

SUNLEI

FOR APPROVAL

樣品承認書



客戶名稱
CUSTOMER

產品名稱
PRODUCT

Trans-inductor Voltage Regulator

產品型號
PART NO.

SLVR130835-SERIES

客戶型號
PART NO.

承認印 APPROVED BY

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發行單位 ISSUE BY



昕磊科技股份有限公司

日期
DATE

2024/09/30

Office:

昕磊科技股份有限公司 SUNLEI TECHNOLOGY CORP.

ADD: 新北市中和區中山路三段110號9樓之8

9F.-8, No.110, Sec.3, Zhongshan Rd; Zhonghe City, Taipei County 235, Taiwan

TEL: 886-2-8228-7672 FAX: 886-2-8228-7673

E-MAIL: andy.h@sunlei.com.tw

WEB: <http://www.sunlei.com.tw>

Factory:

東莞創頂電子有限公司 CHAINTK ELECTRONICS CORP.

ADD: 中國廣東省東莞市虎門鎮樹田村樹安工業區

shuan industrial park, shutian Village Humen Town Dongguan City Guangdong Province China

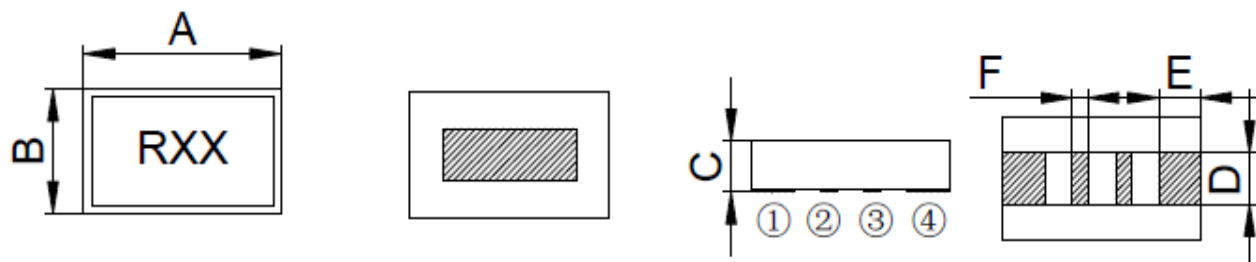
TEL: 86-769-38892012/ FAX: 86-769-38892038

SPECIFICATION FOR APPROVAL

CUSTOMER:		PART NO.:	SLVR130835-SERIES
DESCRIPTION:	Trans-inductor Voltage Regulator	CUSTOMER P/N:	

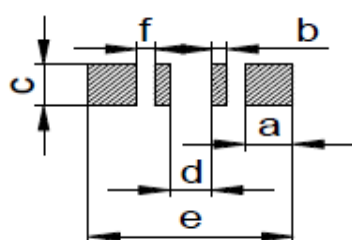
1. CONFIGURATION DIMENSIONS (UNIT: mm)

100% Lead Free and HF.

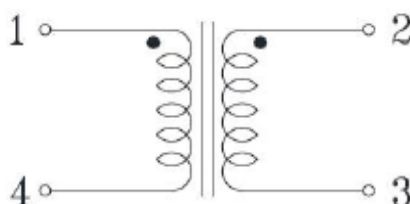


A	12.8±0.5
B	7.8±0.3
C	3.5MAX
D	3.2TYP
E	2.7TYP
F	1.0TYP
a	3.125REF
b	1.0REF
c	3.4REF
d	3.1REF
e	13.3REF
f	1.15REF

MARKING: RXX



SCHEMATIC



RECOMMENDER P.C.B LAYOUT

2. ELECTRICAL CHARACTERISTICS

Part number	L (nH) 1-4/2-3 ± 20%	DCR mΩ +/-10%		Leakage Inductance (nH) (typ)	Coupling Coefficient (typ)	Isat(A) Max			Heating Current (Amps)(typ)	
		1-4	2-3			@25°C	@100°C	@120°C	1-4	2-3
SLVR130835-R07M-D18-2D	70	0.18	0.37	10	0.93	75	60	55	55	40
SLVR130835-R10M-D18-2D	100	0.18	0.37	10	0.94	45	35	30	55	40
SLVR130835-R15M-D18-2D	150	0.18	0.37	10	0.95	30	25	20	55	40

	Operating Voltage min/typ/max	SRF(MHz) typ	RS @1MHz (Ω)Max
SLVR130835-R07M-D18-2D	50	120+	4.6
SLVR130835-R10M-D18-2D	50	120+	4.6
SLVR130835-R15M-D18-2D	50	120+	4.6

Note 1 : DCR @ 25°C, test DCR1-4 & DCR2-3 which was shown on dimension page.

