APPROVAL SHEET

(RoHS Compliant & Halogen Free)

CUSTOMER	:	Foxconn
CUSTOMER'S PART NO	:	
DESCRIPTION	:	
PART NO.	:	MSCDRI-129A-101M-EN
DATE	:	2019/3/26
AUTHORIZED BY	:	**ALFA**

	FULLY APPROVED	PARTIALLY APPROVED	REJECTED
SIGN			
SUGGESTION			

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REVISIONS

REV.	Description	Date	Approvaled by	Checked by	Checked by	Prepared by
00	Issue	2011.12.20	Vincent	Marco	Brian	Sara
01	P.3/9 New item revised : 6R8,330	2012.01.04	Vincent	Marco	Brian	Sara
02	P.2/9 CHARACTERISTICS updated. P.3/9 New item revised : 301,331	2013.09.04	Vincent	Marco	Brian	Sara
03	P.3/9 New item revised : 821	2013.10.21	Vincent	Marco	Sara	Jason
04	P.3/9 New item revised : 560	2014.08.28	Vincent	Marco	Sara	Jason
05	P.2/9 Materials updated P.3/9 New item revised : 681	2015.09.22	Vincent	Marco	Jason	Jeff
06	P.3/9 New item revised : 100、150、221	2016.09.01	Vincent	Marco	Lisa	Jeff

Ⅰ. SCOPE：

This specification applies to the Pb Free high current type SMD inductors for

MSCDRI-129A-SERIES-□□

Warn : This product series can't be used in synchronous rectification circuit that is over 24V.

PRODUCT INDENTIFICATION

MSCDRI - 129A - 101 M - □□

① ② ③ ④ ⑤

① Product Code

② Dimensions Code

③ Inductance Code

④ Tolerance Code

⑤ Inner Control Code

Ⅱ. INDEX：

LISTED ITEM	ATTACHEMENT & TABLES	PAGE
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3. ELECTRICAL SPECIFICATIONS	Please see (2)	2/9，3/9
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5. RELIABILITY TEST METHOD	Please see (4)	4/9，5/9，6/9
6. LAND DIMENSION (Ref.)	Please see (5)	7/9
7. PACKAGING	Please see (6)	8/9，9/9

8.STANDARD TEST CONDITIONS

Unless otherwise specified, test condition should be Temp.＝20±5℃,

Humidity＝35～85%

But if needed, then test condition should be Temp.＝20±2℃,

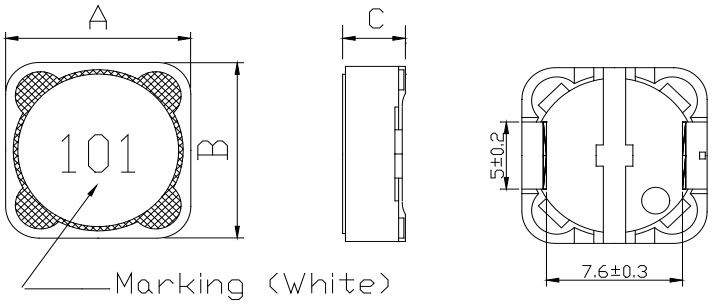
Humidity＝65±5%

9.SHELF LIFE

Storage Condition:The temperature should be within-40℃ ~105℃ and humidity should be less than 75%RH. The product should be used within 12 months from the time of delivery.

In addition, suggest to use product within 6 months from the time of delivery.

(1) SHAPES AND DIMENSIONS



A: 12.0±0.5 mm
B: 12.0±0.5 mm
C: 10.0 Max. mm

(2) ELECTRICAL SPECIFICATIONS

SEE TABLE 1

TEST INSTRUMENTS

L : HP 4284A PRECISION LCR METER (or equivalent)

RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

(3) CHARACTERISTICS

(3)-1 Operate temperature range ..... －40℃～＋125℃

(Including self temp. rise)

