磁立方®

SPECIFICATION FOR APPROVAL

CUSTOMER	:	
CUSTOMER P/N	:	
DESCRIPTION	:	SMD Inductor
Supplier P/N	:	SICM0510-4R4M
REVISION NO.	:	V1.0
DATE	:	2022-Sep-06
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	SICM0510-4R4M	**DATE**	2022-Sep-06

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

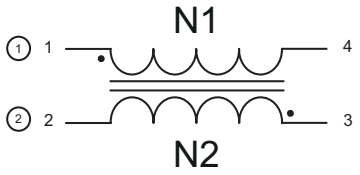
RoHS ISO 9001 质量体系认证

MAIN SPECIFICATION

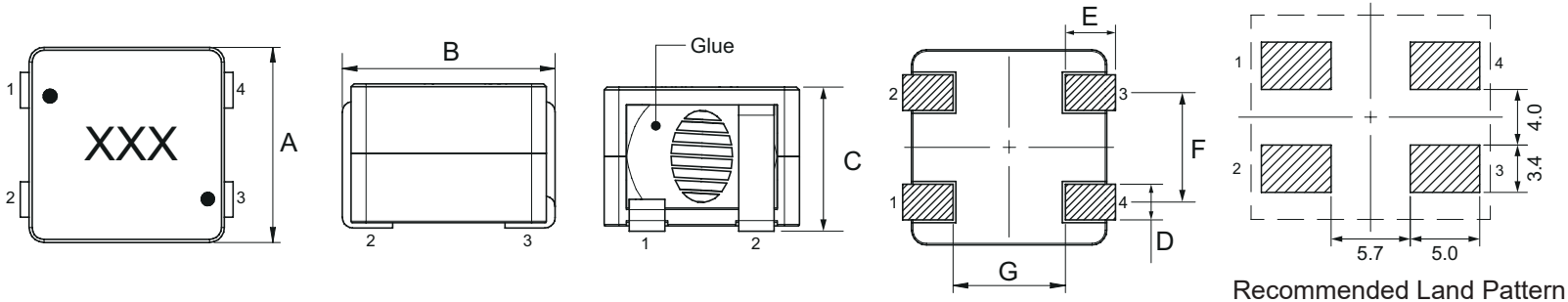
EXPLANATION OF PART NUMBERS

SICM	0510	-	4R4M
Series Codes	Size Codes		Inductance Codes

Schematic:



PRODUCT DIMENSIONS (mm)



Recommended Land Pattern

A	13.2±0.3
B	15.5Max
C	10.5Max
D	2.4Ref
E	3.2Ref
F	7.4Ref
G	7.6Ref

ELECTRICAL CHARACTERISTICS

ITEM P/N	@ 25 ± 5℃ Ambient Temperature			DCR @ 25℃ R(1-4),R(2-3) (mΩ)Typ.	DCR @ 25℃ R(1-4),R(2-3) (mΩ)Max.
	INDUCTANCE 100KHz, 0.1V L(1-4),L(3-2) (μH)	Typical Heat Rating DC Current (A) (Idc)	Typical Saturation DC Current (A) (Isat)		
SICM0510-4R4M	4.4±20%	12.0	24.0	8.3	10.56

◎ All test Data is referenced to 25℃ ambient.

◎ Typical Heat Rating DC Current would cause an △ T approximately 40℃ .

◎ Typical Saturation DC Current would cause Lo to drop approximately 30%.