Note 2 : L1 @ 100kHz, 1.0Vrms, 0A, 25°C.

Note 3 : Li @ 100kHz, 1.0Vrms, ISAT.

Note 4 : IRMS: Irms is the DC current which causes the surface temperature of the part increase approximately 40°C.

Note 5 : Operating Voltage (min/typ/max) : 50VDC typ. SRF: 120+MHz typ. Rs@1MHz (Ω)Max: 4.6

Note 6 : ISAT1: is the DC current which causes the inductance drop to Li at +25°C

ISAT2: is the DC current which causes the inductance drop to Li at +100°C

ISAT3: is the DC current which causes the inductance drop to Li at +125°C



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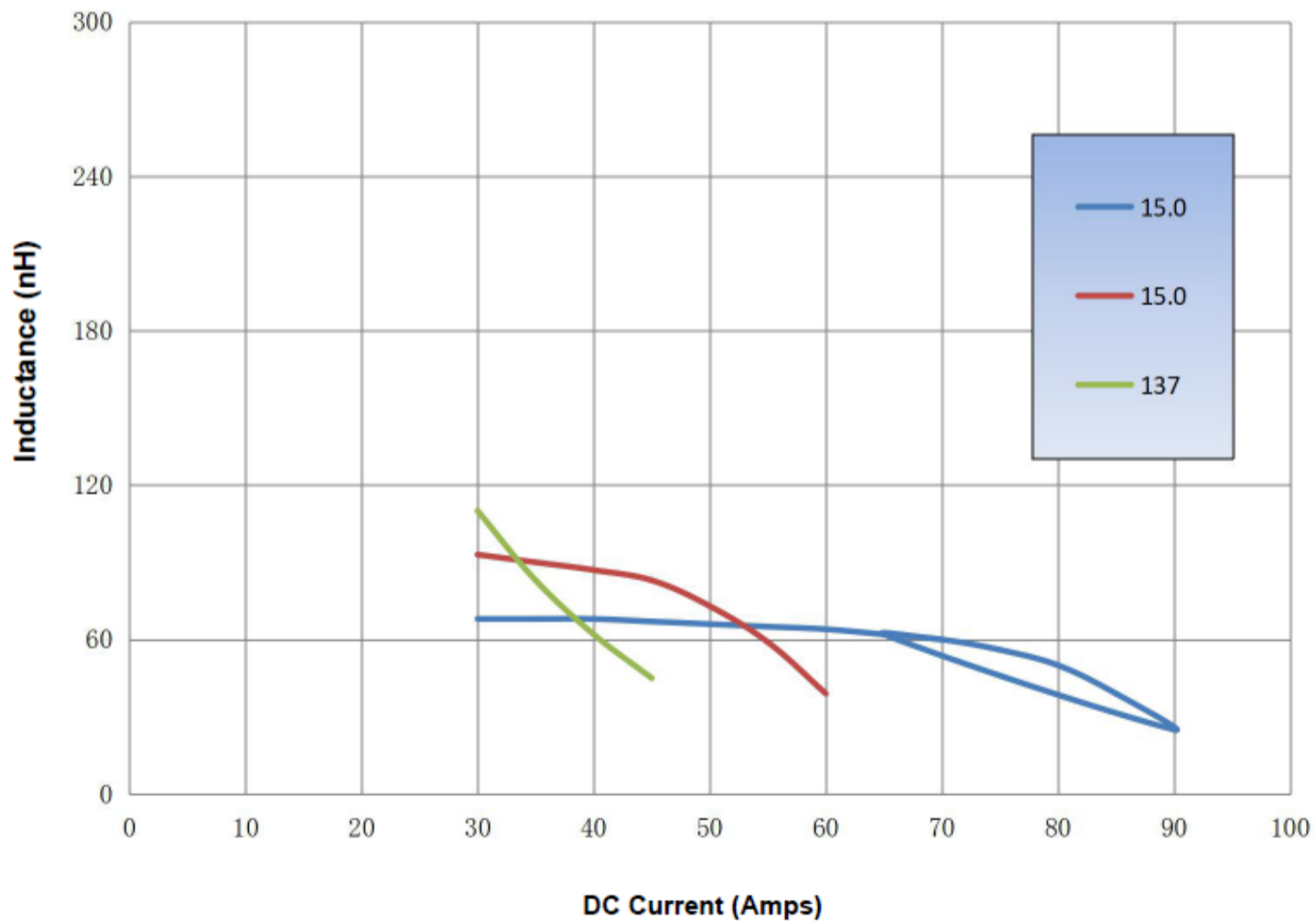
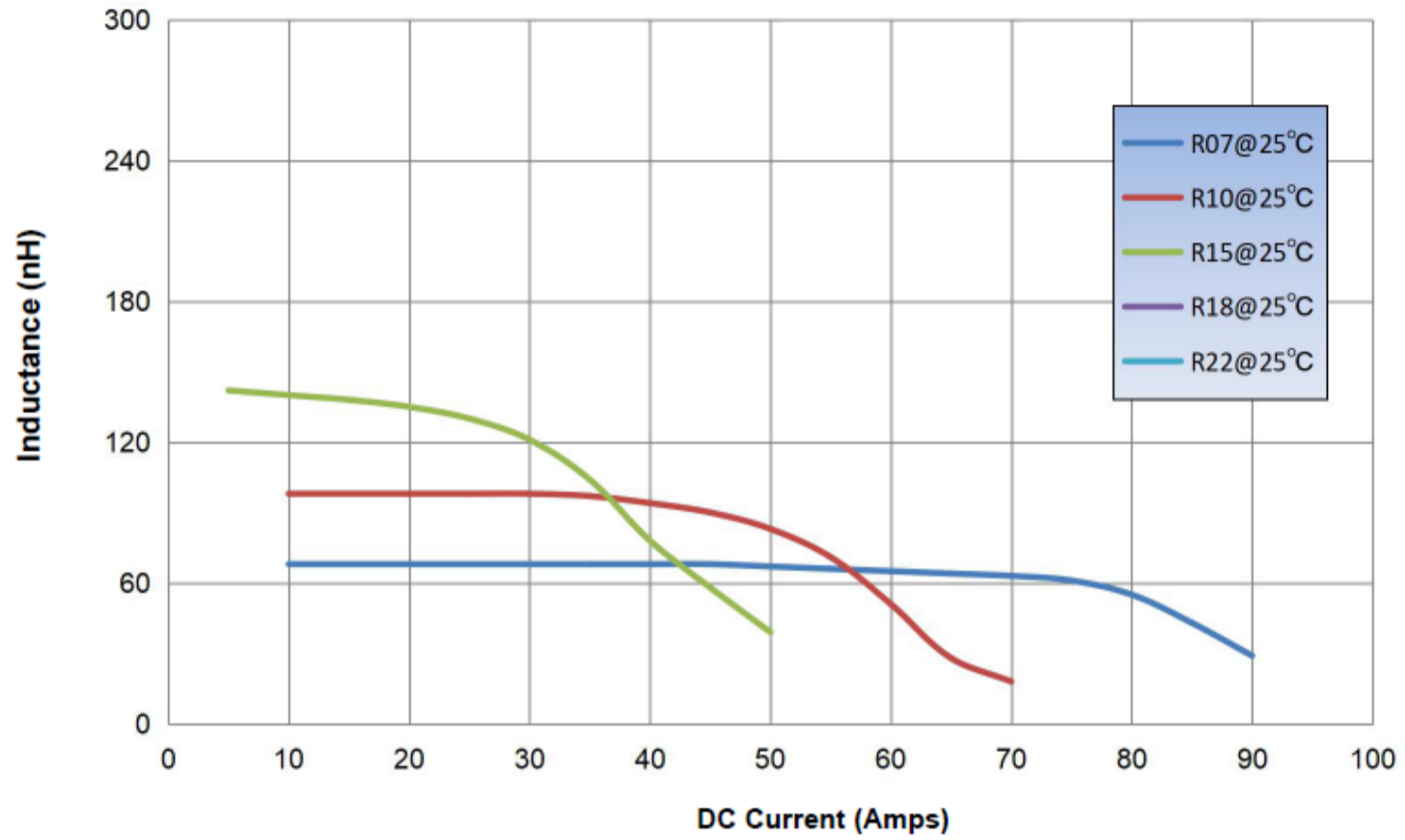
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Andy	Aiji	Yan
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Inductance (nH) vs DC Bias (Amps) # 100KHz/1.0V