(3)-2 Storage temperature range ..... －40℃～＋125℃

MATERIALS

NO.	ITEM	DESCRIPTION & TYPE	UL NO.	MANUFACTURER
1	DR CORE	FERRITE		RU YUAN DONG YANG GUANG MAGNETIC MATERIALS CO.,LTD.
				ACME ELECTRONICS CORPORATION
2	RING CORE	FERRITE		RU YUAN DONG YANG GUANG MAGNETIC MATERIALS CO.,LTD.
				FENGYIN ELECTRONICS CORP.
3	WIRE	POLYURETHANE ENAMELLED	E258243	ELEKTRISOLA MALAYSIA SDN.BHD.
		COPPER WIRE	E84081	PACIFIC ELECTRICAL WIRE & CABLE CO., LTD.
4	SOLDER	Sn99.3%/Cu0.7%		SOLNET METAL INDUSTRY CO., LTD.
				SHENMAO TECHNOLOGY INC.
				OR EQUIV.
5	ADHESIVE	EPOXY RESIN		SHAW HUOW ENTERPRISE CO., LTD.
		(FOR RING CORE ASSEMBLY)		OR EQUIV.
6	ADHESIVE	EPOXY RESIN		KUNSHAN TENNKANG ELECTRIC&CHEMICAL CO.,LTD.
		(FOR PIN BASE ASSEMBLY)		OR EQUIV.
7	PIN BASE	C1100		LIAN CHENG METEL & ELETRONIC FACTORY.
				OR EQUIV.
8	INK	BON MARQUE INK		T&K TOKA.
				OR EQUIV.

TABLE 1

MAGLAYERS PT/NO.	Inductance L(μH)	Percent Tolerance	Test Frequency	Resistance RDC(Ω) Max.	Rated DC Current		Marking
					IDC1 (A)	IDC2 (A)	
MSCDRI-129A-6R8□-□□	6.8	M,N	100kHz/0.25V	14.0m	12.8	8.40	6R8
MSCDRI-129A-100□-□□	10	M,N	100kHz/0.25V	18.3m	11.5	7.50	100
MSCDRI-129A-150□-□□	15	M,N	100kHz/0.25V	28.0m	8.60	6.00	150
MSCDRI-129A-330□-□□	33	M	100kHz/0.25V	45.0m	5.50	4.20	330
MSCDRI-129A-470□-□□	47	M	100kHz/0.25V	60.0m	4.50	3.80	470
MSCDRI-129A-560□-□□	56	M	100kHz/0.25V	70.0m	4.00	3.40	560
MSCDRI-129A-680□-□□	68	M	100kHz/0.25V	88.5m	3.60	3.20	680
MSCDRI-129A-101□-□□	100	M	100kHz/0.25V	0.110	3.10	2.50	101
MSCDRI-129A-221□-□□	220	M	100kHz/0.25V	0.270	2.50	1.80	221
MSCDRI-129A-271□-□□	270	M	100kHz/0.25V	0.330	2.10	1.60	271
MSCDRI-129A-301□-□□	300	M	100kHz/0.25V	0.340	1.80	1.45	301
MSCDRI-129A-331□-□□	330	M	100kHz/0.25V	0.340	1.80	1.45	331
MSCDRI-129A-681□-□□	680	M,N	100kHz/0.25V	0.675	1.60	1.25	681
MSCDRI-129A-821□-□□	820	M	100kHz/0.25V	1.000	1.10	0.85	821

※ □ specify the inductance tolerance,M(±20%),N(±30%)

※IDC1 : Based on inductance change (△L/Lo：drop 30% Max.) @ ambient Temperature : 25℃

IDC2 : Based on temperature rise (△T： 40℃ TYP.)

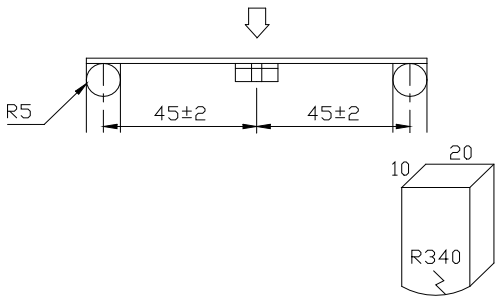
Rated DC Current： The less value which is IDC1 or IDC2.

