德砚电子
DE YAN DIAN ZI

一体成型功率电感

Data Sheet

RoHS ISO 9001 质量管理体系认证 ISO 14001 环境管理体系认证

Shenzhen Deyan Electronics Co., Ltd

SPECIFICATION

AMENDMENT RECORD

SYMBOL	DATE	PAGE	CONTENTS	DWN. BY	CHK. BY	APP. BY
				叶枫	李林	谢东

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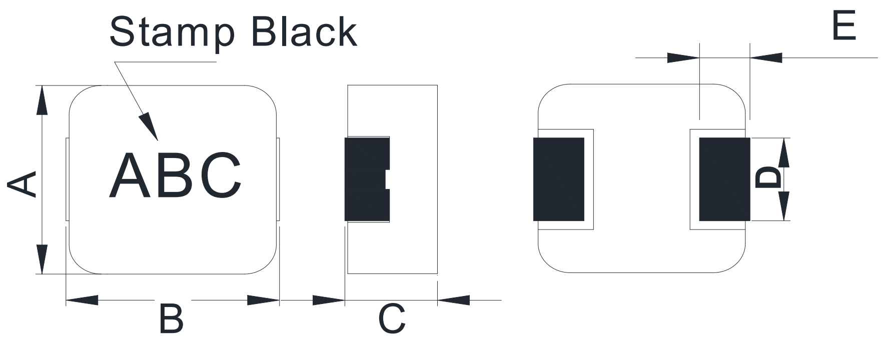
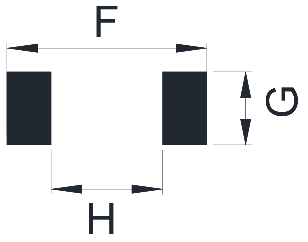
1. DIMENSIONS (UNIT : mm)



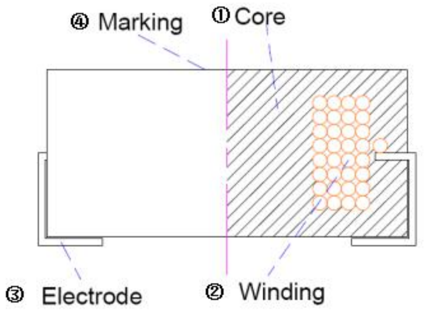
A	B	C	D	E
5.4±0.35	5.7±0.20	3.0 Max.	2.0±0.30	1.5±0.30

2. RECOMMENDED LAND PATTERN (UNIT: mm)



F	6.0 Ref.
G	2.5 Ref.
H	2.2 Ref.

3. STRUCTURE



No.	PARTS	MATERIAL
①	CORE	Alloy powder
②	WIRE	Self bonding polyamide-imide enameled Copper Wire
③	ELECTRODE	Cu
④	MARKING	INK

APPROVAL	**CHECK**	**DESIGN**	

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4.CHARACTERISTICS

No.	P/N.	Inductance (μH)	Stamp	D.C.R. (mΩ) Max.	Saturation current(A)		Temperature rise current(A) (△T≦40℃)	
					Typ.	MAX	Typ.	MAX
01	D0530HP-6R8MT	6.8±20%	6R8	110	5.0	4.0	3.0	2.5

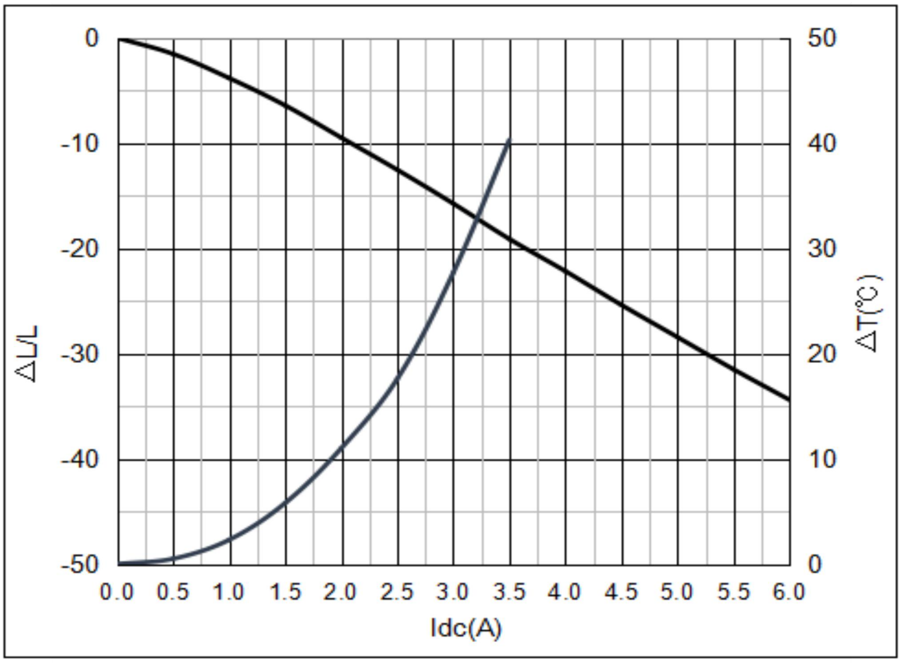
* Testing instrument: Inductance HP 4284A or equivalent at 100KHz /1V..
D.C.R : TH2512B or equivalent. (Ta= 25℃)
Saturation current: WK 3260B+3265B or equivalent.