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Performance graphs :

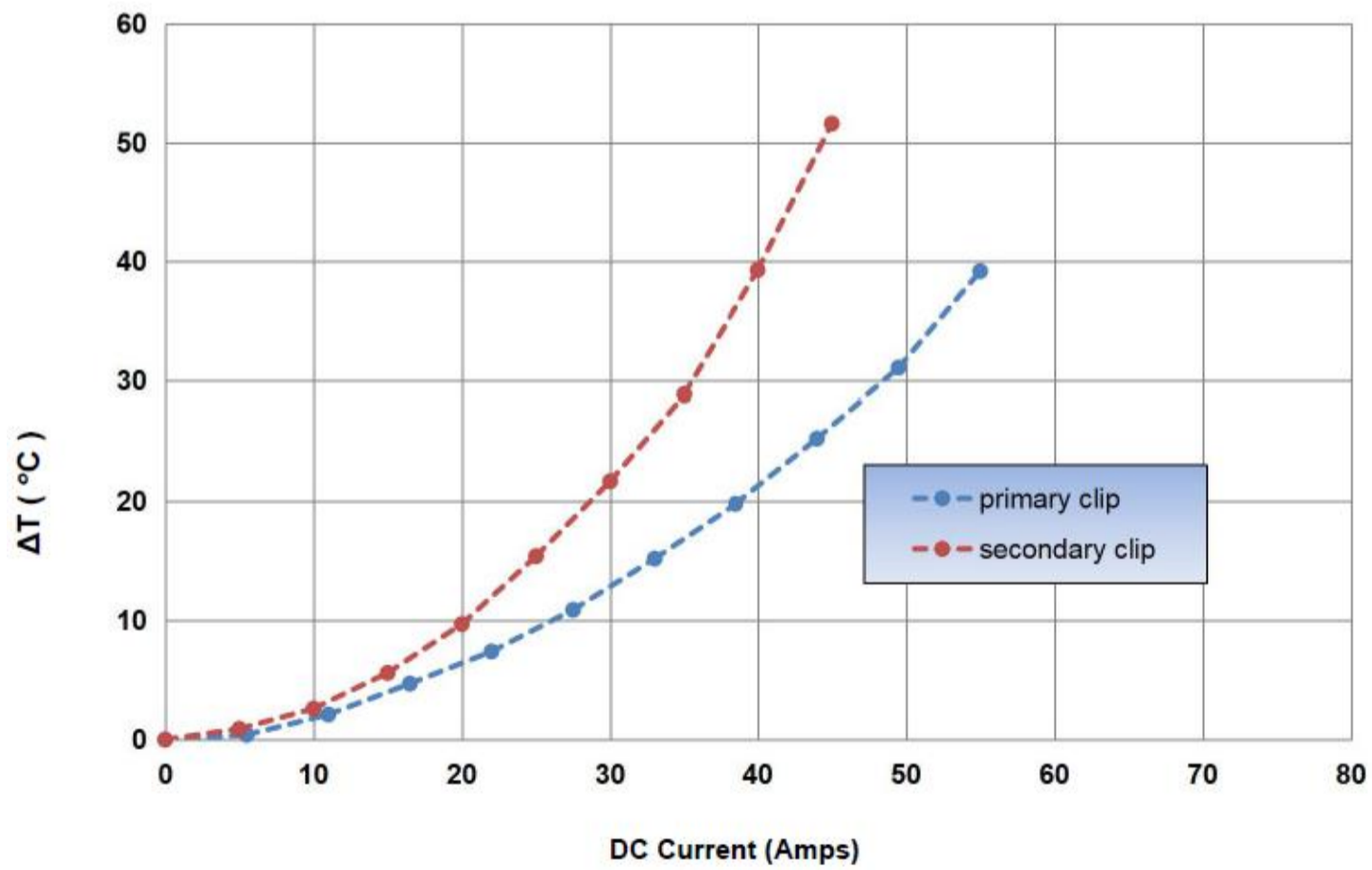
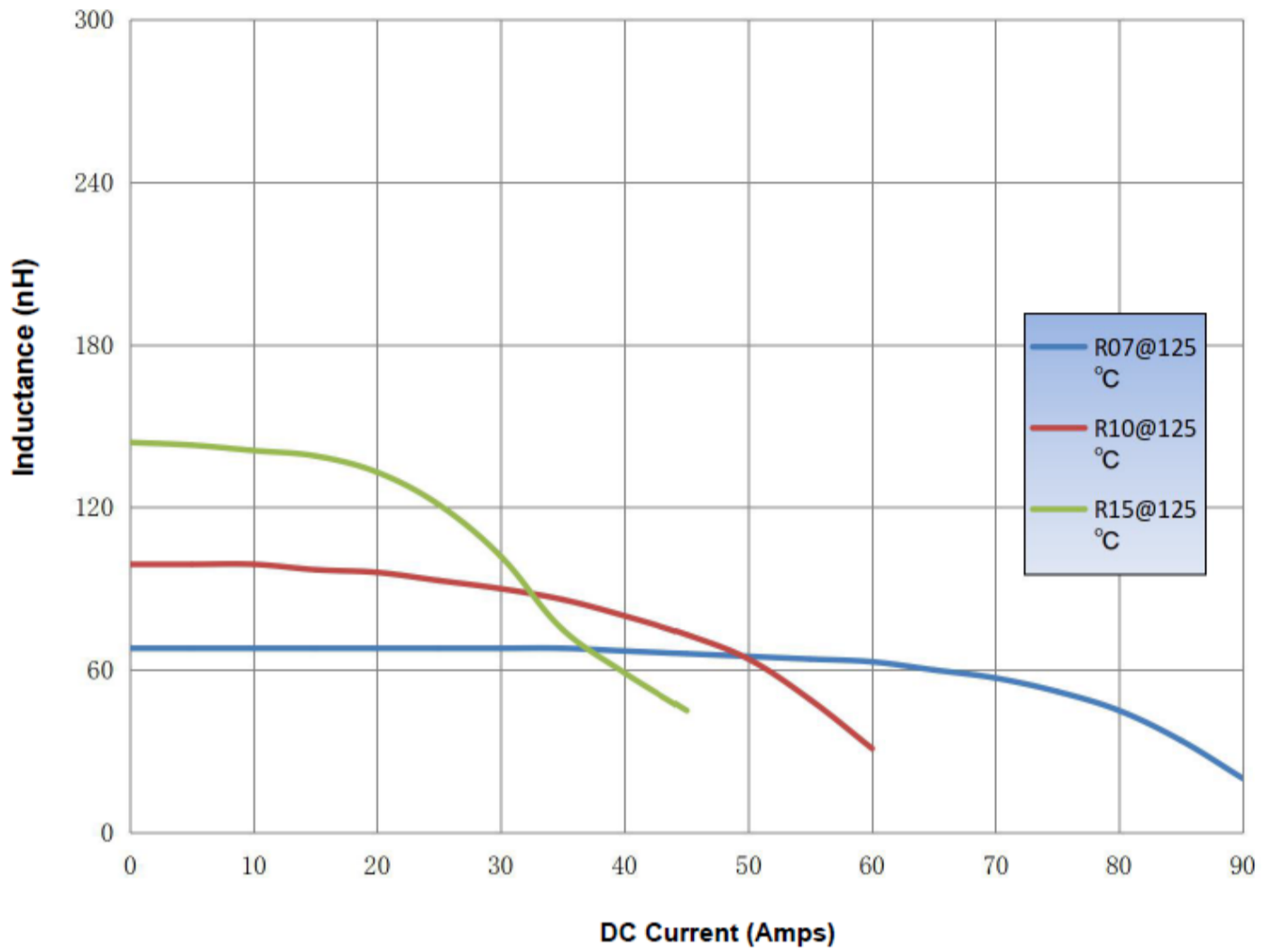


