

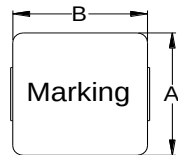


SPECIFICATION FOR APPROVAL



CUSTOMER	*	REV NO	1.0
DESCRIPTION	Inductor,0.33uH,22.0A,1.5mΩ DCR	PAGE NO	1 of 5
PART NO	SC2517-R33MHF	DATE	2014.09.18

1.CONFIGURATIONS & DIMENSIONS:



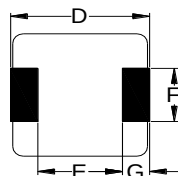
Top View



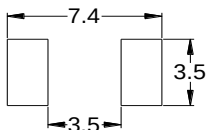
Front View



Side View



Bottom View



Suggest Pcb Layout

A	6.50	±	0.30	mm
B	6.50	±	0.30	mm
C	4.60		(Max.)	mm
D	7.40		(Max.)	mm
E	4.50		(Ref.)	mm
F	2.80		(Ref.)	mm
G	1.30		(Ref.)	mm
H				mm

Note : 1> Marking :

• R33
YY WW

YY:Year;WW:Week.

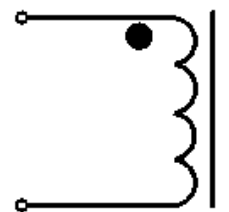
2> The long pin is the beginning of winding.

3> " " "Beginning of winding.

2.ELECTRICAL CHARACTERISTICS:

TEST	CONDITION	Ta= 25°C			
300KHz 0.25V	L	0.33	uH	±	20%
Ta=25°C	DCR	1.50	mΩ	±	7%
300KHz 0.25V Isat=22.0A	L@Isat	Aprox. 20% roll off (Typical)			
300KHz 0.25V Irms=20.0A	L@Irms	0.27	uH		(Typical)
300KHz 0.25V Imax=28.0A	L@Imax	0.25	uH		(Typical)

3.SCHEMATIC DIAGRAM



1> Wire FW050127025203T5-A18 .

NOTES:

1> Open Circuit Inductance (OCL) test condition:300KHz,0.25Vrms,0Adc at 25°C.

2> Isat: DC current that will cause inductance to drops approximately by 20% ;

3> Irms: DC current rating at 40°C temperature rise(typical).

4> Imax: DC current rating at 100°C temperature rise(typical).

5> Operating temperature range:-55°C~+150°C

4.TEST INSTRUMENTS:

L:WK3260B.

DCR:Gain Kai Ta 502BCOHM.

L@Irms & L@Isat:WK3260B and WK3265B.

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CHECKED BY

Royi Luo

DRAWN BY

Billy Tang



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PART NO	TBD							DATE	2014.09.18	
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	6.50 ± 0.3	6.50 ± 0.3	4.60 (Max.)	7.40 (Max.)	4.50 (Ref.)	2.80 (Ref.)	1.30 (Ref.)			
1	6.62	6.50	4.24	7.29	4.28	2.89	1.26			
2	6.56	6.56	4.26	7.31	4.26	2.82	1.28			
3	6.52	6.51	4.29	7.28	4.12	2.74	1.22			
4	6.63	6.60	4.34	7.30	4.15	2.79	1.20			
5	6.51	6.50	4.33	7.28	4.27	2.75	1.18			
6										
7										
8										
9										
10										
AVERAGE	6.568	6.534	4.292	7.292	4.216	2.798	1.228			
REMARK:										
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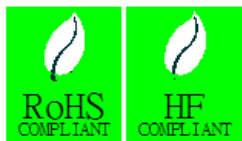
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DESCRIPTION	Inductor,0.33uH,22.0A,1.5mΩ DCR	PAGE NO	3 of 5
PART NO	SC2517-R33MHF	DATE	2014.09.18

5. TEST DATA FOR ELECTRICAL

TEST ITEM	L uH	DCR mΩ	L@Isat uH	L@Irms uH	L@Imax uH				
CON.	300KHz 0.25V	at 25°C	300KHz 0.25V Isat=22.0A	300KHz 0.25V Irms=20.0A	300KHz 0.25V Imax=28.0A				
SPEC	0.33 ± 20%	1.50 ± 7%	Aprox. 20% roll off (Typical)	0.27 (Typical)	0.25 (Typical)				
1	0.319	1.493	0.260	0.265	0.242				
2	0.328	1.467	0.264	0.271	0.248				
3	0.329	1.474	0.266	0.272	0.250				
4	0.305	1.464	0.255	0.262	0.236				
5	0.316	1.476	0.260	0.267	0.241				
6									
7									
8									
9									
10									
AVERAGE	0.3194	1.4748	0.2610	0.2674	0.2434				
R	0.0240	0.0290	0.0110	0.0100	0.0140				

REMARK:

