

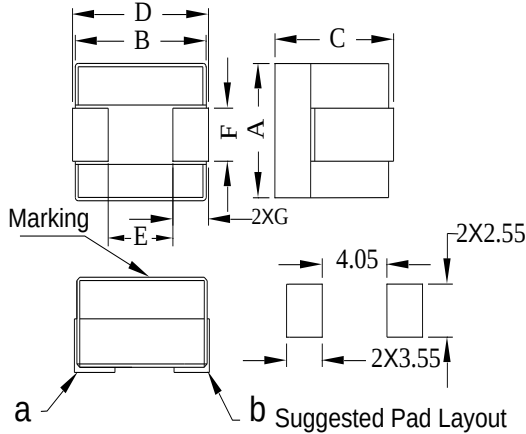


SPECIFICATION FOR APPROVAL



CUSTOMER	*	REV NO	1.0
DESCRIPTION	Inductor , 0.30uH , 34.0A , 0.253mΩ DCR	PAGE NO	1 of 5
PART NO	SL4330C-R30LHF	DATE	2014.04.21

1.CONFIGURATIONS & DIMENSIONS:



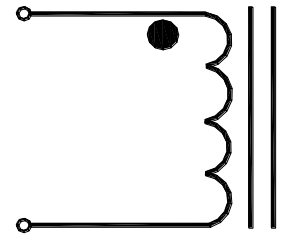
A	7.20	(Max.)	mm
B	10.40	(Max.)	mm
C	7.50	(Max.)	mm
D	11.00	(Max.)	mm
E	5.60	(Nom.)	mm
F	2.05	± 0.20	mm
G	2.50	± 0.30	mm
H			mm
I			mm
J			mm

Note : 1>. Marking : ITG
R30C
YY WW YY:Year;WW:Week.

2.ELECTRICAL CHARACTERISTICS:

TEST	CONDITION				
100KHz 0.1V	L	0.300	uH	±	10%
Ta=25°C	DCR(a-b)	0.253	mΩ	±	5%
100KHz 0.1V Irat=34.0A at 25°C	L@Irat	0.204	uH		(Min.)
100KHz 0.1V Isat1=34A at 25°C	L@Isat1	L Lower by 20%			(Typical)
100KHz 0.1V Isat2=30A at 100°C	L@Isat2	L Lower by 20%			(Typical)
100KHz 0.1V Isat3=29A at 125°C	L@Isat3	L Lower by 20%			(Typical)
100KHz 0.1V Irms=58.0A	△T	Temperature rise by 40°C			(Typical)

3.SCHEMATIC DIAGRAM



NOTES:

- 1>.Open Circuit Inductance (OCL) test condition:100KHz,0.1Vrms,0Adc ,at 25°C.
- 2>.Full Load Inductance (FLL) Test condition:100KHz,0.1Vrms ,Isat ;(Ta=25°C).
- 3>.Isat1 ,Isat2 ,Isat3 ,Isat4 : DC current that will cause inductance to drops approximately by 20% ;
- 4>. Irms: DC current for an approximate temperature rise of 40°C without core loss,.Derating is necessary for AC currents. PCB pad layout,trace thickness and width,air-flow and proximity of other heat generating components will affect the temperature rise. It is recommended the part temperature not exceed 130°C under worst case operating conditions verified in the end application.
- 5>.The nominal DCR is measured from point "a" to point"b",as shown above on the mechanical drawing.
- 6>.The rated current as specification is either the saturation current or the heating current depending on which value is lower.

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4.TEST DATA FOR MECHANICAL										
TEST	A	B	C	D	E	F	G	H	I	J
ITEM	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SPEC	7.20	10.40	7.50	11.00	5.60	2.05	2.50			
	(Max.)	(Max.)	(Max.)	(Max.)	(Nom.)	±	±			
						0.20	0.30			
1	7.05	10.21	7.10	10.52	5.62	2.02	2.49			
2	7.02	10.23	7.06	10.55	5.62	2.01	2.46			
3	7.04	10.23	7.04	10.56	5.65	2.01	2.51			
4	7.06	10.22	7.08	10.54	5.61	2.02	2.49			
5	7.02	10.20	7.08	10.52	5.64	2.02	2.53			
6										
7										
8										
9										
10										
AVERAGE	7.038	10.218	7.072	10.538	5.628	2.016	2.496			
REMARK:										
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5. TEST DATA FOR ELECTRICAL

