物料认可书

序号: BP-RS-0643-2015　　编制日期:　2015-10-21

主送:
1)□香港采购部
2)■采购部
3)□采购开发部
4)■PMC
5)□研发中心
6)□中试部
7)■IQC(蛇口/惠州/TM/内蒙)
8)□PE 部

样板来源:
1)采购部(√)
2)采购开发部(　)

页数: 27　页次: 1

测试: 周宏然　日期:2015-10-21

审核: 文蕾　日期:

确认:　日期:

批准:　日期:

物料编号: 33-MLL689-NTB
适用机型: 通用

物料名称: 贴片电感

供 应 商: 钧铜科技(香港)有限公司　　制造商: 昆山玛冀电子有限公司

供应商物料编号: TCLA-1040 series

样品属性:
已采用的供应商【√】
《增加供应商申请表》编号: 2015-07-002
《元件送样单》编号:

□特殊部品
□关键部品
■重要部品
□一般部品

认可意见及资料:

1)该物料: ①.认可【√】
②.有条件认可,数量为__件【 】
③.不认可【 】
2)附送资料: 【√】说明书　【 】图纸
3)附送样板: 【√】有样板　【 】无样板,到货后补送样板.

测试内容及说明:

测试合格，给予认可。

二次开发检查表

供应商名称：钧铜科技　　部品编码：**33-MLL689-NTB**

NO.	检查项目 Check item	检查结论 Check conclusion（Y/N？）
1	规格书中电参数是否与 R&D 认可的规格书一致？electrical parameters of the SPEC in according with SPEC by R&D approved?	Y
2	规格书中外观尺寸是否与 R&D 认可的规格书一致？standard size of the appearance in SPEC in according with SPEC by R&D approved?	Y
3	规格书中的试验条件与试验项目是否与 R&D 认可的规格书一致？The test conditions and items of SPEC in according with SPEC by R&D approved?	Y
4	样品自身测试结果是否满足规格书要求？ Own test results of Samples meet the requirements of SPEC?	Y
5	适应性(上机)检查是否满足要求？Adaptability check for meeting the requirements of TV?	不适用
6	供方是否提供测试报告及可靠性试验报告？The supplier provided the test report and reliability report?	Y
7	供方包装是否满足长途运输要求？Supplier's packaging meets the requirements of long-distance transport?	Y
8	如是 EMC/安全件部品，其 EMC/安全证书资料是否已上列网上部品代料表 **If EMC or safety component, whether the related information is added to components replacement files.**	非安全件

填表日期：2015-10-21

注：1、上表中第 1、2、3、7 项适用所有部品；

2、上表中第 4、5、6 项对系列认可的阻容类、电感类部品不适用，认可时，在检查结论栏填“不适用”。

部品认证试验报告

物料名称	功率电感	物料编码	33-MLL689-NTB
规格	6.8uH ±20%		
供应商	钧铜	样品型号	TCLA-0660 Series
送样时间		完成时间	2015-10-20

序号	试验项目	试验条件	规格值	测量值			判定
				最大值	最小值	平均值	
1	电感量	常温LCR电桥	6.8uH ±20%	5.74	5.54	5.615	合格
2	直流电阻	常温毫欧表	20±10%mΩ	21.9	21.1	21.6	合格
3	常温直流叠加	常温下测试在规定的直流叠加电流（7.5A）下的电感量，并测试加大1A（或0.5A）的过载点的电感量	≥70%L0	4.64	4.45	4.516	合格
4	高温直流叠加	测试100℃加最大直流电流下的电感量，并测试加大1A（或0.5A）的过载点的电感量	≥70%L0	4.35	4.19	4.256	合格
5	温升试验	将电感通过规定的温升电流(5A)30min，测试前后的温度差	温升小于40℃	35.6	11.2	22.14	合格
6	耐焊接热试验	在150±10℃条件下预热1~2分钟，有助焊剂条件下进入265±5℃的锡炉中10±1s后洗净	10倍以上显微镜下观察无明显损伤；复测电参数符合规格值	/	/	/	合格
7	线径对比	与一次认可厂家对比测试线径（mm）	泽天	0.558	0.538	0.548	合格
			钧铜	0.591	0.538	0.5645	
8							
9							
10							

