



SPECIFICATION FOR APPROVAL



CUSTOMER: _____ FILE NO.: _____

CUSTOMER P/N: _____

DESCRIPTION: SMD TYPE MOLDING POWER INDUCTOR

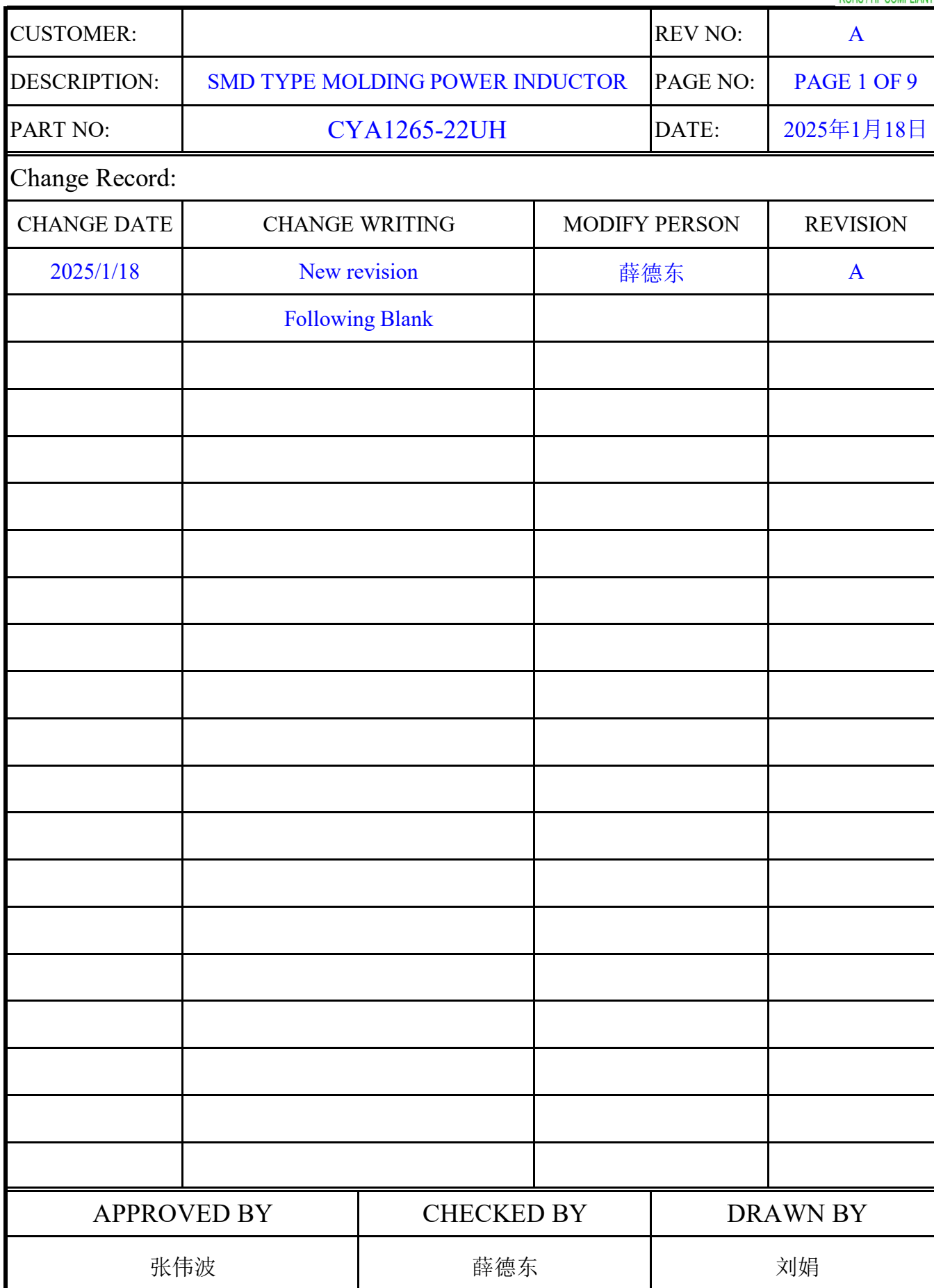
PART NO: CYA1265-22UH

DATE: 2025年1月18日 REVISION: A

SPECIFICATION ACCEPTED BY:	
DRAWN BY	刘娟
CHECKED BY	薛德东
APPROVED BY	张伟波

CUSTOMER CONFIRMATION	
Engineering Department	
Quality Department	
Purchasing department	

Note: if the customer does not sign back but has a formal order, it will be regarded as formal approval.