(4) RELIABILITY TEST METHOD

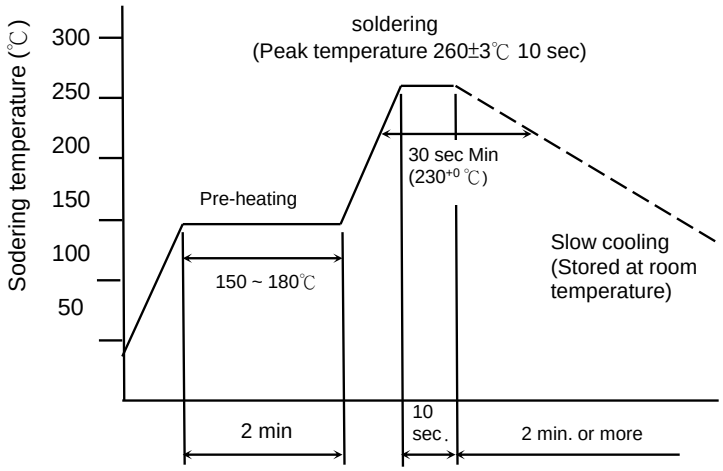
ELECTRICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Temperature characteristics	△L/L20℃ ≦±10% 0～2000 ppm/℃	The test shall be performed after the sample has stabilized in an ambient temperature of -20 to +85℃,and the value calculated based on the value applicable in a normal temperature and narmal humidity shall be △L/L20℃ ≦±10%.

MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Substrate bending	△L/Lo≦±5% There shall be no mechanical damage or elec-trical damage.	The sample shall be soldered onto the printed circuit board in figure 1 and a load applied unitil the figure in the arrow direction is made approximately 3mm.(keep time 30 seconds) PCB dimension shall the page 7/9 F(Pressurization)  PRESSURE ROD figure-1

MECHANICAL

TEST ITEM	SPECIFICATION	
Vibration	△L/Lo≦±5% There shall be no mechanical damage.	The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.52mm and a frequency of from 10 to 55Hz/1 minute repeated should be applied to the 3 directions (X,Y,Z) for 2 hours each. (A total of 6 hours)
Solderability	New solder More than 90%	Flux (rosin, isopropyl alcohol{JIS-K-1522}) shall be coated over the whole of the sample before hard, the sample shall then be preheated for about 2 minutes in a temperature of 130～150℃ and after it has been immersed to a depth 0.5mm below for 3±0.2 seconds fully in molten solder M705 with a temperature of 245±5℃. More than 90% of the electrode sections shall be couered with new solder smoothly when the sample is taken out of the solder bath.
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	Temperature profile of reflow soldering  The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time. The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.

ENVIROMENT CHARACTERISTICS

<table>
<tr><th>TEST ITEM</th><th colspan="2">SPECIFICATION</th></tr>
<tr><td>High temperature storage</td><td>△L/Lo≦±5%

There shall be no mechanical damage.</td><td>The sample shall be left for 96±4 hours in an atmospere with a temperature of 125℃ and a normal humidity.
Upon completion of the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.</td></tr>
<tr><td>Low temperature storage</td><td>△L/Lo≦±5%

There shall be no mechanical damage.</td><td>The sample shall be left for 96±4 hours in an atmosphere with a temperature of -25±3℃.
Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.</td></tr>
<tr><td>Change of temperature</td><td>△L/Lo≦±5%

There shall be no other dama-ge of problems</td><td>The sample shall be subject to 5 continuos cycles, such as shown in the table 2 below and then it shall be subjected to standard atmospheric conditions for 1 hour, after which measurement shall be made.

table 2
<table>
<tr><th></th><th>Temperature</th><th>Duration</th></tr>
<tr><td>1</td><td>－25±3℃
(Themostat No.1)</td><td>30 min.</td></tr>
<tr><td>2</td><td>Standard atmospheric</td><td>No.1→No.2</td></tr>
<tr><td>3</td><td>85±2℃
(Themostat No.2)</td><td>30 min.</td></tr>
<tr><td>4</td><td>Standard atmospheric</td><td>No.2→No.1</td></tr>
</table></td></tr>
<tr><td>Moisture storage</td><td>△L/Lo≦±5%

