



磁立方

# SPECIFICATION FOR APPROVAL

**CUSTOMER** : \_\_\_\_\_

**CUSTOMER P/N** : \_\_\_\_\_

**DESCRIPTION** : SMD Inductor

**Supplier P/N** : ST2112M-500M

**REVISION NO.** : V1.0

**DATE** : 2021-Jan-14

**NOTES** : STANDARD

Supplier DOCUMENTED	
APPROVED	David
CHECKED	Zhao yun
PREPARED	You yuan

CUSTOMER APPROVAL	

© Company seals

Version:1.0	CUSTOMER P/N	PRODUCT	SMD Inductor
	ITEM P/N	DATE	2021-Jan-14
	ST2112M-500M		



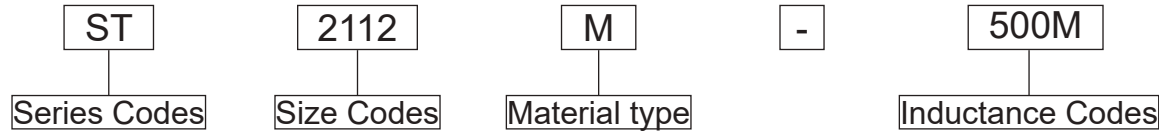
深圳市磁立方科技有限公司  
ShenZhen Magnetic Cube Technology Co., LTD.

TEL:0755-23018051 E-FAX:0755-22140304 E-MAIL:Sales@mct8.com HTTP:www.mct8.com  
ADD:F2, Building C, Furong Road No.8 , Tantou, Songgang, Baoan District, Shenzhen

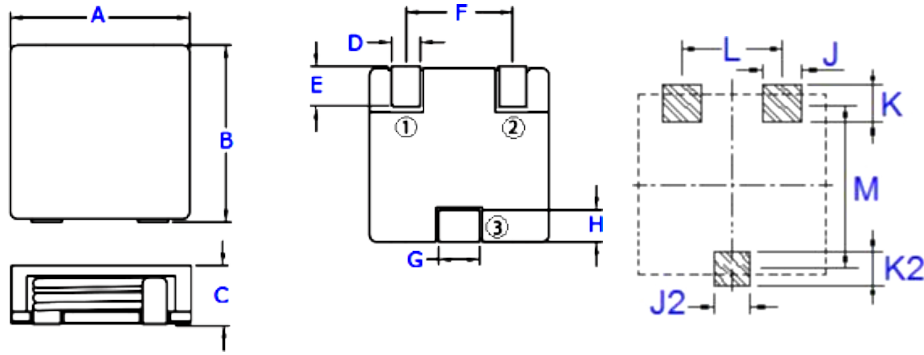


# MAIN SPECIFICATION

## EXPLANATION OF PART NUMBERS



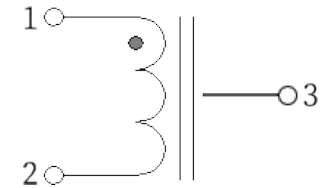
## PRODUCT DIMENSIONS (mm)



	Dimensions
A	21.7Max
B	21.5Max
C	12.5Max
D	3.0±0.3
E	2.3Min
F	14.5±0.5
G	2.5Ref.
H	2.4Ref.

	Dimensions
J	4.0Ref.
J2	4.0Ref.
K	5.0Ref.
K2	4.0Ref.
L	14.5Ref.
M	17.5Ref.

## Schematic:



## ELECTRICAL CHARACTERISTICS

ITEM P/N	Controlled Electrical Specs.		Irated(A)	Heating Current Idc (A TYP)	Saturation Current Isat (A TYP)25°C
	Inductance@0Adc(μH±20%)	DCR(mΩ)Max			
ST2112M-500M	50.0±20%	32.6	7.4	7.4	10

- ◎ All test Data is referenced to 25°C ambient.
- ◎ Typical Heat Rating DC Current would cause an approximately Δ T of 40°C .
- ◎ Typical Saturation DC Current would cause Lo to drop approximately 30%.
- ◎ The Part temperature (ambient + Δ T) should not exceed 125°C under worst case operating conditions.
- ◎ Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