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1. DRAWING

ASSEMBLY

(UNIT: mm)

SCHEMATICS

SUGGESTED PCB LAYOUT

CODE	A	B	C	D	E
DIMENSION	12.8±0.5	13.5±1.0	6.3±0.2	3.8±0.5	2.5±0.5

2. ELECTRICAL CHARACTERISTICS @25°C

ITEM	SPEC. RANGE	TEST CONDITION	TEST INSTRUMENTS
$L_0(\mu H)$	22.0*(1±20%)	100KHz/1.0V	Microtest 6377
IDC(A)	5		Microtest 6377
Isat(A)	9.5		Microtest 6220
DCR(mΩ)	50MAX		Microtest 4210

3. GENERAL SPECIFICATION

- Rating DC current: Temperature rise(ΔT) is 40°C approximately at IDC.
- Saturation DC current: Inductance drop approximately 30% of L_0 at Isat.
- Storage temp.: -40°C ~ 85°C
- Storage R.H.: 30% ~ 70%
- Operating temp.: -25°C ~ +125°C
- Resistance to solder heat: 260°C/10 secs.

APPROVED BY	CHECKED BY	DRAWN BY
张伟波	薛德东	刘娟



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4.1 TEST DATA OF ELECTRICAL CHARACTERISTIC

TEST ITEM	L ₀	Temperature rise	L _{Isat}	DCR	
	(μH)	(°C)	(μH)	(mΩ)	
CON.	100KHz/1V	IDC5A	Isat 9.5	At 25°C	
SPEC.	22.0*(1±20%)	△T 40°C	Drop 30 %	50MAX	
1	22.700	29.4	16.142	32.05	
2	23.980	31.7	16.890	34.75	
3	22.750	30.3	16.250	31.97	
4	22.660	32.6	15.980	34.93	
5	22.730	30.9	16.010	33.11	
6	22.100	33.1	15.900	32.04	
7	21.470	32.3	15.570	31.98	
8	23.090	29.2	16.230	32.00	
9	23.650	30.5	16.740	32.60	
10	22.770	30.7	16.120	31.95	
X	22.790	31.07	16.183	32.738	
R	2.51	3.90	1.32	2.98	

TEST INSTRUMENTS

☐ PRECISION LCR METER	Microtest 6377
☐ BIAS CURRENT SOURCE	Microtest 6377, Microtest 6200
☐ AUTOMATIC COMPONENT ANALYZER	Microtest 7703
☐ LCR METER	Microtest 6377
☐ OHM METER	Microtest 4210

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4.2 TEST DATA OF DIMENSIONS

CODE	A	B	C	D	E		
	(mm)	(mm)	(mm)	(mm)	(mm)		
SPEC.	12.8±0.5	13.5±1.0	6.3±0.2	3.8±0.5	2.5±0.5		
1	12.69	13.67	6.40	3.80	2.50		
2	12.71	13.70	6.34	3.80	2.43		
3	12.70	13.69	6.36	3.80	2.47		
4	12.68	13.60	6.18	3.80	2.42		
5	12.73	13.67	6.30	3.80	2.46		
6	12.70	13.70	6.27	3.80	2.51		
7	12.68	13.67	6.34	3.80	2.47		
8	12.71	13.70	6.29	3.80	2.49		
9	12.70	13.66	6.30	3.80	2.47		
10	12.69	13.68	6.19	3.80	2.38		
X	12.699	13.674	6.297	3.800	2.460		
R	0.05	0.10	0.22	0.00	0.13		
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张伟波			薛德东			刘娟	