TEST ITEM	L uH	DCR mΩ	L@Isat1 uH						
CON.	100KHz 0.1V	at 25°C	100KHz 0.1V Isat1=34A at 25°C						
SPEC	0.300 ± 10%	0.253 ± 5%	L Lower by 20% (Typical)						
1	0.291	0.254	0.263						
2	0.285	0.251	0.258						
3	0.290	0.253	0.263						
4	0.286	0.257	0.260						
5	0.287	0.255	0.260						
6									
7									
8									
9									
10									
AVERAGE	0.2878	0.2540	0.2607						
R	0.0060	0.0060	0.0046						

REMARK:

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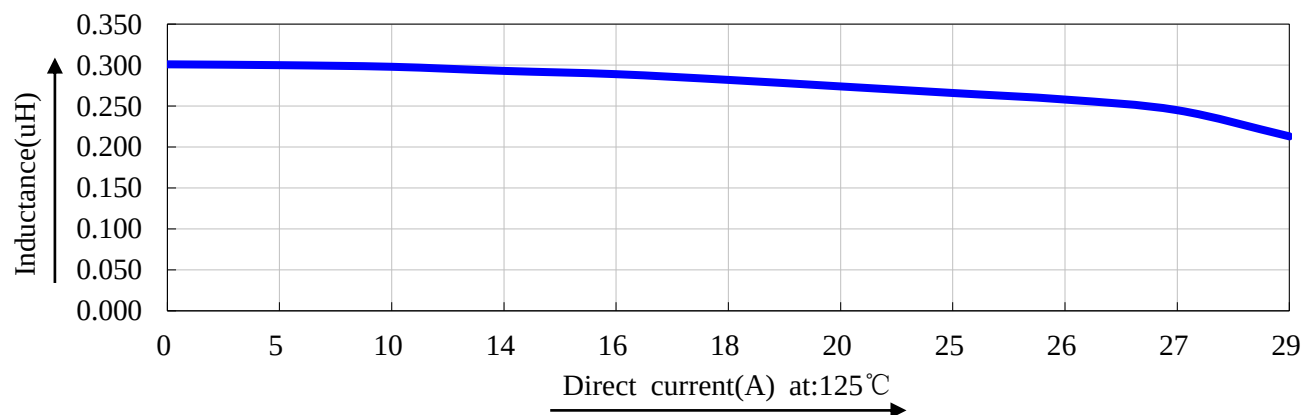
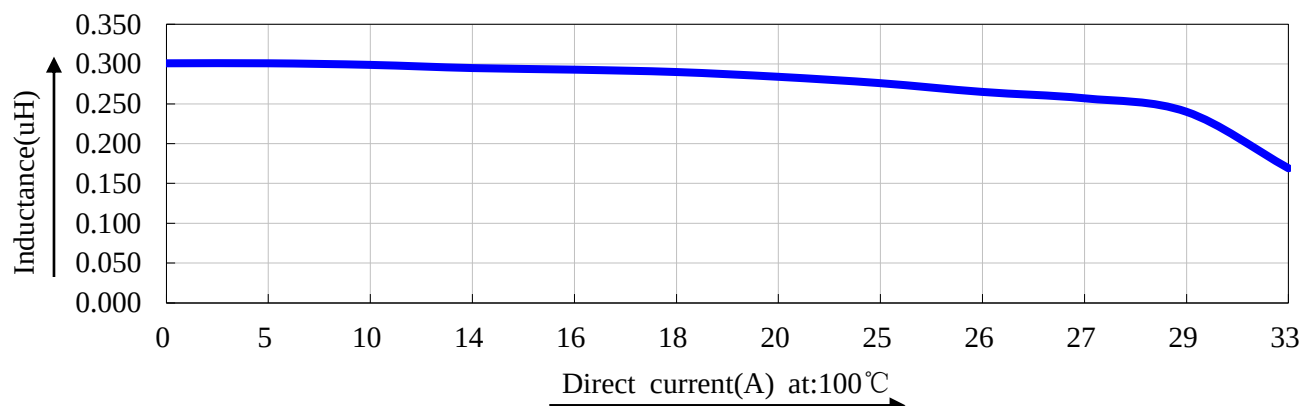
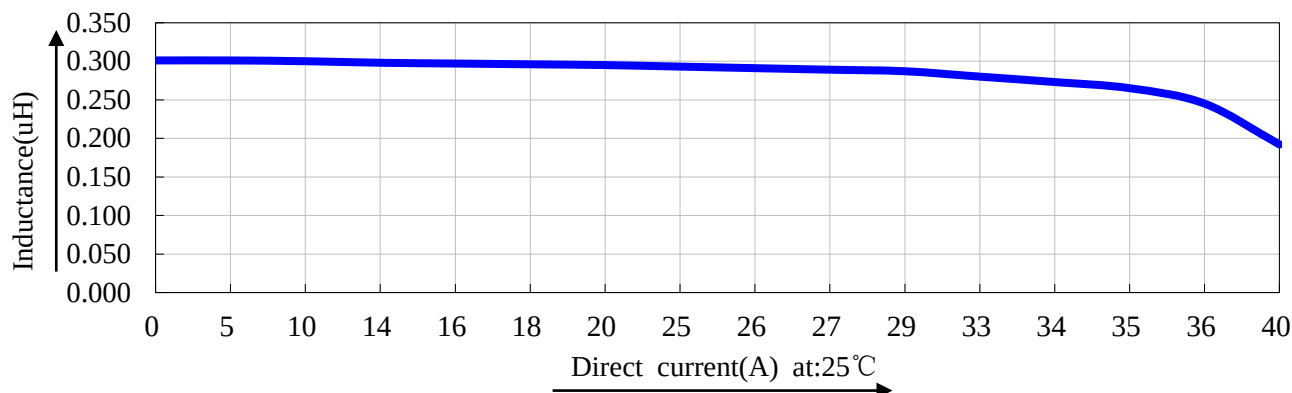


