



ISO9001 ISO14001 IATF16949 CHILISIN ELECTRONICS CORP.

RoHS & Halogen Free & REACH Compliance.

SPECIFICATION FOR APPROVAL

Customer : 各廠家

Customer P/N: _____

Drawing No : _____

Quantity : 0 Pcs. Date : 2018/11/13

Chilisin P/N : MRSC252A10-100M-N

SPECIFICATION ACCEPTED BY:	
COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

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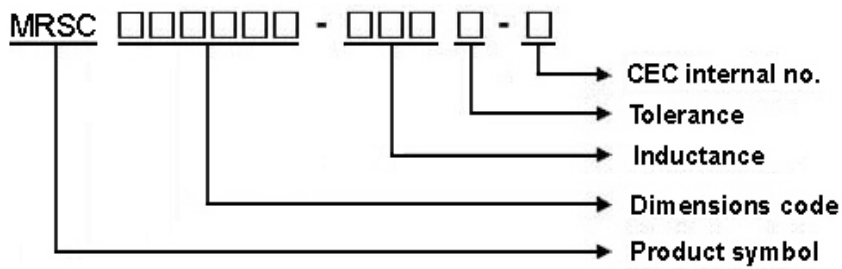
Checked by
溫美玲 ling

Approved by
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MRSC252A10 Series Specification

1 Scope: This specification applies to Wire Wound Power Inductors

2 Part Numbering:



3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $20^{\circ}\text{C} \sim 25^{\circ}\text{C}$ R.H. 65% (In Tape & Reel Condition)

4 Marking:



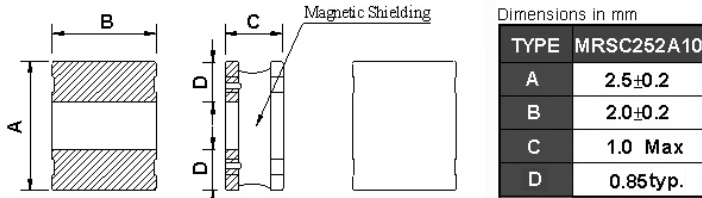
NO Marking

5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20 to 30°C
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

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6 Configuration and Dimensions:



7 Electrical Characteristics:

Part No.	Inductance (uH)	Test Freq.	SRF (MHz)Min.	RDC(mΩ) Max.(Typ)	Isat(A) Max.(Typ)	Irms(A) Max.(Typ)	Tolerance (±%)
MRSC252A10-3R3□-N	3.3	1MHz,200mV	24	198(165)	1.40(1.60)	1.20(1.40)	20,30
MRSC252A10-4R7□-N	4.7	1MHz,200mV	19	264(220)	1.30(1.40)	1.10(1.20)	20,30
MRSC252A10-6R8□-N	6.8	1MHz,200mV	15	396(330)	1.00(1.10)	0.90(1.00)	20,30
MRSC252A10-100□-N	10	1MHz,200mV	12	500(435)	0.90(1.00)	0.80(0.90)	20,30
MRSC252A10-220□-N	22	1MHz,200mV	8	1260(1050)	0.56(0.63)	0.45(0.50)	20,30

Note: □-tolerance M=±20% / T=±30%

1. Operating temperature range -40°C ~125°C (Including self - temperature rise)
2. Isat for Inductance drop 30% from its value without current.
3. Iirms for a 40°C temperature rise from 25°C ambient.
4. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.

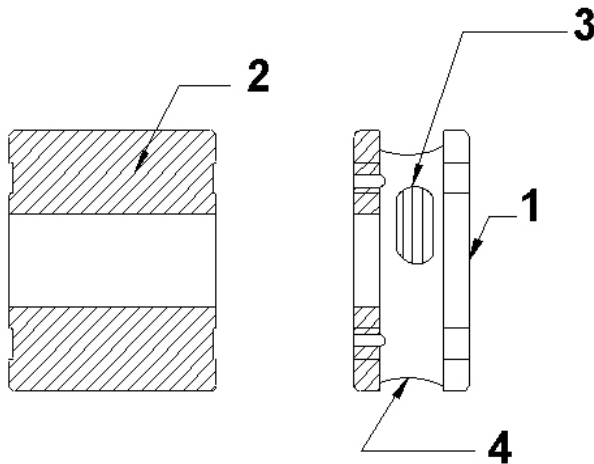
Circuit design 125°C under worst case operating conditions. Component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