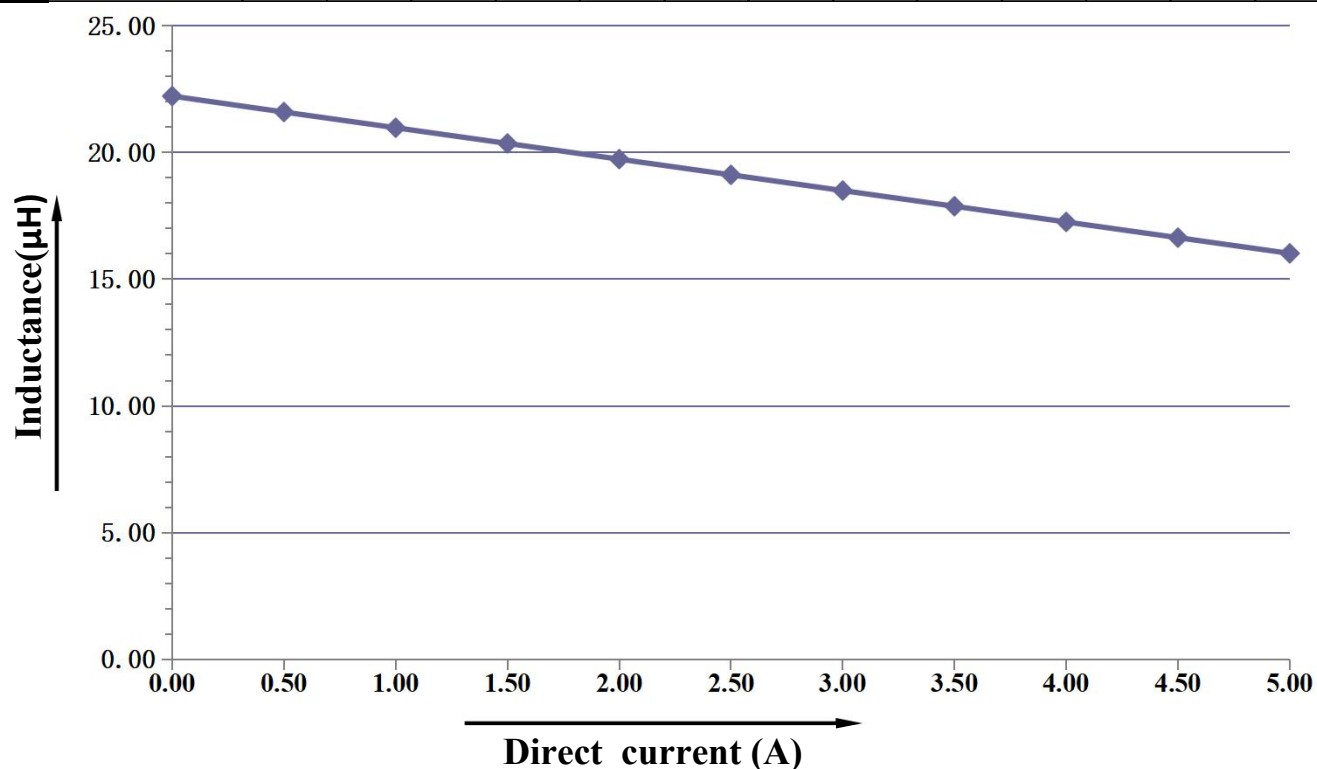
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5. MATERIAL LIST

NO	ITEM	DESCRIPTION	SUPPLIER	REMARK
1	POWDER	ALLOY POWDER	TLL	
2	WIRE	ENAMELED COPPER WIRE EIW	JUNGSHING OR EQU	
3	TERMINAL	SHEET MATERIAL	ZHONGSHUN OR EQU	