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6.1 ELECTRICAL CHARACTERISTICS.



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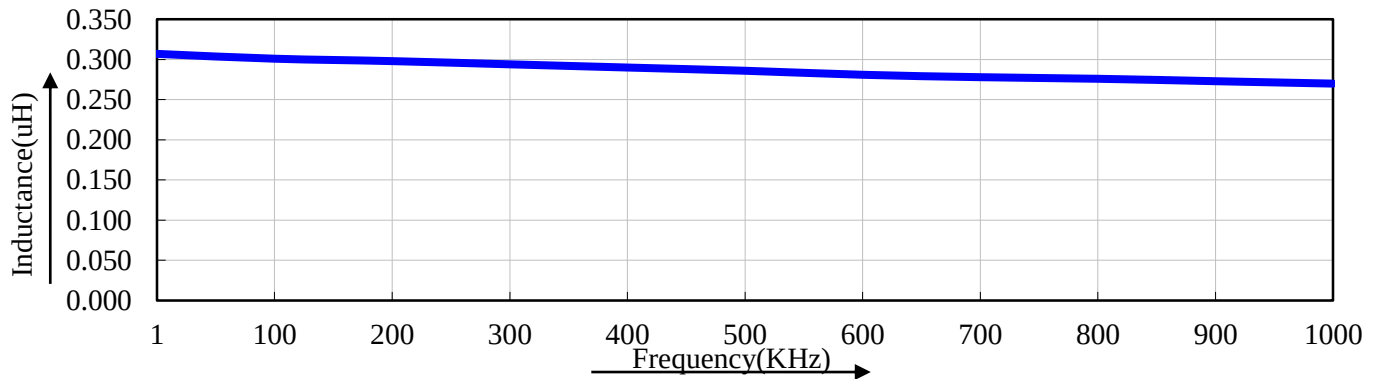
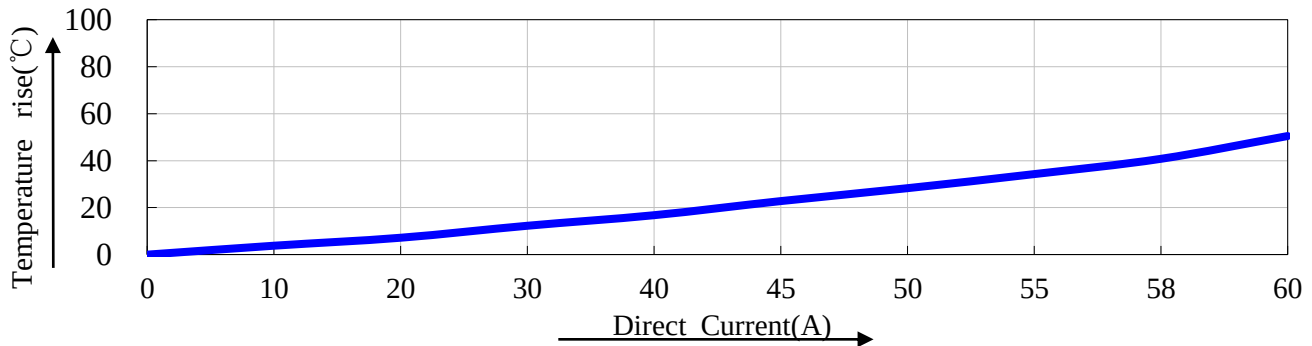
SPECIFICATION FOR APPROVAL