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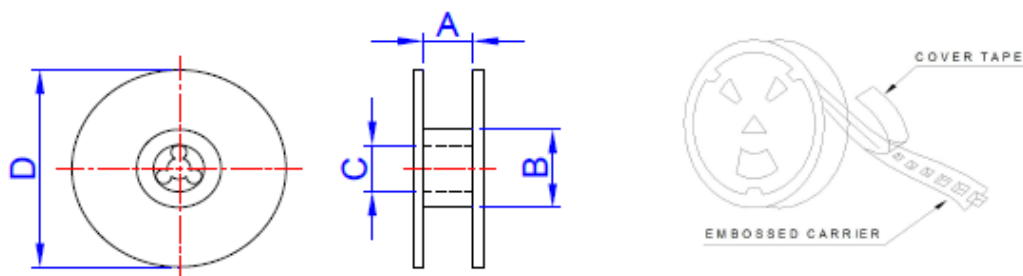
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PACKING

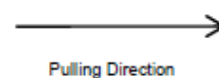
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Reel Dimension

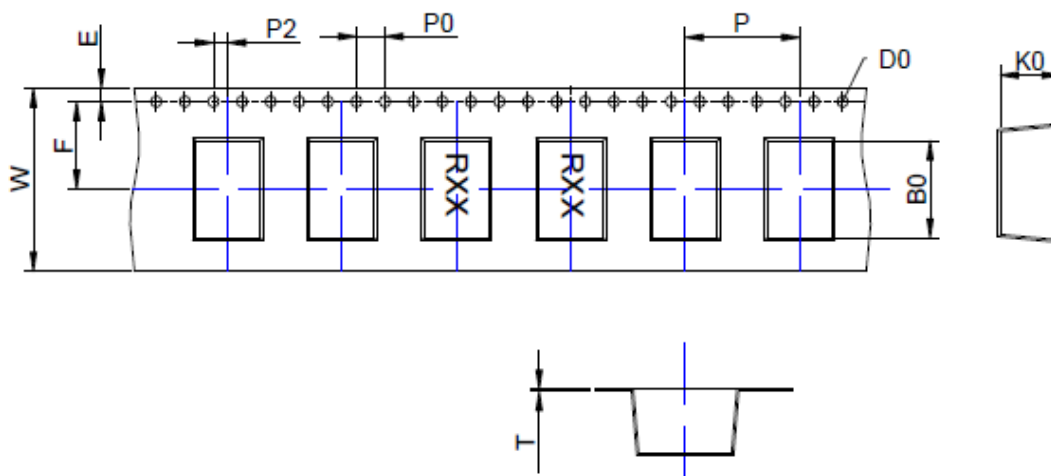


Unit : mm

Reel type	A	B	C	D
13" x 24mm	24.5 ± 0.5	100 ± 2	13 ± 0.5	330(REF)



Tape Dimension



Unit : mm

P/N	PCS/Reel	W	P	P0	P2
		24.0±0.3	16.0±0.1	4.0	2.0
SLVR130835 Series	1,000	E	F	D0	T
		1.75	11.5	1.5	0.5±0.05
	IN BOX/PCS	OUT BOX/PCS	A0	B0	K0
	2000	8000	8.1±0.1	13.1±0.1	3.4±0.1