6.1 ELECTRICAL CHARACTERISTIC CURVE----L vs Isat

Inductances (uH) VS Direct current (A)													
CURRENT(A)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0		
L_1 (uH)	22.23	21.60	20.98	20.36	19.74	19.12	18.50	17.88	17.26	16.64	16.02		
Drop%	0.0%	2.8%	5.6%	8.4%	11.2%	14.0%	16.8%	19.6%	22.4%	25.1%	27.9%		



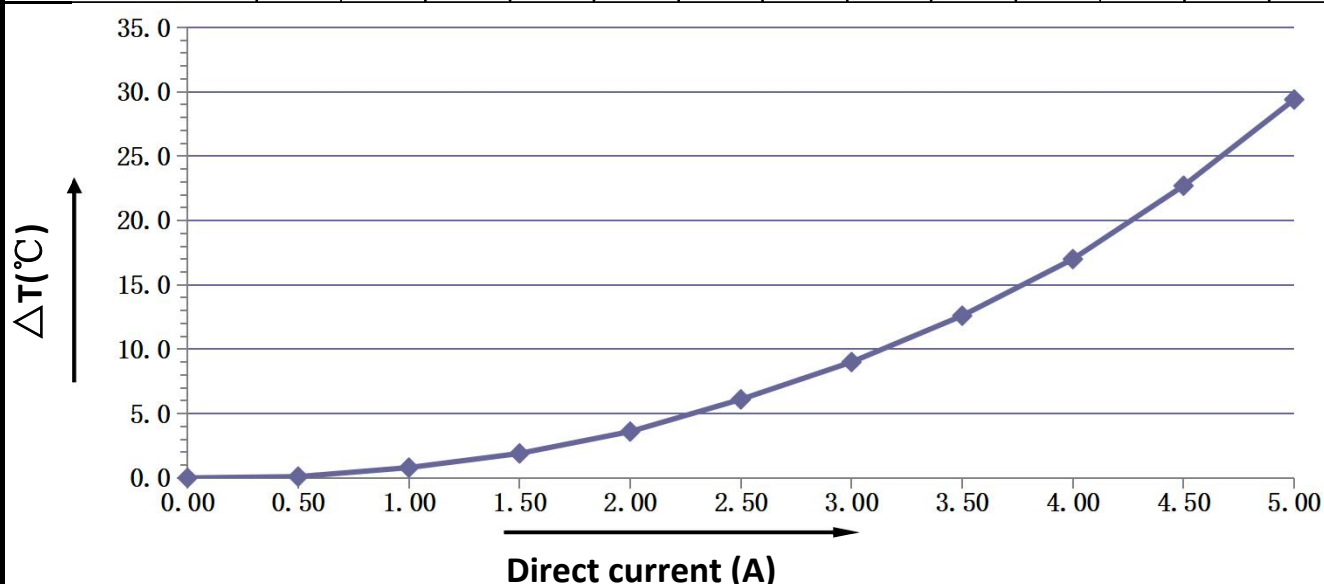
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张伟波	薛德东	刘娟

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6.2 ELECTRICAL CHARACTERISTIC CURVE--- ΔT vs IDC

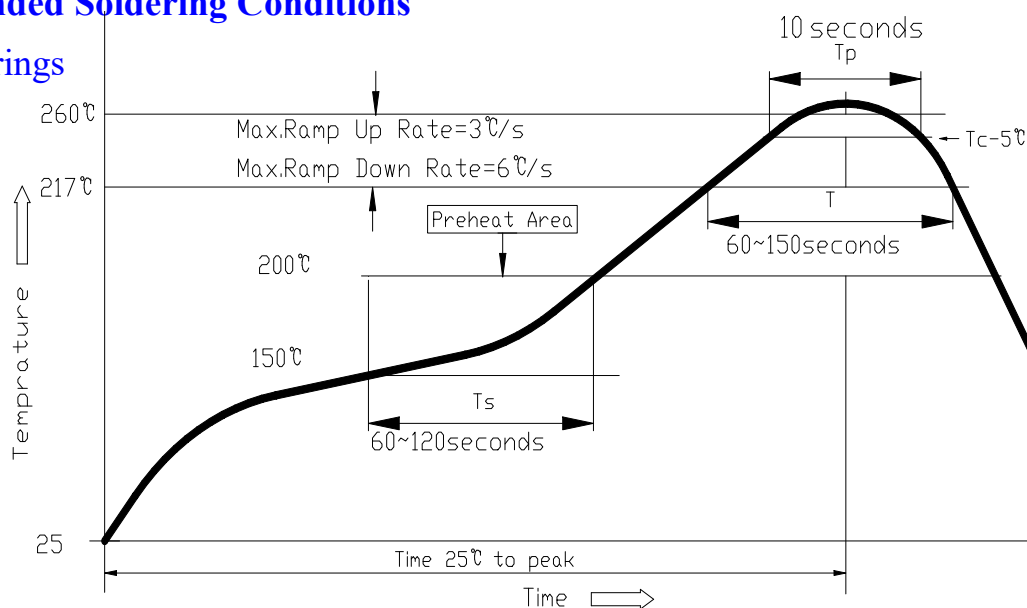
Temperature Rise($^{\circ}\text{C}$)vs Direct Current(A)