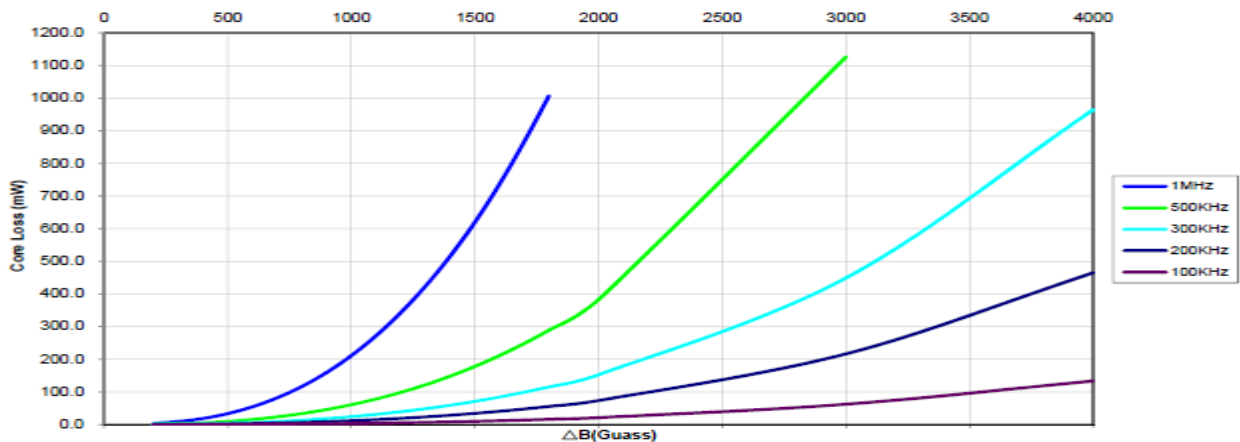
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6.2 ELECTRICAL CHARACTERISTICS.

Frequency: 100KHz 0.1V



Core Loss:



Where $\Delta B = 0.395 \cdot L(nH) \cdot \Delta I$

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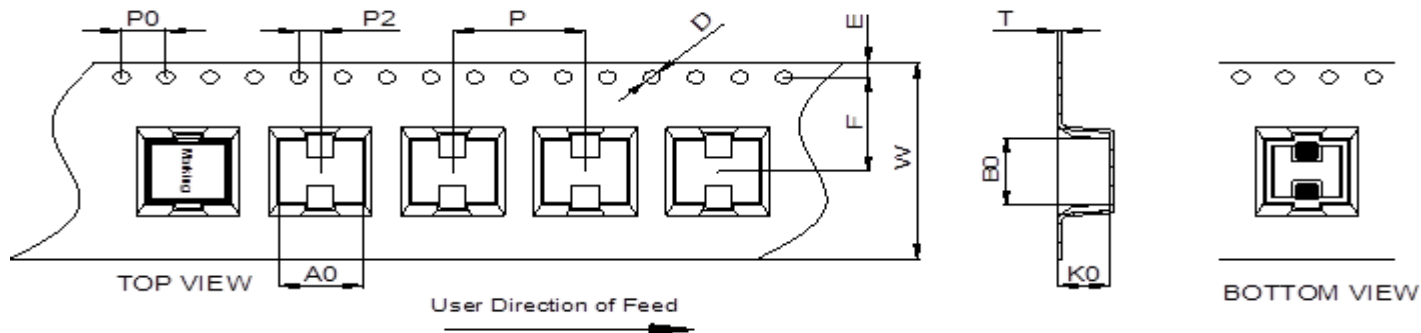
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1.PACKAGE SPECIFICATION.(UNIT:mm)

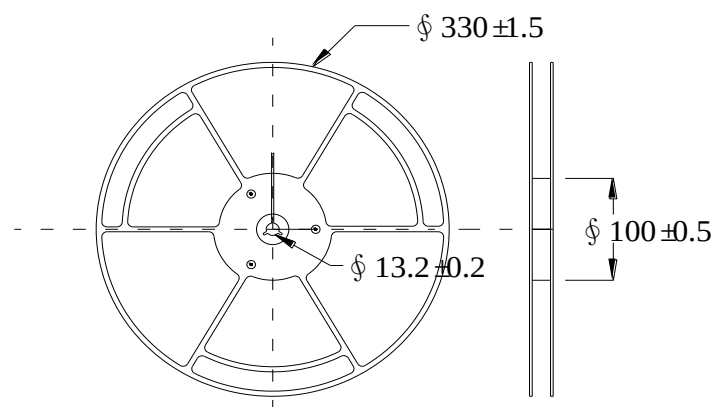
(1).ENCAPSULATION MODE



(2).DIMENSION(mm)

