

Manufacturing By.

Magnetic Induction Co.,Ltd

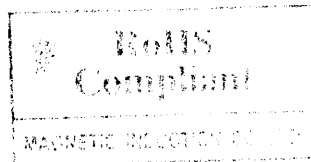
9 Moo.16 T.Koktoom A.Muang




Lopburi Thailand 15210.

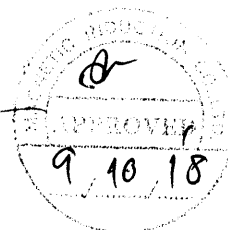
Tel. : 086-1224999 / 089-2391661

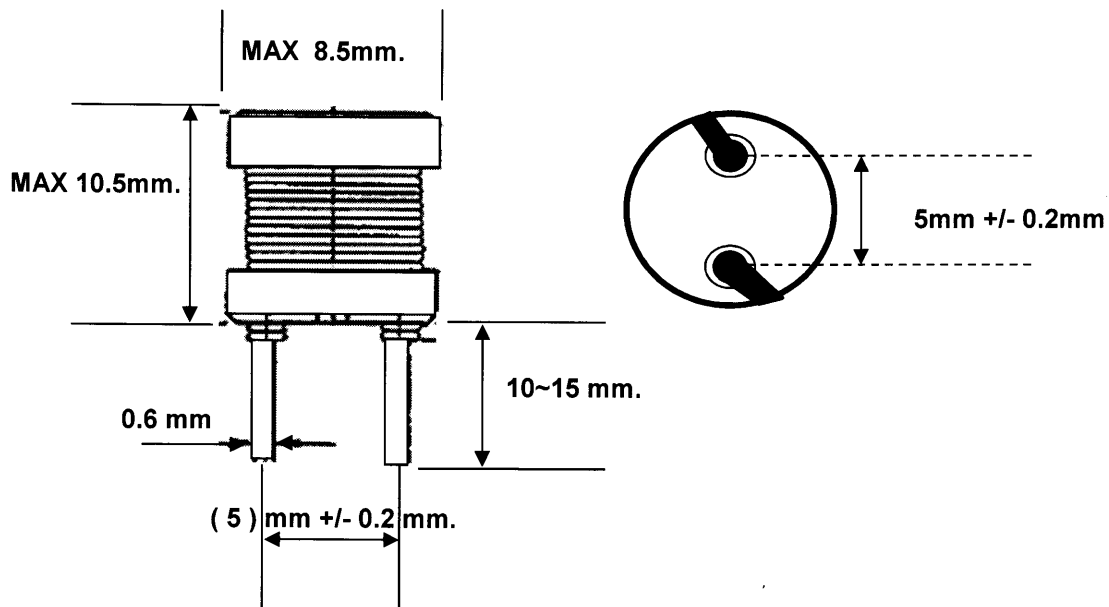
Fax. : 036-776577

Mobile No. : 086-1224999

WWW.magneticinduction.net**SPECIFICATION**Customer.- **Electronics Source**Customer P/No.- Choke Coil 20uHMIND. P/No.- CCR4ADR810S200MAGNETIC INDUCTION CO.,LTD.
ENGINEERING DEPARTMENT.(MIND-ENG'G)

ORIGINATOR BY	CHECK BY	APPROVE BY
		
9/10/2018	9/10/2018	9/10/2018

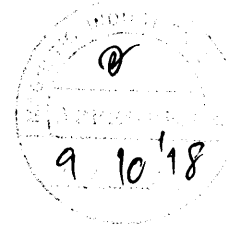
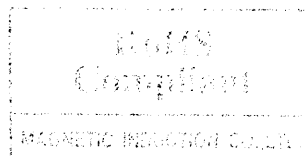


1. Appearance and Dimensions.

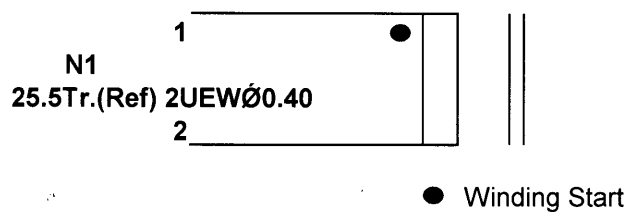
** 1. (). Is reference only

In transportation can be allow to be bend and shift the lead wire.