CURRENT(A)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0		
$\Delta T(^{\circ}\text{C})$	0.0	0.1	0.8	1.9	3.6	6.1	9.0	12.6	17.0	22.7	29.4		



7. Recommended Soldering Conditions

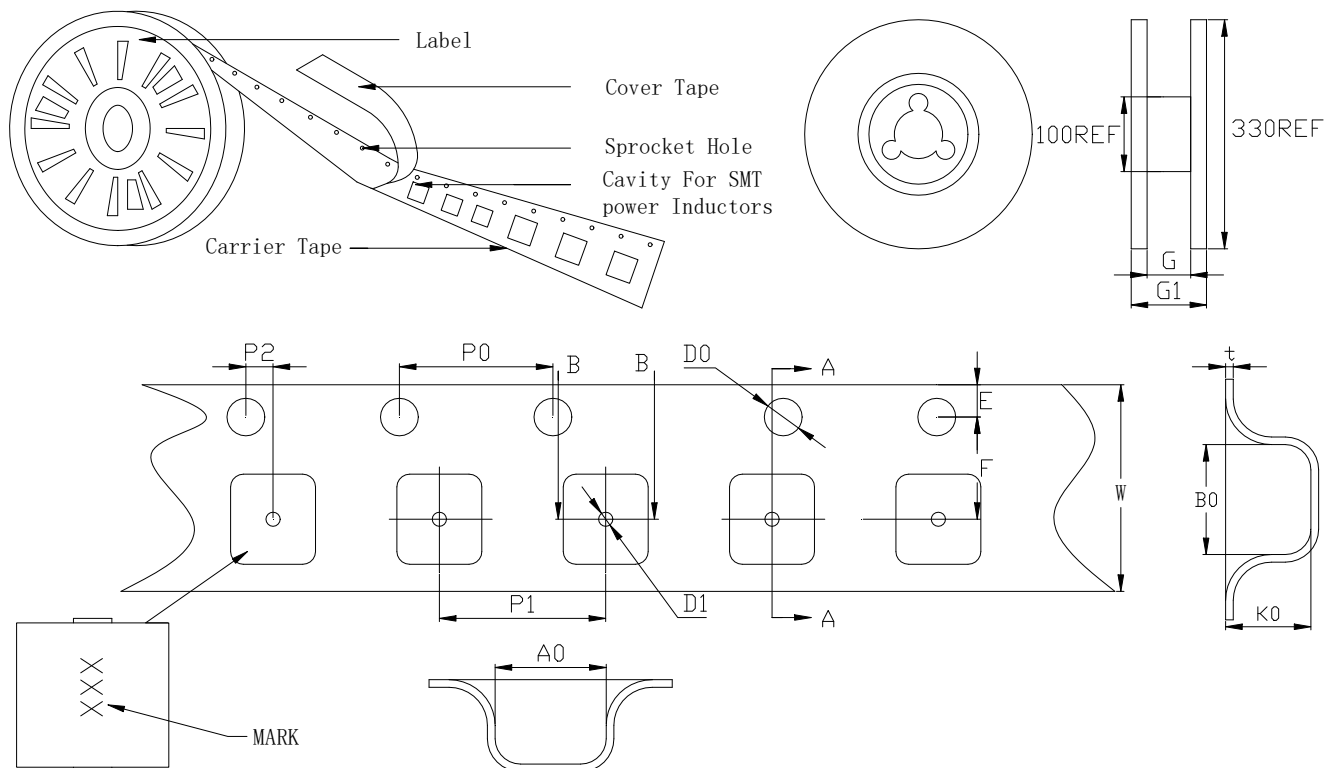
Reflow Solderings



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8. PACKAGING(unit: mm)



TYPE	DIMENSION OF REEL				PACKING UNIT
					(PCS/R)
CYA1265	W	24.0±0.35	D1	Ø1.50MIN	Φ 330mm
	E	1.75±0.15	A0	13.5±0.15	500 PCS/R
	F	11.50±0.15	B0	14.2±0.15	
	P1	16.00±0.15	K0	6.8±0.15	
	P0	4.00±0.15	t	0.35±0.15	
	P2	2.00±0.15	G	24.8±0.5	
	D0	Ø1.50±0.15	G1	32.2±0.5	

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9.1 RELIABILITY TEST

TEST ITEM	SPECIFICATION	TEST CONDITION
Resistance to soldering heat	1. Inductor shall have no evidence of electrical and mechanical damage. 2. Inductance shall not change more than $\pm 5\%$. 3. Q shall not change more than $\pm 20\%$.	a. Temp: $260 \pm 5^\circ\text{C}$ b. Time: 10 ± 1.0 secs
Solderability test	The terminal shall be at least 95% covered with solder.	After fluxing, the terminal shall be dipped in a melted solder bath at $245 \pm 5^\circ\text{C}$ for 4 ± 1.0 secs.
High temperature & high humidity test	The anti-erosion quality of the surface and the specimen's inductance shall not change from the initial value within $\pm 10\%$	a. Test condition 1) Temp.: $60 \pm 2^\circ\text{C}$, R.H.: 90~95% 2) Time: 500 ± 2 hours b. Measurement methods: The experimental component should be put at normal condition for 2 hours then to measure again after test
Salt spray test		a. Test condition 1) Temp.: $35 \pm 2^\circ\text{C}$ 2) Time: 48 ± 2 hours 3) Salt solution PH: 6.5~7.2 b. Measurement methods: The experimental component should be put at normal condition for 2 hours then to measure again after test