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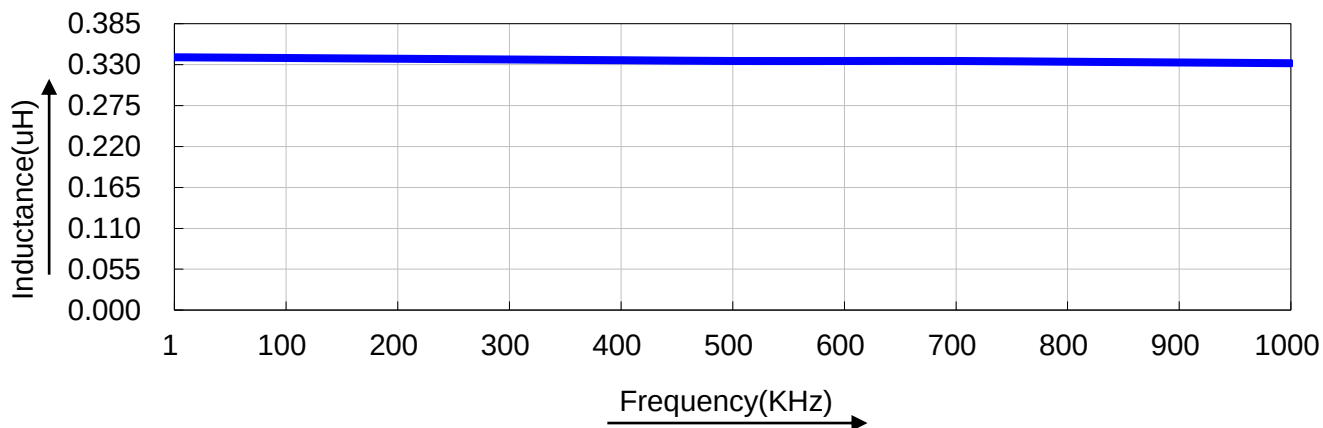
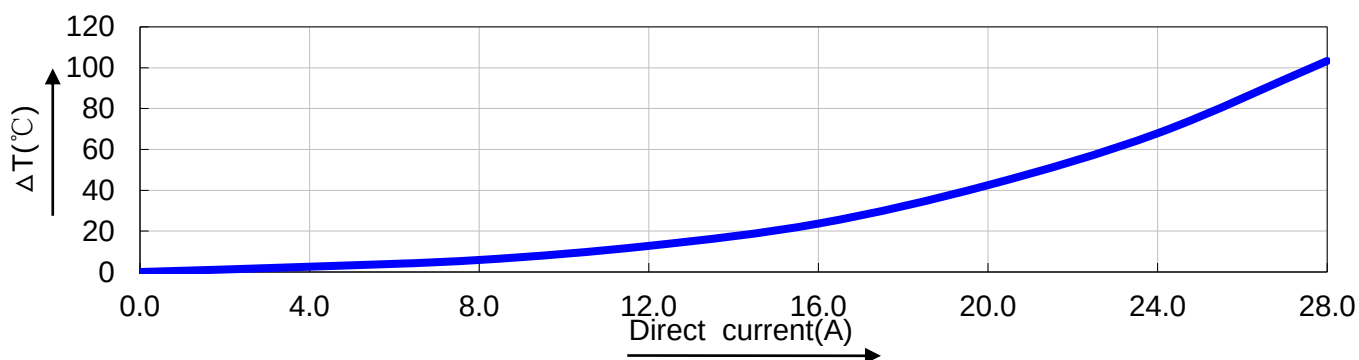
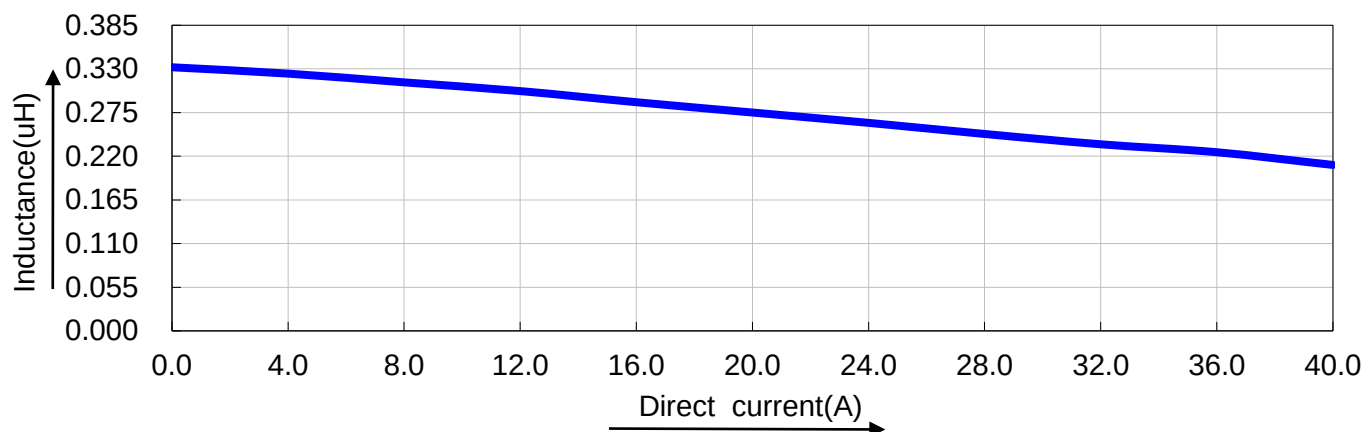