** 2. Winding direction it not require.

**2. Process Construction****2.1 Winding specification**

NO.	COIL	TERM.No.	TURNS	MAGNET WIRE	LAYER
1	N1	1-2	25.5(Ref)	2UEW Ø0.40	-

2.2 Winding Layout

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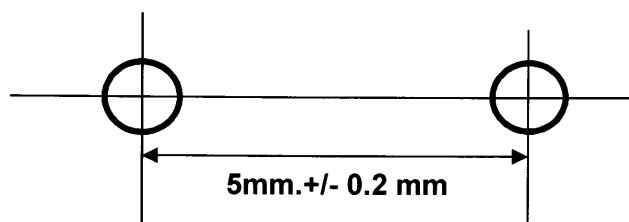
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2.3 Pin Diamention



** (). Is reference only

3. Material List

No.	Part Name	Material,Diamension	Manufacture
1	Ferrite core	DR8*10	Fengyin Company Or Equivalence other maker
2	Magnet wire	Polyurethane enameled copper wire 2UEW Ø0.40	Siam Electric Enamal Co.,Ltd (E94303) Thai Hitachi Enamal Co.,Ltd (E137472) Siam Pacific Electric wire (E94303)
3	Solder	Lead (Pb) Free	Ultra core Co.,Ltd Or Optinal

4. Inspection requirements

4.1 Electriccal Requirement

No.	Item	Spec	Condition & Method
1	Operating Temperature	-20 ºC To + 120ºC	Include Temperature rise of coil
2	Inductance	20 uH +/-10%	Freq. 10KHz ,Osc 1V Hioki 3522
3	DC Resistance	Max 2.8 Ω	Micro Ohm Meter @25ºC or equivalent
4	Rated Voltage	VAC 250 V 50/60 Hz	_____
5	Rated Current	400mA	_____

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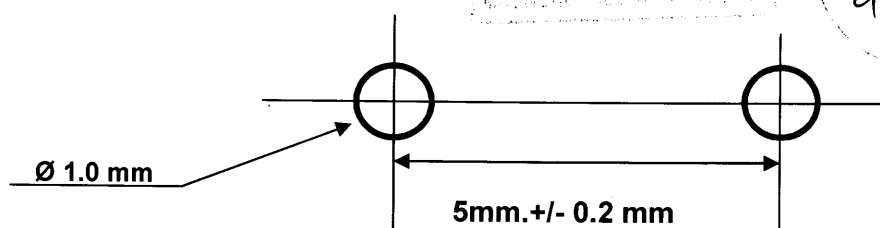
4.2 Characteristics

No.	Item	Condition & Method															
1	Solderability Specification : 3smax to soldered Soldering shall be min 95%	Dip pin to flux specified JIS C 0050 for 5 to 10 Sec. After That. Solder pins by solder bath for 2+/- 0.5 Sec Heated 230 +/- 5 C															
2	Resistance to soldering	Dip pin to flux specified JIS C 0050 for 5 to 10 Sec. After That. Solder by solder bath for 10+/- 0.5 Sec Heated 270 +/- 5 C															
3	Vibration	10 ~55~10Hz. Sweep time : 0.35 mm. One Amplitude : 1 min.of vibration X,Y,Z each exes for 0.5h															
4	Cold Resistance	Stored at -37C to -43C for 96h Measured after 1 to 2 at normal condition															
5	Heat Resistance	Temperature : 98C~102C Time 96 h. Measured after 1 to 2 at normal condition															
6	Thermal shock	Stored at the following environmental cycle with 20 cycles. <table border="1"> <thead> <tr> <th>Step</th><th>Temperature(C)</th><th>Time(Min)</th></tr> </thead> <tbody> <tr> <td>1</td><td>-25+/-3</td><td>30</td></tr> <tr> <td>2</td><td>Standard</td><td>2~3</td></tr> <tr> <td>3</td><td>85+/-2</td><td>30</td></tr> <tr> <td>4</td><td>Standard</td><td>2~3</td></tr> </tbody> </table>	Step	Temperature(C)	Time(Min)	1	-25+/-3	30	2	Standard	2~3	3	85+/-2	30	4	Standard	2~3
Step	Temperature(C)	Time(Min)															
1	-25+/-3	30															
2	Standard	2~3															
3	85+/-2	30															
4	Standard	2~3															
7	Thermal test Specification : Lo +80%/-60%	Stored at -25C~85C. Measure inductance .And compaer with initial value of 20C															
8	Moisture Resitance	Stored at 58C~62C, 90% to 95% for 96h Measure after 1 to 2h at normal condition															

4.3 Visual and Phycal check

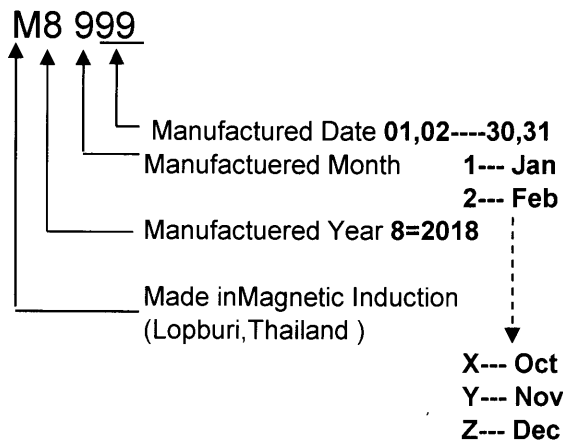
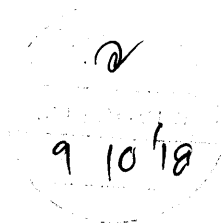
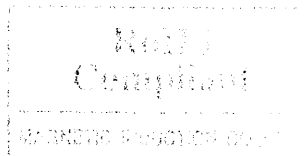
Item	Criteria	level	Method
Soldering	The hight of soldering area do not excess the base of the terminal	100% Check	Visual observation
Marking	All letters shall be legible	100% Check	Visual observation
Dimension	Each dimension do not excess specification	N =10 pcs	Caliper