A0	B0	K0	P0	P	P2	E	F	D	W	T
7.40±0.10	11.20±0.10	7.70±0.10	4.00±0.10	16.00±0.10	2.00±0.10	1.75±0.10	11.50±0.10	1.5+0.1-0.0	24.00+0.30/-0.10	0.40±0.05

(2).REEL SIZE



(3).PACKAGE MODE

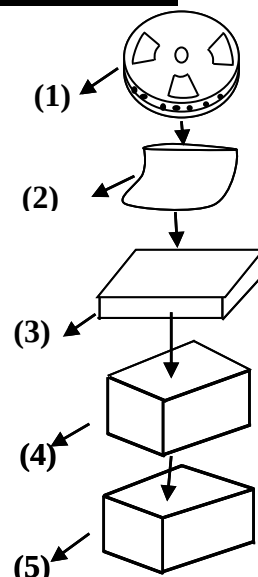
500PCS/Reel

1Reel/Bag

1 Bag/Small Box

4Small Boxes/Middle Box

1Middle Box/Outer Box



(5).PACKAGING LIST

NO.	PACKAGING PART	REFERENCE DIMENSION	MATERIAL	QUANTITY
1	Reel	13"	Plastic	500PCS/Reel
2	Bag	450x360x0.075 (mm)	Plastic	1 Reel/Bag
3	Small Box	340X335X45 (mm)	Paper	1Bag/Small Box
4	Middle Box	356X350X226 (mm)	Paper	4 Small Boxes/Middle Box
5	Outer Box	378X362X252 (mm)	Paper	1 Middle Box/Outer Box

(6).WEIGHT: N.W:2.35g/pcs Total4.7Kg(APPROX);G.W:10.3Kg(APPROX) ;

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1.RELIABILITY TEST.

TEST ITEMS	SPECIFICATIONS	TEST METHOD AND REMARKS
Solder ability	The electrodes shall be at least 90% covered with new solder coating	According to IEC68-2-20; 1. Soldering temperature:245±5℃ 2. Solder:99.3Sn/0.7Cu 3. Flux:Rosin 4. Immersion time:5±1Sec
Soldering heat resistance	1. Appearance :no damage 2. Inductance change:within ±10%of initial value	1. Preheat temperature150℃ 2. Preheat time:1min 3. Solder temperature260±5℃ 4. Dipping time:10±1Sec 5. Measured at room temperature after placing for 24hours
Vibration(OUT LAB)	1. Appearance:no damage 2. All Electrical and mechanical parameters within tolerance	According to MIL-STD202 Method204; 1.Frequency:10 to55Hz 2.Amplitude:1.52mm 3.Direction and timeX Y and Z Direction for 2 hours each
Humidity resistance test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-1MethodCa; 1. Temp:40±2℃ 2. Humidity:90%-95%RH 3. Test time:500±2H 4. The component should be stabilized at normal condition for24 Hours before test
High temperature resistance test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-2; 1. 1. Temperature:85±3℃ 2. Test time:500+24H 3. The component should be stabilized at normal condition for 24hours before test
Low Temperature resistance test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-1 Method A(Ad); 1. Temperature:-40±3℃ 2. Test time:500+24H 3. The component should be stabilized at normal condition for 24hours before test
Temperature cycles test	1. Appearance: no damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-14 Method N(Nb); 1. High-temp:85±3duration:30min 2. room -temp:25±2℃ Duration3H 3. Low-temp:-40±3Duration30min 4. room-temp: 25±2℃ Duration3H 5. Number of cycle:10cycles 6. The component should be stabilized at normal condition for 24hours before test

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Soldering Reflow Chart



Stage	Precaution	Recommended temperature profile	
Reflow soldering	Temperature profile can be referenced after confirming of adhesion , temperature of resistance to soldering heat , component size , soldering etc. sufficient . Note: please refer to the latest IPC/JEDEC J-STD-020: "Moisture/Reflow Sensitivity Classification for Nonhermetic Solid State Surface Mount Devices"	The graph shows Temperature in °C on the y-axis (25, 125, 220, 250, 260) and time on the x-axis. The profile starts at 25°C, ramps up to 125°C (150s to 210s), then ramps up to 220°C (240s to 480s). A shaded cyan area indicates the recommended temperature range during the final ramp. The profile then rises to a peak of 260°C (10s MAX) and finally cools down (Natural cooling). The cooling time from 220°C to 25°C is specified as 60s to 90s.	
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