* Saturation Current (Isat) will cause L0 to drop approximately 30% from its value without current. (Ta=25℃)

* The temperature rise current value is the DC current value having temperature increase up to approximately 40℃(Ta=25℃)

* Absolute maximum voltage 30VDC

6R8 DC Bias & Temperature Characteristics



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5.GENERAL CHARACTERISTICS

* STANDARD TESTING CONDITIONS:

UNLESS OTHERWISE SPECIFIED, THE STANDARD RANGE OF ATMOSPHERIC CONDITIONS FOR MEASUREMENTS AND TESTS ARE AS FOLLOWS: AMBIENT TEMPERATURE: 15℃~35℃. RELATIVE HUMIDITY : 25% ~85%. AIR PRESSURE : 86kPa ~106kPa.

IF THERE IS ANY DOUBT ABOUT THE RESULTS, MEASUREMENT SHALL BE MADE WITHIN THE FOLLOWING LIMITS: AMBIENT TEMPERATURE: 20℃±1℃. RELATIVE HUMIDITY: 63% ~67%. AIR PRESSURE : 86kPa ~106kPa.

No.	ITEMS	CONDITIONS	SPECIFICATION
1	OPERATION TEMPERATURE STORAGE TEMPERATURE		-40 ～ + 125℃ (INCLUDING COIL TEMPERATURE RISE) -40 ～ + 125℃
2	TEMPERATURE COEFFICIENT	-30 ～ +105℃	0 ～ 2000 ppm/℃
3	FIXING STRENGTH	SAMPLE IS PUSHED IN THREE DIRECTIONS OF X, Y AND Z WITH FORCE OF 5. 0N FOR 10±5 SECONDS. AFTER SOLDERING BETWEEN COPPER PLATE AND ELECTRODES.	NO ELECTRODE DETACHMENT.
4	RESISTANCE TO SOLDERING HEAT TEST	REFER TO THE SPEC “STD-001NP”.	NO MECHANICAL BREAKAGE. DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±10%
5	SOLDERABILITY TEST	IMMERSE THE ELECTRODE IN FLUX FOR 5 SECONDS. THEN DIP THE ELECTRODE INTO A SOLDERING BATH OF 245±5℃ FOR 2±0.5 SECONDS.	OVER 95% OF THE SURFACE BEING IMMERSED SHALL BE COVERED WITH NEW SOLDER UNIFORMLY.
6	VIBRATION TEST	AMPLITUDE: 1.5mm P-P FREQUENCY:10～55～10Hz (1 MINUTE PER CYCLE) DURATION: 1 HOUR IN EACH OF X, Y, Z AXIS.	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±10%
7	HUMIDITY TEST	TEMPERATURE: 40℃±2℃ HUMIDITY: 90%～95%RH DURATION: 96±4 HOURS.	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±10%
8	THERMAL SHOCK TEST	20 CYCLES OF +105℃ FOR 30 MINUTES, -40 ℃ FOR 30 MINUTES. CHARACTERISTICS ARE MEASURED AFTER THE AMBIENT AIR EXPOSURE OF 1 HOUR	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ±10%
9	HIGH TEMPERATURE STORAGE TEST	TEMPERATURE: 125℃±2℃ DURATION: 96±4 HOURS	
10	LOW TEMPERATURE STORAGE TEST	TEMPERATURE: -40℃±3℃ DURATION: 96±4 HOURS.	