综合判定:测试合格

部品测试数据

测试项目:	常温直流叠加		
测试环境:	常温		
测试人:	周宏然	**测试时间**	10月20日

测试项目	钧铜　常温直流叠加(100KHz，0.5V)			
测试仪器/条件	L0	L7.5A	L8.5A	RDC
规格值	6.8uH　±20%	≥70%L0	≥70%L0	20±10%mΩ
1	5.74	4.45	4.5	21.6
2	5.68	4.49	4.61	21.9
3	5.63	4.52	4.49	21.1
4	5.58	4.57	4.41	21.6
5	5.54	4.45	4.41	21.7
6	5.56	4.45	4.47	21.5
7	5.57	4.57	4.5	21.5
8	5.55	4.55	4.5	21.7
9	5.73	4.64	4.57	21.6
10	5.57	4.47	4.41	21.8
Max	5.74	4.64	4.61	21.9
Min	5.54	4.45	4.41	21.1
Average	5.615	4.516	4.487	21.6
判定	合格	合格	合格	合格
	泽天　常温直流叠加(100KHz，0.5V)			
1	5.73	4.48	4.54	20.9
2	6.01	4.63	4.62	20.9
3	6.1	4.67	4.72	20.6
4	6.22	4.97	4.79	20.6
5	5.97	4.66	4.61	20.9
6	5.76	4.498	4.52	21.1
7	6.34	4.75	4.84	20.9
8	5.94	4.48	4.97	21.4
Max	6.34	4.97	4.97	21.4
Min	5.73	4.48	4.52	20.6
Average	6	4.642	4.701	20.91
判定	合格	合格	合格	合格

部品测试数据

测试项目:	高温直流叠加		
测试环境:	高温100℃		
测试人:	周宏然	**测试时间**	10月20日

测试项目	钧铜　高温直流叠加(100KHz，0.5V)			
测试仪器/条件	L0A	L7.5A	L8.5A	
规格值	≥70%（6.8uH ±20%）	≥70%L0	≥70%L0	
1	5.45	4.25	4.22	
2	5.41	4.3	4.28	
3	5.45	4.25	4.23	
4	5.42	4.19	4.1	
5	5.38	4.26	4.21	
6	5.41	4.25	4.26	
7	5.38	4.28	4.31	
8	5.35	4.19	4.22	
9	5.52	4.35	4.29	
10	5.4	4.24	4.26	
Max	5.52	4.35	4.31	
Min	5.35	4.19	4.1	
Average	5.417	4.256	4.238	
判定	合格	合格	合格	
	泽天　高温直流叠加(100KHz，0.5V)			
1	5.58	4.24	4.34	
2	5.85	4.34	4.41	
3	5.95	4.54	4.53	
4	6.06	4.49	4.53	
5	5.83	4.48	4.47	
6	5.67	4.45	4.37	
7	6.22	4.72	4.67	
8	5.79	4.47	4.48	
Max	6.22	4.72	4.67	
Min	5.58	4.24	4.34	
Average	5.86	4.466	4.475	
判定	合格	合格	合格	

温升测试				
	环境温度（℃）	5A直流温度（℃）	温升（℃）	判定
钧铜	25.3	36.5	11.2	合格
	25.8	37	11.2	合格
	26	52.1	26.1	合格
	25.7	52.3	26.6	合格
	26.2	61.8	35.6	合格
泽天	25.9	61.3	35.4	合格
	26.7	44.6	17.9	合格
	25.8	65.1	39.3	合格
	25.7	53.6	27.9	合格
	26.1	56.7	30.6	合格

昆山瑪冀電子有限公司

KunShan MAZO tech Co.,Ltd.

Approval Sheet

Customer:	TCL
Supplier:	Kun Shan MAZO Tech.Co., Ltd
Part No.:	TCLA-0660 Series
Document No.:	TD2015092301

Supplier Confirmation		
Approved	Checked	Written
Darren	Lucas	Maggie

Customer Confirmation

Catalog of Attachments:

☐	Supplier Specification	☑	Sample Test Report
☑	Customer Specification	☑	Marking Standard
☐	Environmental Documents	☑	Reliability Test Report
☐	Packing Standard	☐	Others _____

※We Supply the product Which follows (Pb &Halogen free) Regulation

KunShan MAZO tech CO.,Ltd.

