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	ESR0805□□□□L□-□□□		
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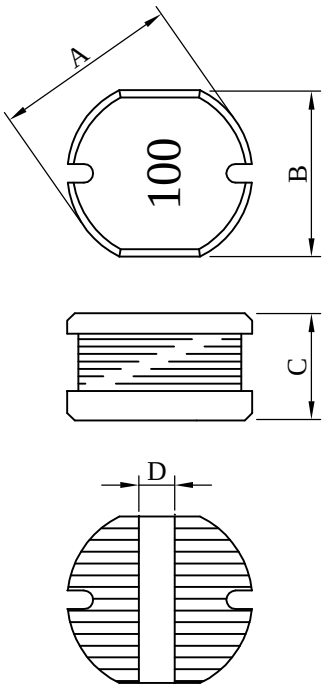
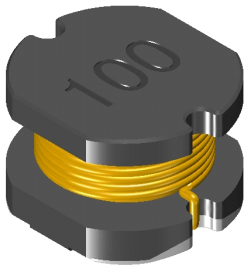
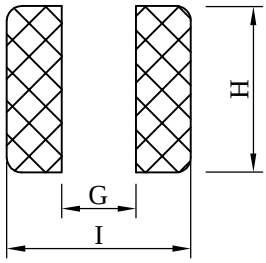
Ⅰ．Configuration and dimensions：







(PCB Pattern)

Unit：m/m

A	B	C	D	G	H	I
7.80 ±0.3	7.00 ±0.3	5.00 ±0.5	2.10 ref.	2.00 ref.	7.50 ref.	8.00 ref.

Ⅱ．Description：

a．Ferrite drum core construction.

b．Enamelled copper wire：F、H class

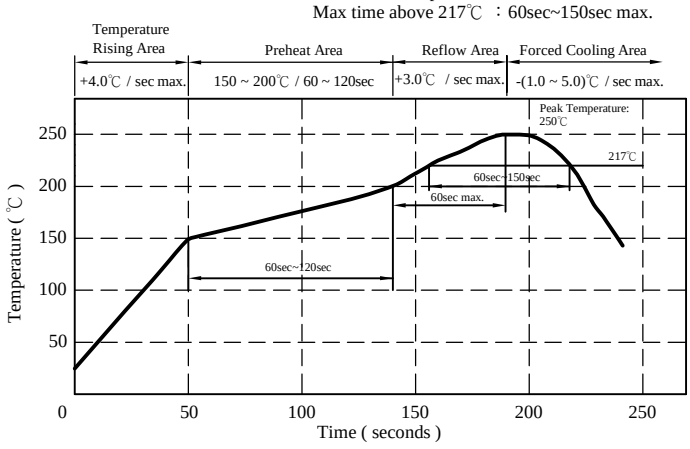
c．Product weight： 0.810g（ref.）

d．Moisture sensitivity Level 1

e．Products comply with RoHS' requirements

f．Halogen free available

Peak Temp：250℃ max.
Max. Peak Temp - 5℃：30sec max.
Max time above 217℃ ：60sec~150sec max.



Ⅲ．General specification：

a．Storage temp.：-40℃ ----+125℃

b．Operating temp.：-40℃----+125℃

(Temp. rise included.)

c．Resistance to solder heat：250±5℃.10 secs.

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Ⅳ．Electrical characteristics：