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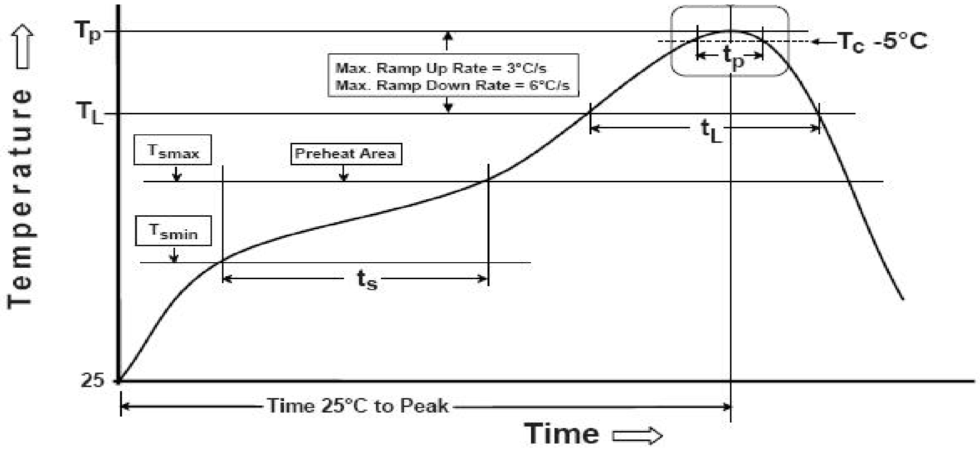
6. Reflow profile for SMT components



Reflow is referred to standard IPC/ JEDEC J-STD-020D

Profile Feature		Lead(Pb) Free solder
Preheat and soak	·temperature Min.(Tsmin)	150℃
	·temperature Max.(Tsmax)	200℃
	·time(Tsmin to Tsmax)(t_s)	60-120 Seconds
Average ramp up rate Tsmax to Tp		3℃/Second Max.
Liquidous temperature (T_L)		217 °C
Time (T_L) maintained above T_L		60-150 seconds
Peak package body temperature (Tp)		**Table2**
Time (tp)* within 5 °C of the specified classification temperature (Tc)		30* seconds
Average Ramp-down rate (Tp to TL)		6 °C/second max
Time 25 °C to peak temperature		8 minutes max.

Table2. Pb-Free Process - Classification Temperatures (Tc)

Package Thickness	**Volume mm^3 <350**	**Volume mm^3 350~2000**	**Volume mm^3 >2000**
<1.6 mm	260℃	260℃	260℃
1.6mm- 2.5mm	260℃	250℃	245℃
>2.5 mm	250℃	245℃	245℃

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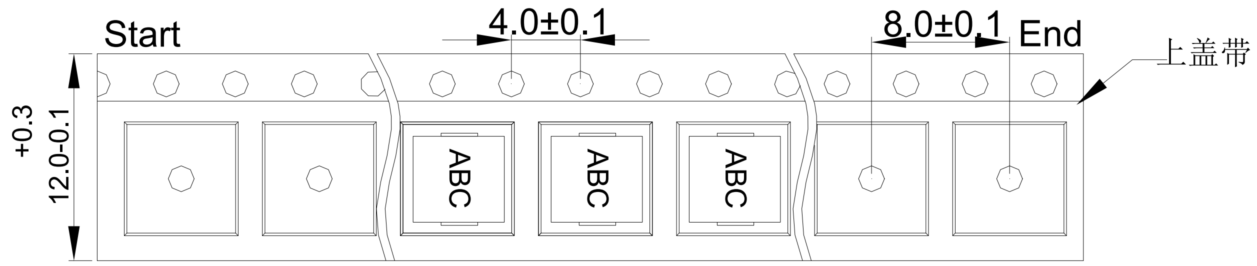
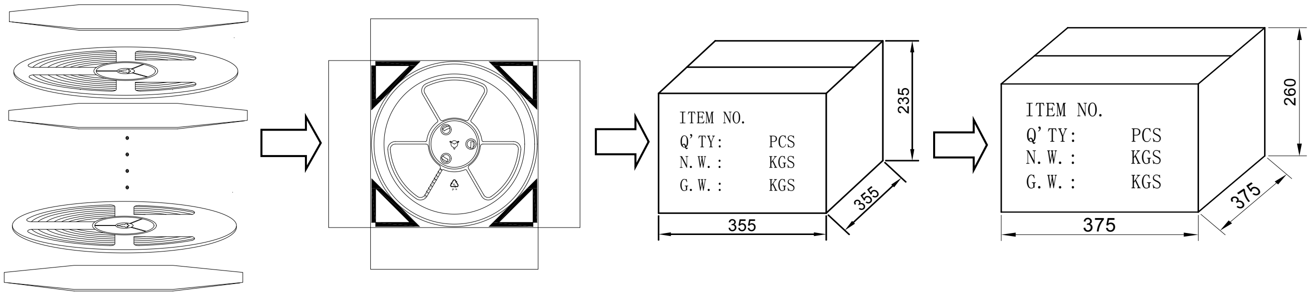
7. PACKING

REFER TO STANDARD PACKING DRAWING. **2000PCS/R**





REEL	2000PCS
BOX	20000PCS

8. NOTE

SOLDERING TIN PERIOD OF VALIDITY：SIX MONTHS
STORAGE TEMPERATURE：25℃±5℃
COMPARATIVELY HUMIDITY：35%--70%

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