4.3 Pin Alignment Fixture



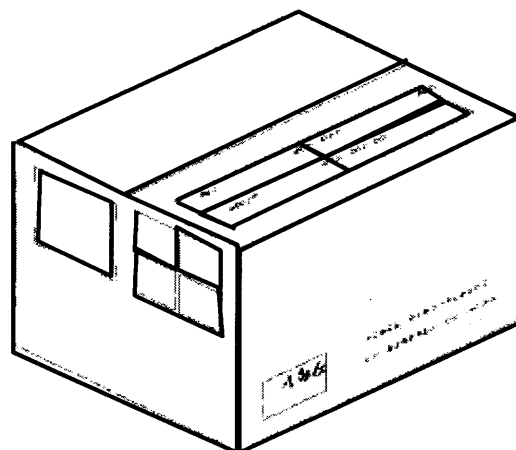
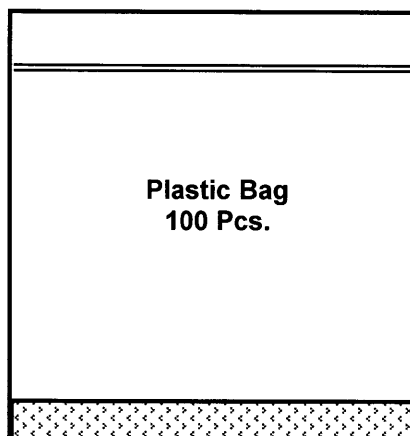
5. Marking

When shipment to customer must be stick Label or Stamp on the product follow this.-

5.1 Marking Lot No.**REMARK :****6. Packing Spec****6.1 Parts of Packing**

A. Inner Box

B. Master Box

**6.2 Mass**

- Product mass : Approx 9.2 g/pcs
- Total mass : Approx 11.4 g/pcs

6.3 Packing method

1. Use Plastic Bag 100 Pcs/ Bag
2. Use the master box 5,000 Pcs/box
3. In case of the odd QTY. put some empty package case into the master box.

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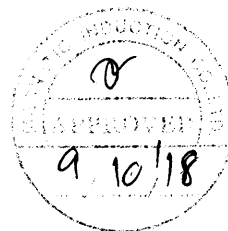
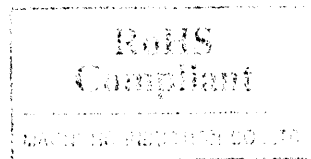
6.4 Labeling

Example

1. Customer : ES
2. Customer Part No. : Choke coil 20uH
3. MIND. Part No. : CCR4ADR810S200
4. Quantity : 5000 pcs/box ,Total 25,000 Pcs.
5. No. of Package : 1 of 5 box
6. Lot No. M8X09
7. Date 9/10/2018

Remark

- 1 Prior to delivery of products including unspecified item under approval spec. sheet, supplier shall submit new spec .Sheet to customer's engineering and approval.
- 2 When change materials, manufacturing method,construction and etc., submit application from of change approval to the purchasing,and receive agreement for changing by customer'engineer and approval.
- 3 Supplier should be solved with own responsibility about problem of industrial property
** Regulation on the application of ozone depleting compound
Regulation chemical : CFCS ,Halon,Carbon tetracholoride,1.1.1 Trichloroethane (Methylchloroform)
a). This product,or assembled unit/component does not contain.
b). The above compound is not used in the manufacturing process for this product or assembled unit or component.
- 4 All the material used in this part do not contain or aply heavy metaic Mercury,Lead, Cadmium,Chromium Trioxide, Comply with the present RoHS and WEEE requirement
- 5 Please don't use it for other purposes. Also,please don't duplicate the specification, nor open the contents of it third parties without permission of Magnetic Induction Co.,Ltd.



!!Caution for safety

This sepcification regulates the quality of the product as a single unit.Prior to the use, the product must be evaluated for assuarance of safety when it is monthed on your product.

We have been marking continuous efforts to enhance the quality and reliability of our product.To prevent accident resulting injury or daeth,damage to social prorerty and fire accident arising from a defect in our product,you are requested to incorporate thorough safety measures in it design,such as redundancy,fire-containment and anti-malunction measures.

If there are any questions on items not mentioned hear,please consult office.