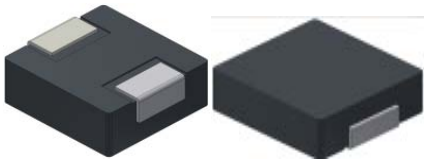
No.1618,Hua An Rd.,HuaQiao Town,

kun Shan City,Jiang Su Province,China 215332

TEL:86-512-36869427

High Current, Power Inductors

TCLA-0660-XXX-M Power Choke



Description

- Halogen Free
- 125°C maximum total temperature operation
- 7.3x6.8x 6.0mm maximum surface mount package
- Powder iron core material
- Magnetically shielded, low EMI
- High current carrying capacity, Low core losses
- Frequency range up to 5MHz
- RoHS compliant

Applications

- Voltage Regulator Module (VRM)
- Multi-phase regulators
- Point-of-load modules
- Smart phone POL modules
- SSD modules
- Notebook regulators
- Battery power systems
- Graphics cards
- Data networking and storage systems

Environmental Data

- Storage temperature range: -55°C to +125 °C
- Operating temperature range: -55°C to +125°C (ambient plus self-temperature rise)
- Solder reflow temperature: J-STD-020D compliant

Description		
TCLA-0660-8R2-M	8.2μH	±20 %
Model	Inductance Value	Inductance Tolerance

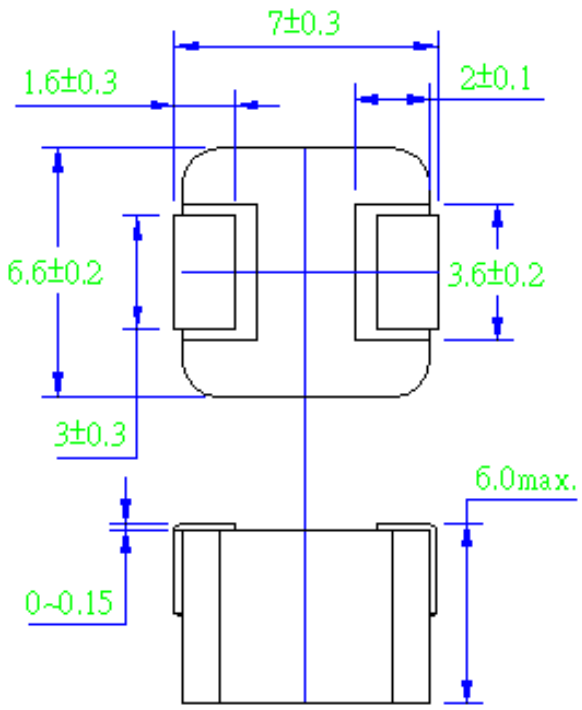
Global Part Number								
T	C	L	A	0	6	6	0	8	R	2	M
Product Series				Dimensions				Inductance			Value Tol.

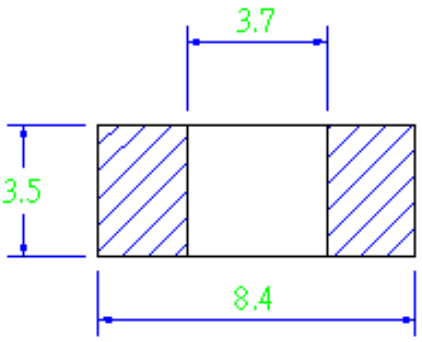
Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %,100kHz, 0.5V			TYP.	TYP.
TCLA-0660-6R8-M	6.8	20.0±10%		5.0	7.5
Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %,100kHz, 0.5V	TYP.	MAX.	TYP.	TYP.
TCLA-0660-8R2-M	8.2	26.0	28.0	5.0	6.0

Notes

1. All test data is referenced to 25 °C ambient
2. Operating temperature range - 55 °C to + 125 °C
3. Idc(A):DC current (A) that will cause an approximate ΔT of 40 °C(reference ambient temperature is 25 °C)
4. Isat(A):DC current (A) that will cause L0 to dropapproximately30 %
5. The part temperature (ambient + temp rise) 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 affect the part temperature. Part temperature should be verified in the end application.