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=spec '!A6:B6	SC2517-R33MHF	DATE	2014.09.18

8.ELECTRICAL CHARACTERISTICS.



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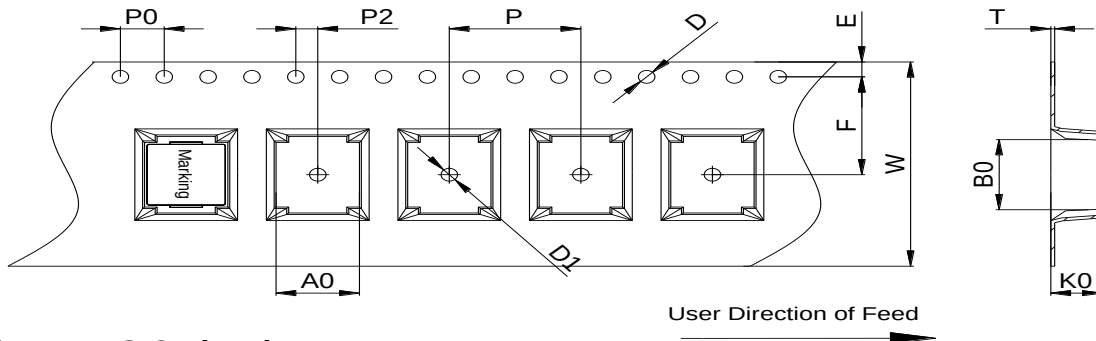
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1.PACKAGE SPECIFICATION.(UNIT:mm)

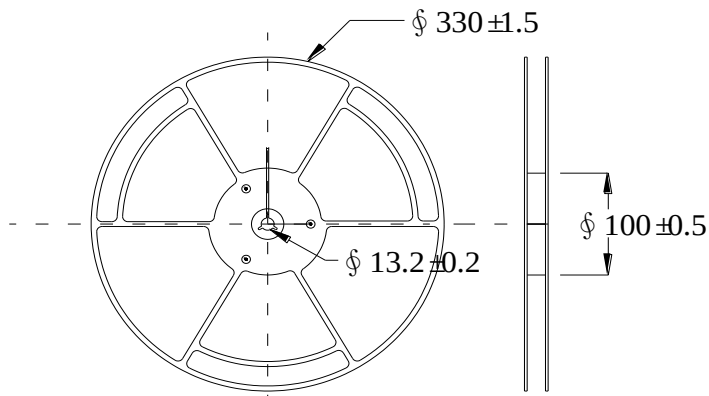
(1).ENCAPSOLATION MODE



(2).DIMENSION(mm)

W	A0	B0	K0	P	P0	P2	D	D1	F	E	T
16.00±0.30/-0.10	6.90±0.10	7.60±0.10	4.70±0.10	12.00±0.10	4.00±0.10	2.00±0.10	1.50+0.10/-0	1.50+0.10/-0	7.50±0.10	1.75±0.10	0.35±0.05

(2).REEL SIZE



(3).PACKAGE MODE

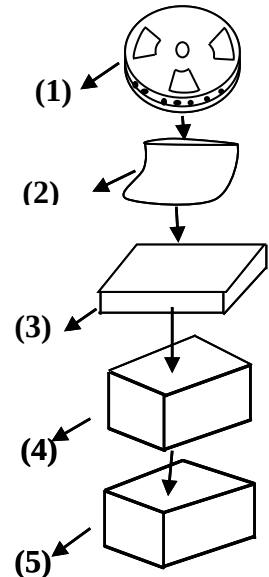
1100PCS/Reel

1Reel/Bag

2 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	1100PCS/Reel
2	Bag	450x360x0.075 (mm)	Plastic	1 Reel/Bag
3	Small Box	340X335X45 (mm)	Paper	2Bag/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).N.W:0.85g/pcs TOTAL7.48Kg(APPROX),G.W:TOTAL13.08Kg(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 peaks at 260°C for a maximum of 10 seconds (10S (MAX)) before natural cooling. The cooling phase is labeled 'Natural cooling' and '60s to 90s'.	
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Martin		Andrew	Richard

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