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8 MRSC252A10 Series

8.1 Construction:



8.2 Material List:

No	Part	Material
1	CORE	Magnetic Metal
2	TERMINAL	Ag/Ni/Sn
3	WIRE	Grade 180
4	EPOXY	Magnetic powder resin

MRSC252A10 Series Specification

9 Packaging:

9.1 Packaging -Cover Tape

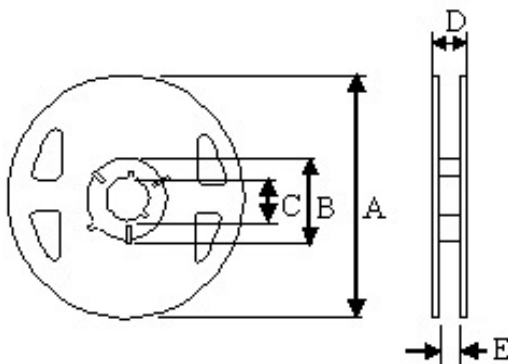
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



9.2 Packaging Quantity

TYPE	PCS/REEL
MRSC252A10	2000

9.3 Reel Dimensions



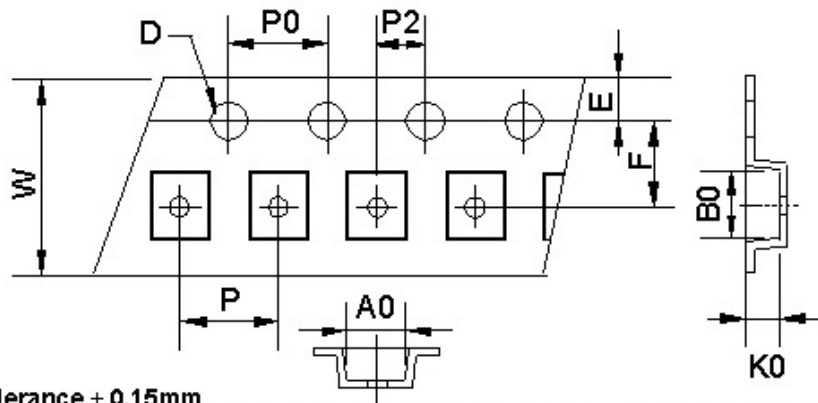
Dimensions in mm

TYPE	A	B	C	D	E
MRSC252A10	180	60	13	14.4	8.4

MRSC252A10 Series Specification

9 Packaging:

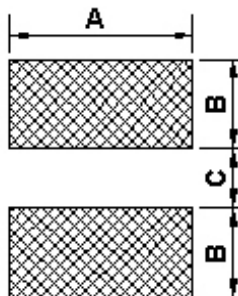
9.4 Tape Dimensions in mm



Tolerance $\pm 0.15\text{mm}$

TYPE	A0	B0	K0	D	E	F	W	P	P0	P2
MRSC252A10	2.35	2.80	1.15	1.55	1.75	3.5	8	4	4	2

10 Recommended Land Pattern:



Dimensions in mm

TYPE	A	B	C
MRSC252A 10	2.1	0.9	0.8

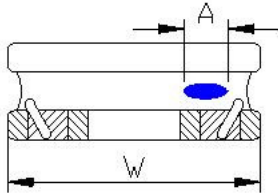
11 Note:

1. Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)
5. The moisture sensitivity level (MSL) of products is classified as level 1.

MRSC252A10 Series Specification

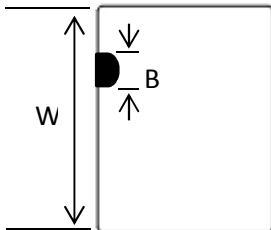
11 Note:

6. Void Appearance tolerance Limit



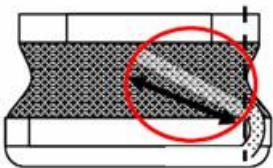
Exposed wire tolerance limit of coating resin part on product side.
The unilateral should be no more than two holes.

$$\begin{aligned} A &\leq W/2 \text{ GOOD} \\ A &> W/2 \text{ NG} \end{aligned}$$



The appearance standard pf the chipping size in top side.

$$\begin{aligned} B &\leq W/5 \text{ GOOD} \\ B &> W/5 \text{ NG} \end{aligned}$$