•Dimensions-mm





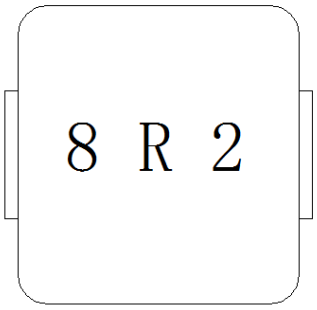
Recommend Land Pattern Dimensions

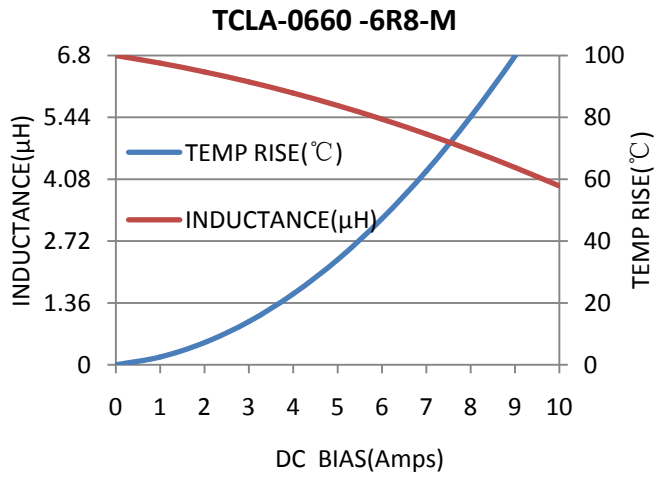
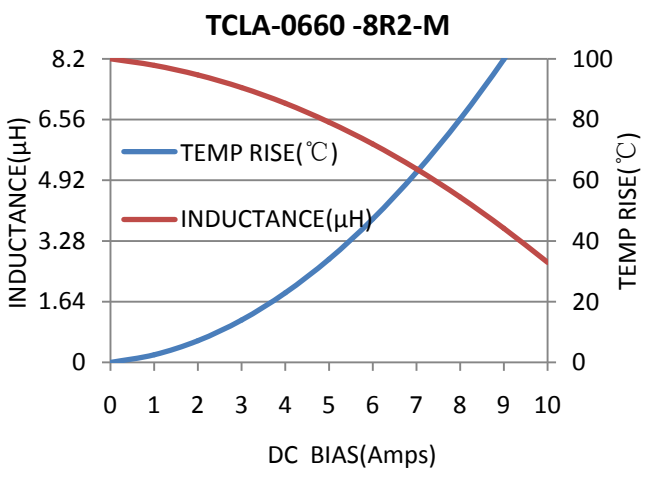
Marking