Vibration test	1. Inductance shall be within $\pm 10\%$ of the initial value. 2. Appearance: no damage	a. Frequency: 10 to 55HZ b. Amplitude: 1.5mm c. Direction and time: X, Y and Z directions for 2 hours each.

We have suggested the storage period of lead-free product should not over 6 months.

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张伟波	薛德东	刘娟

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9.2 RELIABILITY TEST

TEST ITEM	SPECIFICATION	TEST CONDITION
Free fall test	No mechanical damage shall be noticed.	Drop the product from 1 meter height to 3 cm thick board, repeat 10 times.
Temperature Cycling test	1. Inductance shall be within $\pm 10\%$ of the initial value 2. Appearance: No damage	a. Test condition 1) Temp.: -55°C , time: $30 \pm 3\text{min}$ 2) Temp.: $+125^{\circ}\text{C}$, time: $30 \pm 3\text{min}$ 3) Cycles times: 10 cycles b. Measurement methods: The experimental component should be put at normal condition for 2 hours then to measure again after test
High Temperature resistance test		a. Test condition 1) Applied rated current 2) Temp.: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 3) Test time: $500 + 24/-0\text{H}$ b. Measurement methods: The experimental component should be put at normal condition for 24 hours then to measure again after test.
Low temperature resistance test		a. Test condition 1) Temp.: $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 2) Test time: $500 + 24/-0\text{H}$ b. Measurement methods: The experimental component should be put at normal condition for 24 hours then to measure again after test.

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