◎ The Part temperature (ambient + △ T) should not exceed 125℃ 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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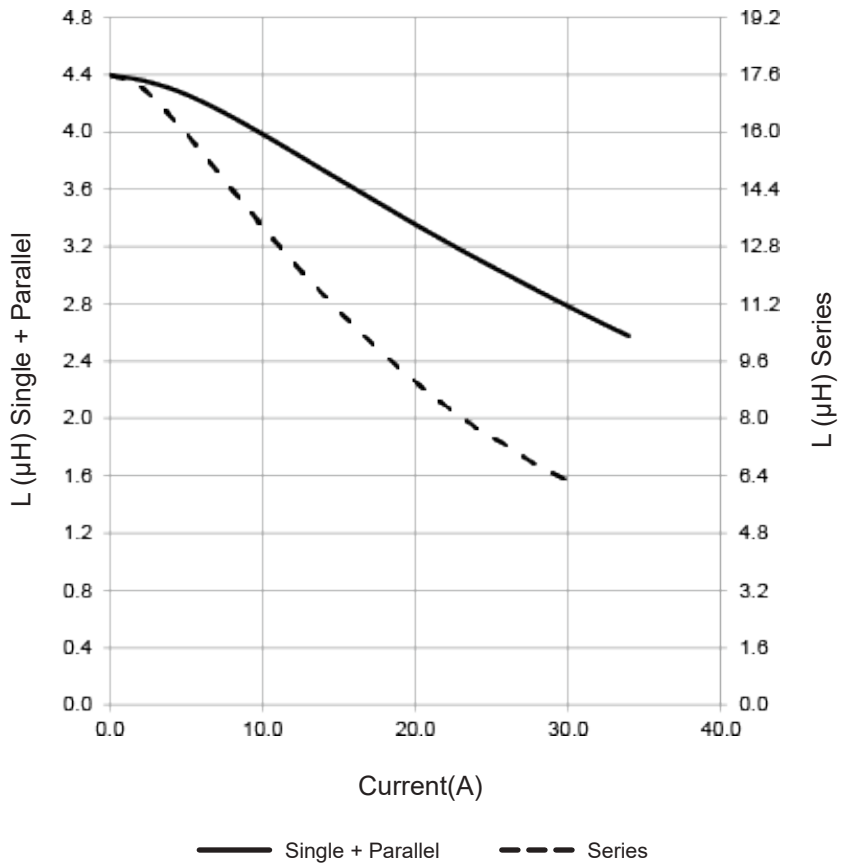
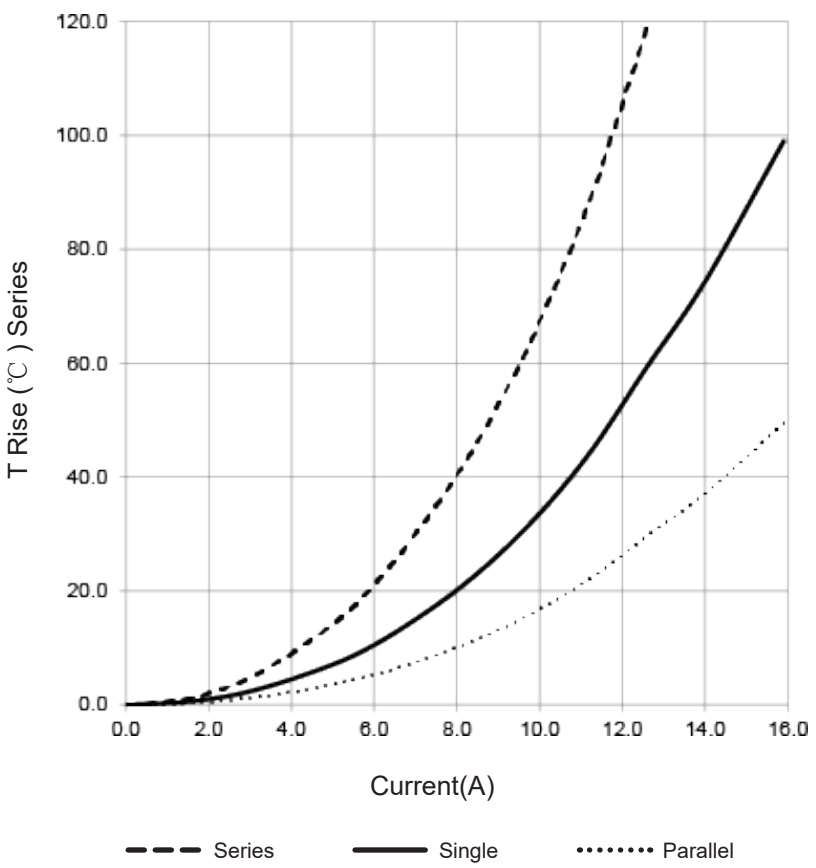
CHARACTERISTICS

Typical Inductance vs. Current Characteristics:



Typical Temperature Rise vs. Current Characteristics:



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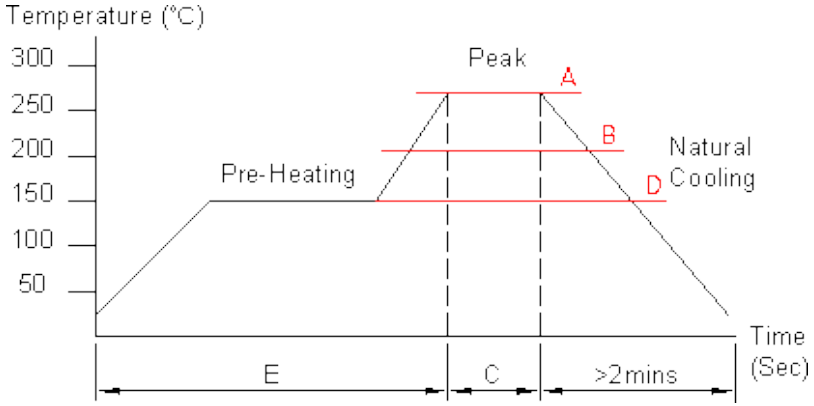
CHARACTERISTICS

RECOMMENDED SOLDERING TEMP. GRAPH



A	B	C	D	E
260°C	230°C	8-10Sec	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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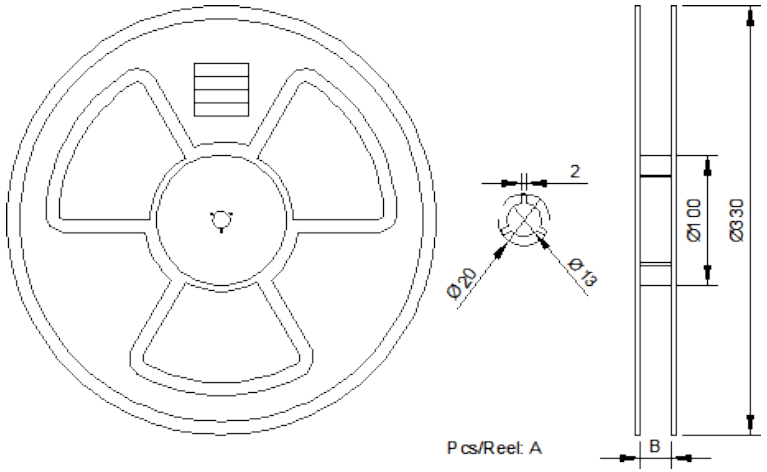
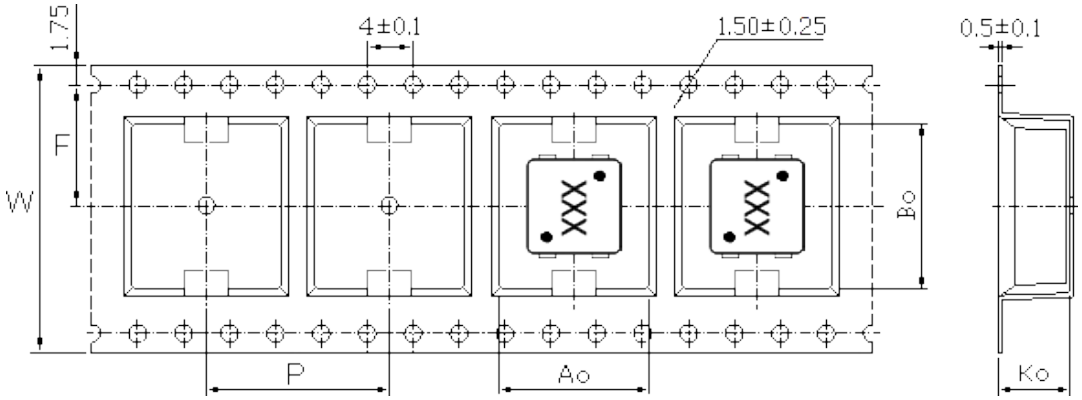
PACKING INFORMATION

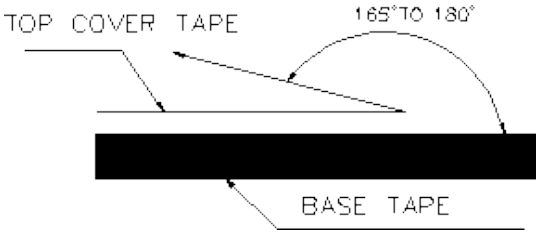
Packing Information:(unit: mm)





Series	A(Pcs/Reel)	B	W	P	Ao	Bo	Ko
SICM0510-4R4M	300	32.5±0.5	32	20	13.8±0.15	15.8±0.15	10.9±0.1

Typical Pulling Force: 20~130grams



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