The inductor is marked with a 3-digit code

Example - -8.2→8R2

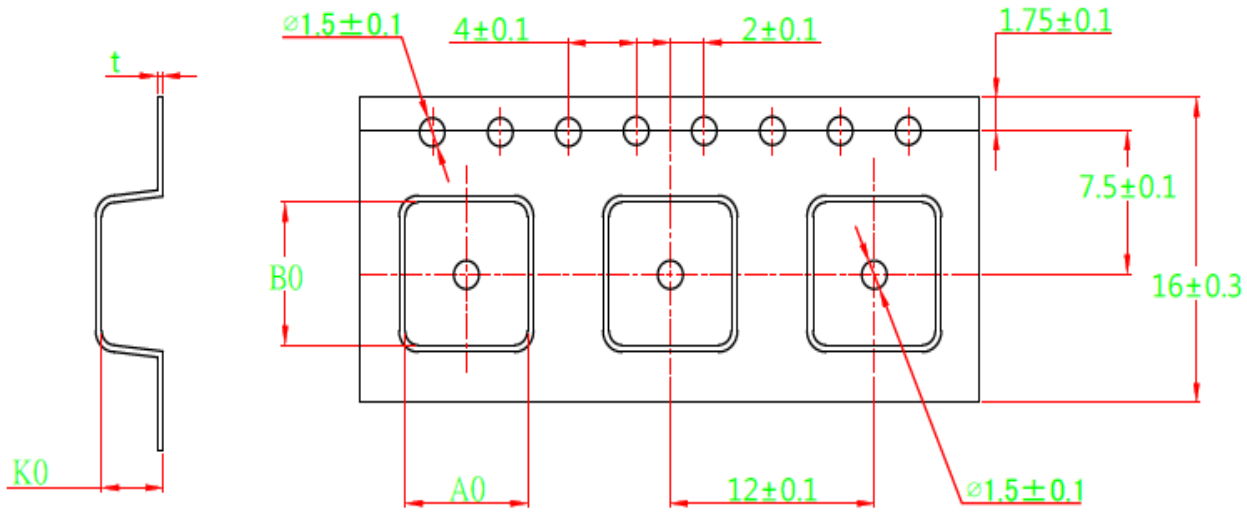
Note：Using Ink for marking



Performance Graphs	
Test Instruments	Test Condition
Wayne kerr 3260B/G LCR Meter Wayne kerr 3265B Bias Current Source	Temperature: 26 ± 3℃ Humidity: < 70% RH Frequency: 100 KHz, 1.0V
	

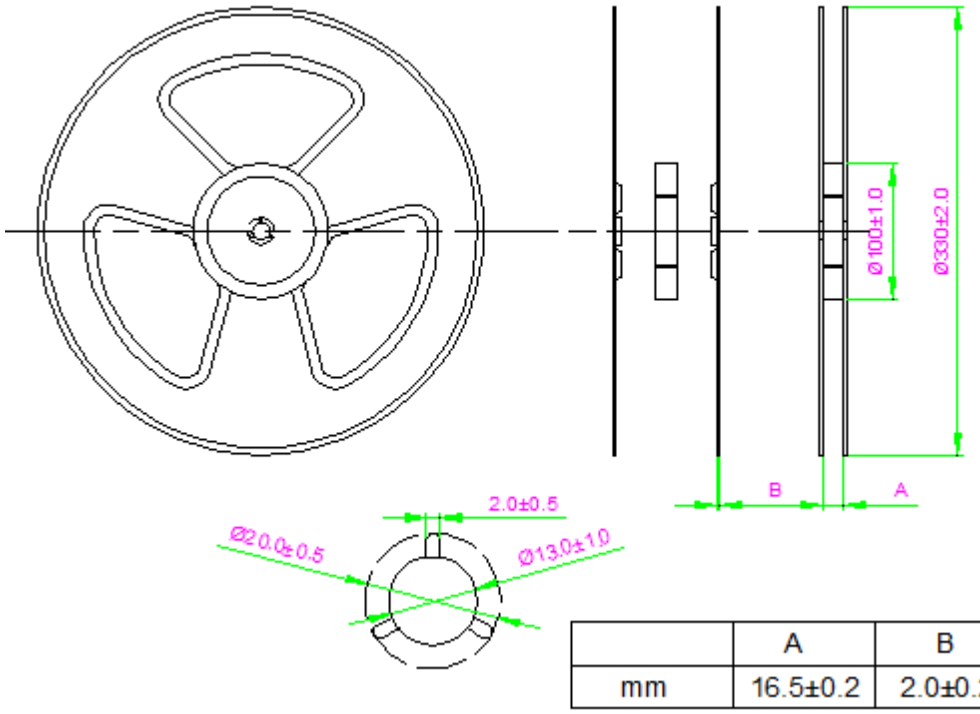
Mechanical Reliability		
Item	Specification and Requirement	Test Method
Solderability	The surface of terminal immersed shall be minimum of 95% covered with a new coating of solder	Solder heat proof: 1. Preheating: 160 ± 10 ℃ 2. Retention time: 245 ± 5 ℃ for 2 ± 0.5 seconds
Vibration	Inductance change: Within ± 10% Without mechanical damage such as break	1. Vibration frequency: (10 Hz to 55 Hz to 10Hz) in 60 seconds as a period 2. Vibration time: Period cycled for 2 hours in each of 3 mutual perpendicular directions. 3. Amplitude: 1.5 mm max.
Shock	Inductance change: Within ±10% Without mechanical damage such as break	1. Peak value: 100 G 2. Duration of pulse: 11ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions
Endurance Reliability		
Item	Specification and Requirement	Test Method
Thermal Shock	Inductance change: Within ± 10% Without distinct damage in appearance	1. Repeat 100 cycles as follow: (-55 ± 2 ℃; 30 ± 3 min) →(Room temp., 5 min) → (+125 ± 2 ℃, 30 ± 3 min) → (Room temp., 5 min) 2. Recovery: 48 + 4 / -0 hours of recovery under the standard condition after the test.
High Temperature Resistance	Inductance change: Within ± 10% Without distinct damage in appearance	1. Environment condition: 85 ± 2 ℃ Applied Current: Rated current 2. Duration: 1000 + 4 / -0 hours
Humidity Resistance	Inductance change: Within ± 10% Without distinct damage in appearance	1. Environment condition: 60 ± 2 ℃ Humidity: 90–95% Applied Current: Rated current 2. Duration: 1000 + 4 / -0 hours
Low Temperature Store	Inductance change: Within ± 10% Without distinct damage in appearance	Store temperature: -55 ± 2 ℃,1000 + 4 / -0 hours
High Temperature Store	Inductance change: Within ± 10% Without distinct damage in appearance	Store temperature: +125 ± 2 ℃,1000 + 4 / -0 hours