DWG No.	Inductance (μH)	R.D.C. (mΩ)		Rated Current (A)	SRF (MHz) typ.
		typ.	max.		
ESR08051R5ML□-□□□	1.5±20%	15	20	4.80	115
ESR08052R5ML□-□□□	2.5±20%	20	27	4.00	71.2
ESR08053R3ML□-□□□	3.3±20%	24	32	3.60	53.3
ESR08054R7ML□-□□□	4.7±20%	28	38	3.30	44.2
ESR08055R6ML□-□□□	5.6±20%	32	43	3.10	34.9
ESR08056R8ML□-□□□	6.8±20%	36	48	2.80	32.0
ESR08058R2ML□-□□□	8.2±20%	39	52	2.50	28.5
ESR0805100ML□ -□□□	10±20%	50	70	2.45	27.5
ESR0805120ML□ -□□□	12±20%	56	80	2.20	25.8
ESR0805150ML□ -□□□	15±20%	60	90	2.05	22.5
ESR0805180ML□ -□□□	18±20%	74	100	1.90	17.6
ESR0805220ML□ -□□□	22±20%	82	110	1.80	16.5
ESR0805270ML□ -□□□	27±20%	94	120	1.70	14.3
ESR0805330ML□-□□□	33±20%	117	130	1.62	13.2
ESR0805390ML□-□□□	39±20%	137	160	1.50	12.6
ESR0805470KL□ -□□□	47±10%	165	180	1.40	12.1
ESR0805560KL□ -□□□	56±10%	200	240	1.20	11.5
ESR0805680KL□ -□□□	68±10%	230	280	1.10	10.5
ESR0805820KL□ -□□□	82±10%	300	370	1.00	9.4
ESR0805101KL□ -□□□	100±10%	320	430	0.90	8.8
ESR0805121KL□ -□□□	120±10%	360	470	0.80	7.7
ESR0805151KL□ -□□□	150±10%	515	640	0.72	7.2
ESR0805181KL□ -□□□	180±10%	576	710	0.65	6.2
ESR0805221KL□ -□□□	220±10%	750	960	0.60	6.0
ESR0805271KL□ -□□□	270±10%	870	1110	0.55	5.0
ESR0805331KL□ -□□□	330±10%	1020	1200	0.50	4.9
ESR0805391KL□ -□□□	390±10%	1290	1500	0.45	4.4
ESR0805471KL□ -□□□	470±10%	1470	1700	0.40	3.6

1). □：Packaging information：□ Code

2). "-□□□"：Reference code

3). Electrical specifications at 25℃

4). Inductance test condition :1.5uH~82uH at 1MHz/1V
100uH~470uH at 1kHz/1V

5). Rated current: The DC current at which the inductance decreases to 90% of it's initial value or when Δt=40℃,whichever is lower(Ta=20℃)

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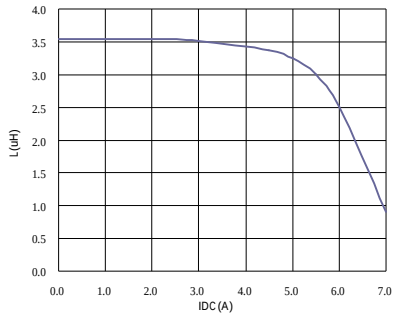
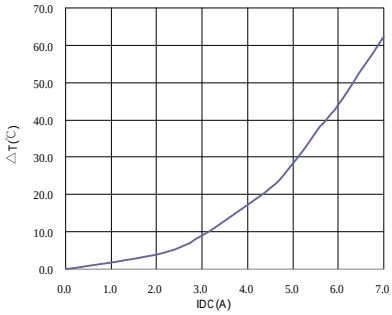
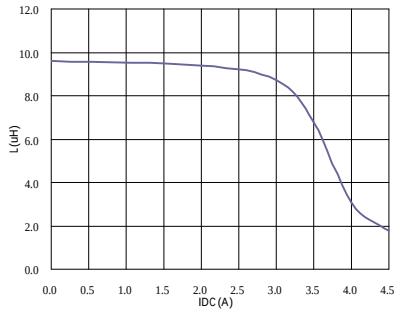
V ．Curve：