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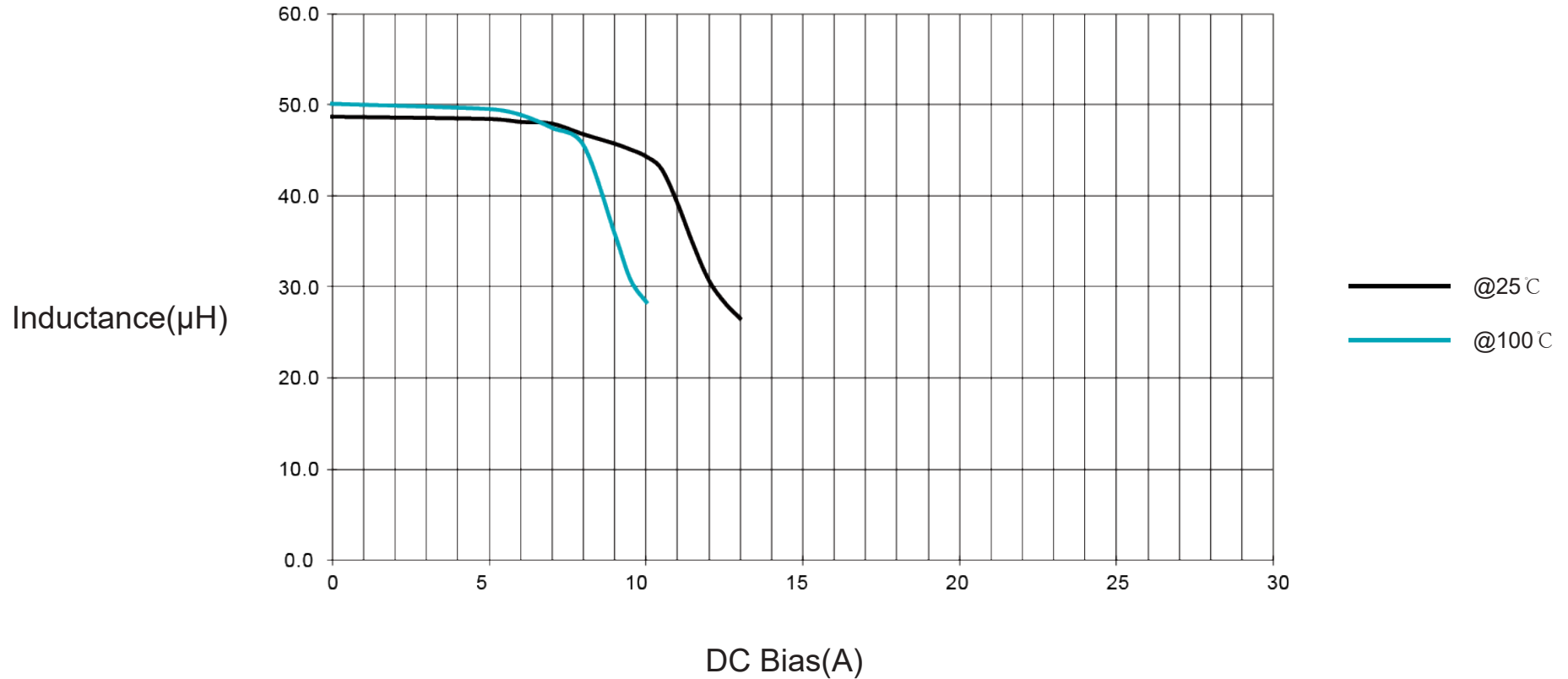
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# CHARACTERISTICS

## PERFORMANCE CURVES

### Typical Inductance VS DC Bias



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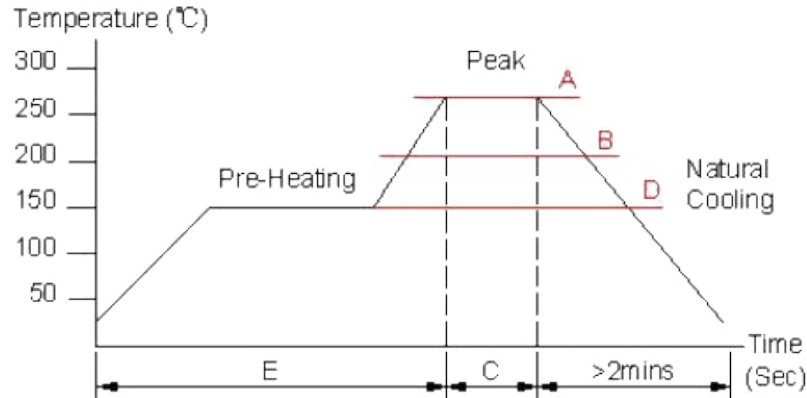
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# CHARACTERISTICS