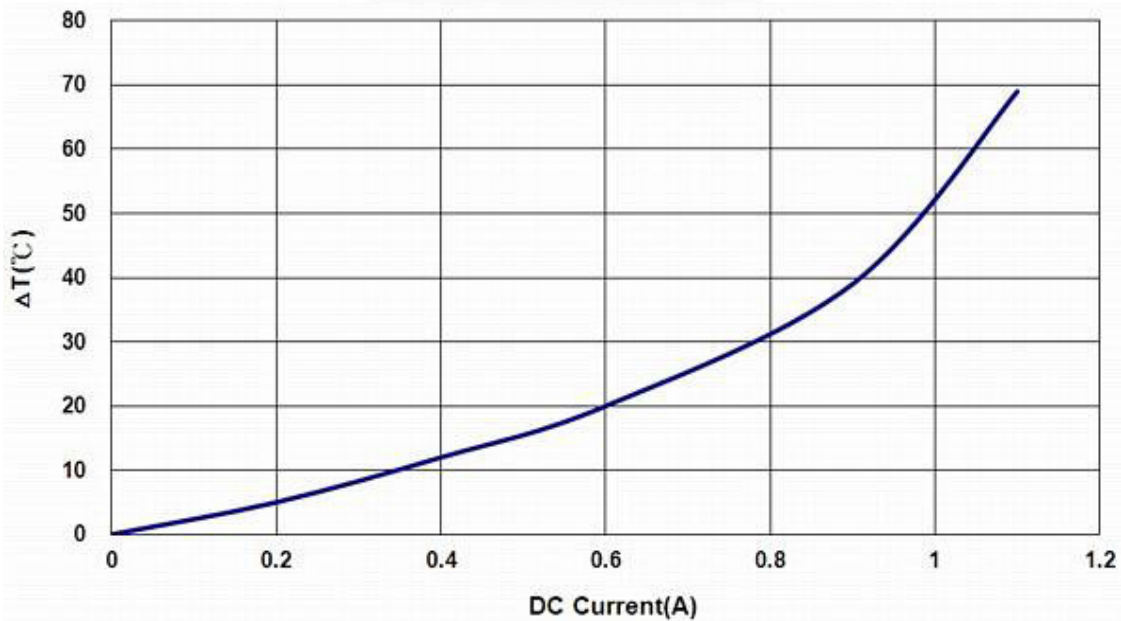
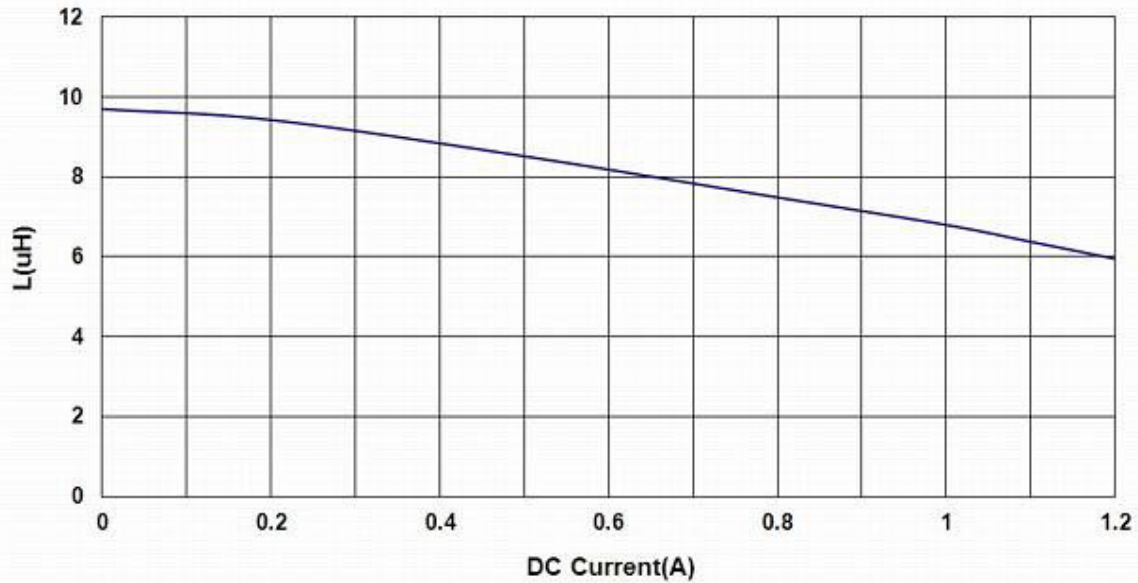


External appearance criterion for wxposed wire

Exposed end of the winding wire at the side should be acceptable.

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12 Graph: MRSC252A10-100M-N



Temperature test conditions:

1. Start as the atmosphere temp. @25°C.
2. Take the reading once it becomes stable.
3. Need to wait 90Sec at least, then change to the next applied current value.