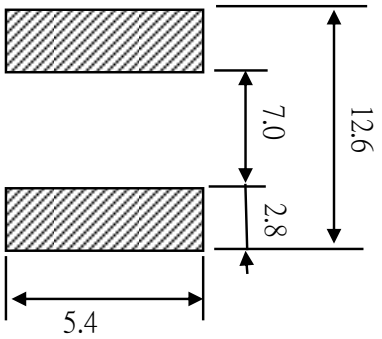
There shall be no mechanical damage.</td><td>The sample shall be left for 96±4 hours in a temperature of 40±2℃ and a humidity(RH) of 90～95%.
Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity more than 1 hour.</td></tr>
<tr><td colspan="3">Test conditions：
The sample shall be reflow soldered onto the printed circuit board in every test.</td></tr>
</table>

(5) LAND DIMENSION (Ref.)

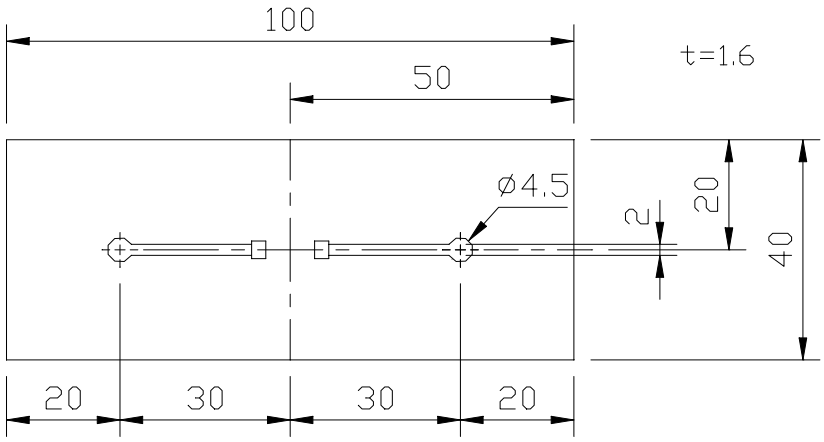
PCB: GLASS EPOXY t＝1.6mm