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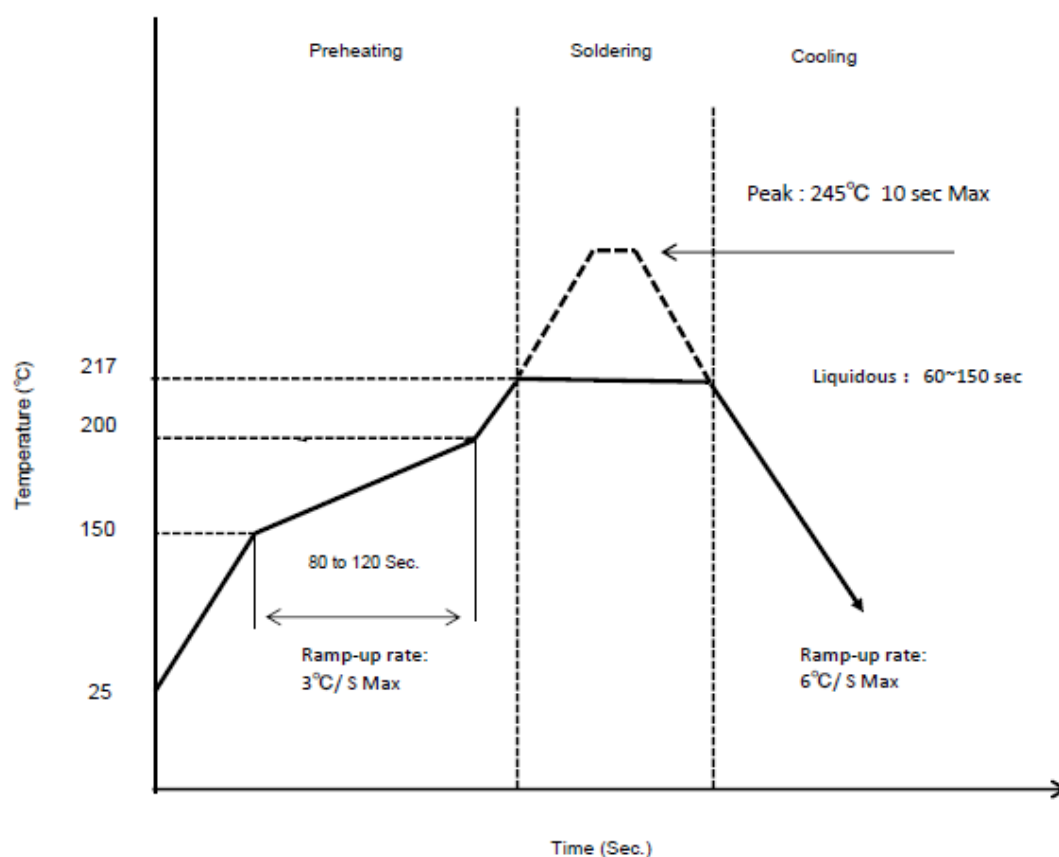
RELIABILITY

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Storage

1. Temperature conditions: $-10\text{ }^{\circ}\text{C} \sim 40\text{ }^{\circ}\text{C}$, $< 70\% \text{ RH}$
2. Recommended products should be used within 6 months form the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

Recommended Soldering Conditions



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RELIABILITY

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Reliability and Testing Conditions / Pin Type Power Inductors:

Item	Specification	Conditions															
Storage temperature and humidity range	-10 °C ~ 40 °C , 70% RH Max.																
Resistance to Soldering Heat	More than 95% of the terminal electrode should be covered with solder.																
Solderability	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.																
Heat resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in 125 \pm 5°C and 1 hour drying under normal condition.															
Cold resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in -40 \pm 2°C and 1 hour drying under normal condition.															
Thermal shock	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 100 cycles. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Times (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40\pm2</td> <td>30</td> </tr> <tr> <td>2</td> <td>Room Temperature</td> <td>Within 3</td> </tr> <tr> <td>3</td> <td>125\pm5</td> <td>30</td> </tr> <tr> <td>4</td> <td>Room Temperature</td> <td>Within 3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Times (min.)	1	-40 \pm 2	30	2	Room Temperature	Within 3	3	125 \pm 5	30	4	Room Temperature	Within 3
Step	Temperature (°C)	Times (min.)															
1	-40 \pm 2	30															
2	Room Temperature	Within 3															
3	125 \pm 5	30															
4	Room Temperature	Within 3															
Humidity Resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in 85°C/85%RH . Measurement at 24 \pm 2 hours after test conclusion.															
Vibration Test	Inductance within $\pm 20\%$ of initial value and appearance shall not break.	1. Reflow: 2times 2. Frequency: 10HZ~55HZ~10HZ, 20 Min/Cycles 3. Amplitude: 1.52 mm 4. Directions: X,Y,Z 5. Time: 12 cycle / direction.															