## RECOMMENDED SOLDERING TEMP. GRAPH



A	B	C	D	E
260°C	230°C	10Sec	150°C	60~240Sec

## MECHANICAL RELIABILITY

TEST	Specification & Requirement	Method Used
Solderability	The surface of terminal/pin tested shall be covered with new solder by 95%	Solder heat proof.
		Preheating:180 ±10°C 90 seconds
		Soldering:255 ±5°C for 3 ±1 sec
Shock	Inductance change within ± 5% Without mechanical damage	Drop down with 981m/s2 (100G) shock
		Attitude upon a rubber block method shock testing machinem, 3 tests.
Vibration	Inductance change within ± 5% Without mechanical damage	Vibration frequency:10Hz to 55Hz to 10Hz, 60 seconds cycle.
		Vibration time: 2 hours

## ENDURANCE RELIABILITY

TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C ,(30 mins) -> room temp. (5 mins) ->125°C , (30 mins) -> room temp. (5 mins)100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85°C ambient Duration: 1000 hrs
Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60°C ambient Humidity: 90~95% Duration: 1000 hrs
Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp -25 ±2 °C for total 1,000 +4/-0 hours
High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp 125±2 °C for total 1,000 +4/-0 hours

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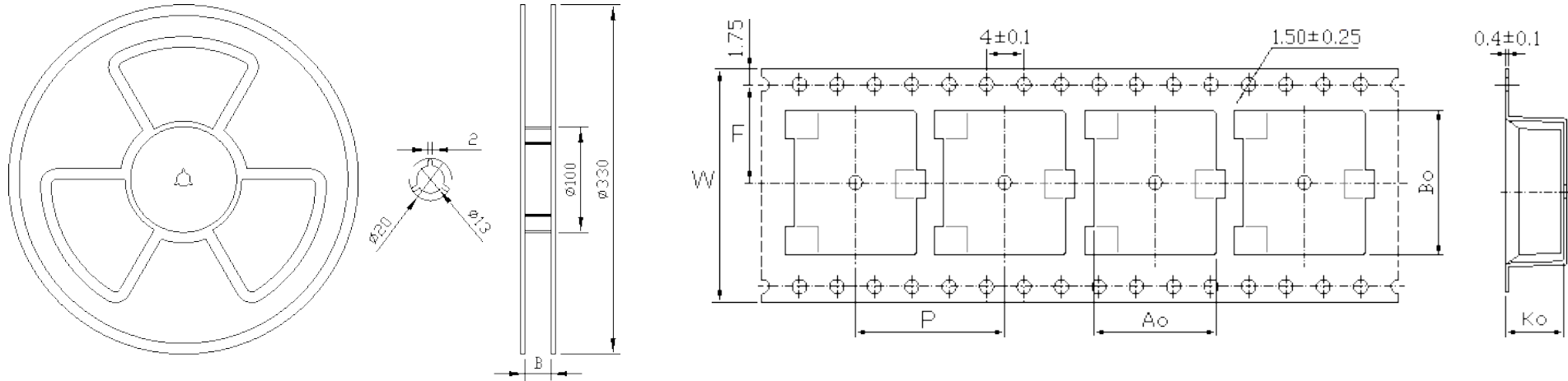
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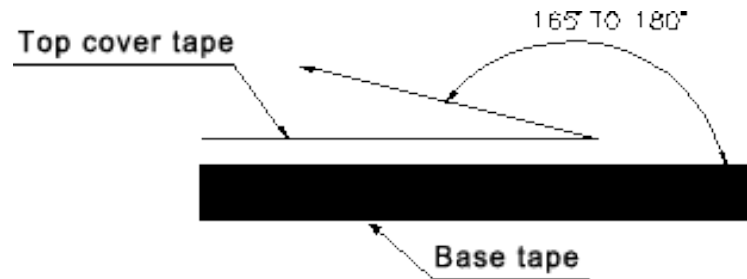
# PACKING INFORMATION

## PACKING INFORMATION:(Unit:mm)



Series	A	B	Ao	Bo	Ko	W	P
ST2112M	120(Pcs/Reel)	44.5+0.5/-0	20.8±0.2	21.8±0.2	12.7±0.2	44	32

Typical Pulling Force: 30~130grams:



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