(5)-1 LAND PATTERN DIMENSIONS

(STANDARD PATTERN) **Unit:mm**

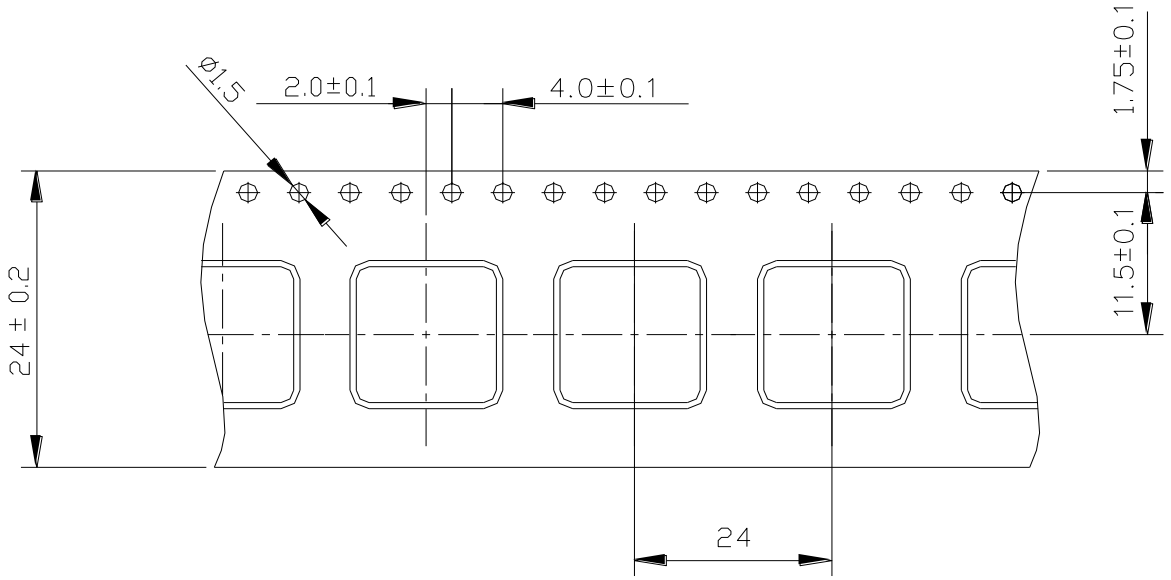


(5)-2 SUBSTRATE BENDING TEST BENDING TEST BOARD

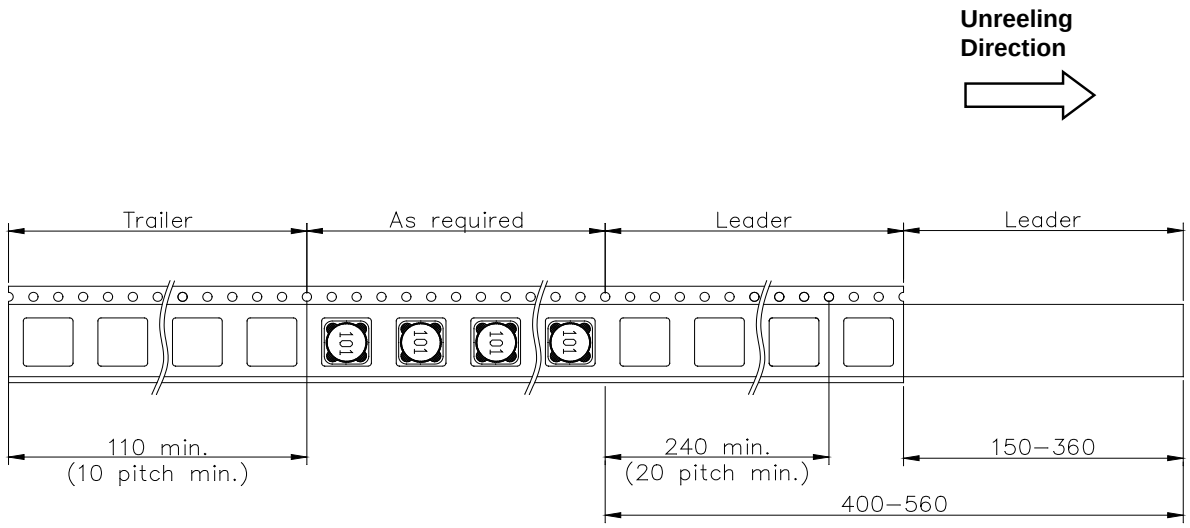


(6) PACKAGING

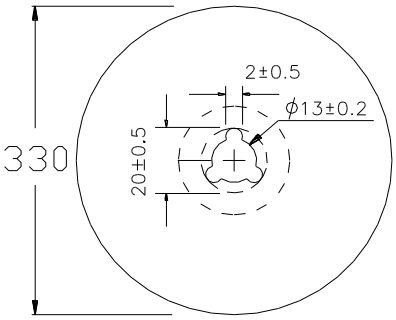
(6)-1 CARRIER TAPE DIMENSIONS (mm)

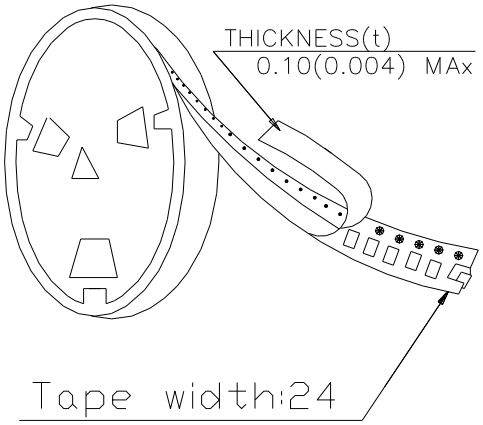


(6)-2 TAPING DIMENSIONS (mm)



(6)-3 REEL DIMENSIONS (mm)





(6)-4 QUANTITY

250 pcs/Reel

The products are packaged so that no damage will be sustained.