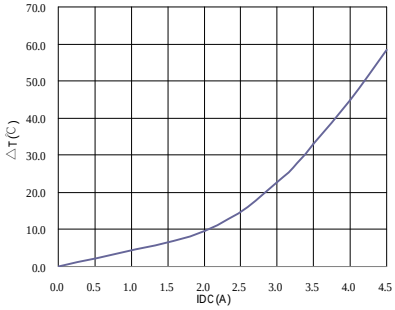
ESR08053R3ML□



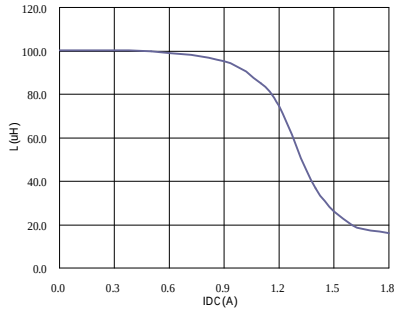


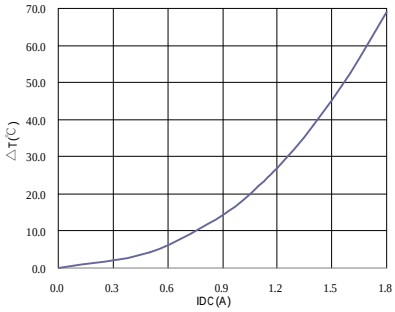
ESR0805100ML□



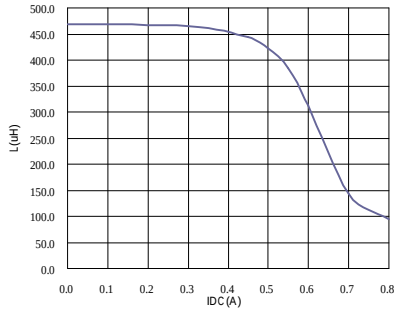


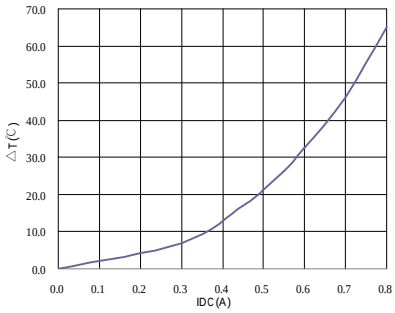
ESR0805101KL□





ESR0805471KL□





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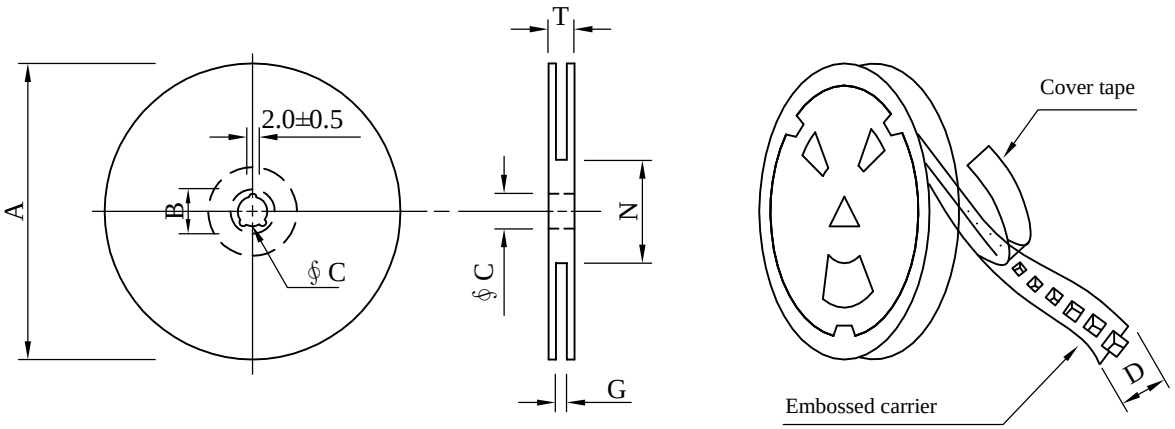
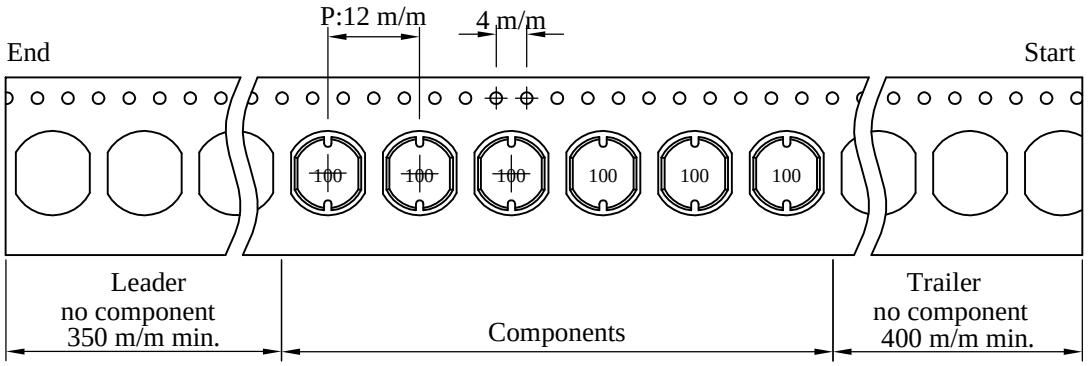
Ⅵ．Packaging information：

(1) Configuration



※Carrier tape width : D



User direction of feed

(2) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
13 - 16	330	21±0.8	13±0.5	16	18^{+0}	50^{-0}	22.4

(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	1,000	1200	13 - 16	6,000	8.7	38 x 37 x 22

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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 apperarance. 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.Saturation current	Inductance shall not drop more than 10% 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 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.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.
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.