Tape Packaging Dimensions



A0	B0	K0	t
7.2±0.10	7.5±0.10	6.6±0.15	0.35±0.05

Reel Dimensions

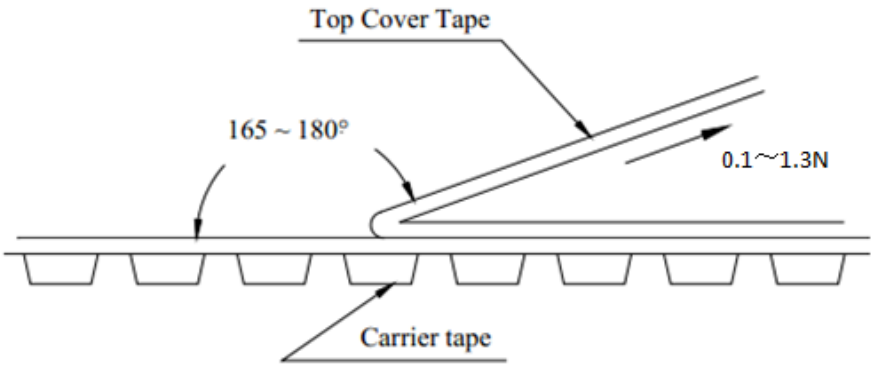


	A	B
mm	16.5±0.2	2.0±0.2

• Peel force of top cover tape

The peel speed shall be about 300mm/minute

The peel force of top cover tape shall be between 0.1 to 1.3 N



• Numbers of taping

500pieces/reel

• Label making

The following items shall be marked on the production and shipping

Label on the reel

• Production Labe
• Part No
• Description
• Quantity
• Produce No
• Taping No

• Shipping Label

(1)*Customer's name
(2)*Customer's part No
(3)Manufacturer's part No
(4)Manufacturer's name
(5) Manufacturer's country

昆山瑪冀電子有限公司

KunShan MAZO tech Co.,Ltd.

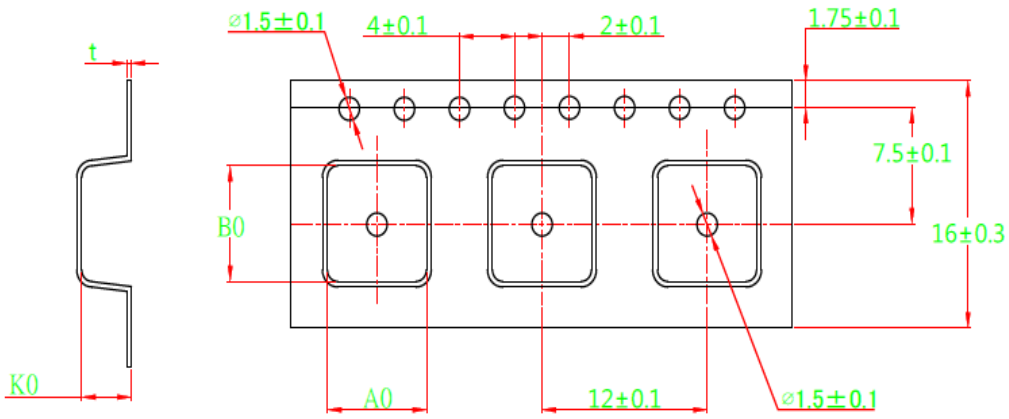
Packing Standard

Customer: TCL

Part No.: TCLA-0660 Series

1. Tape Packaging

Colour: Transparent

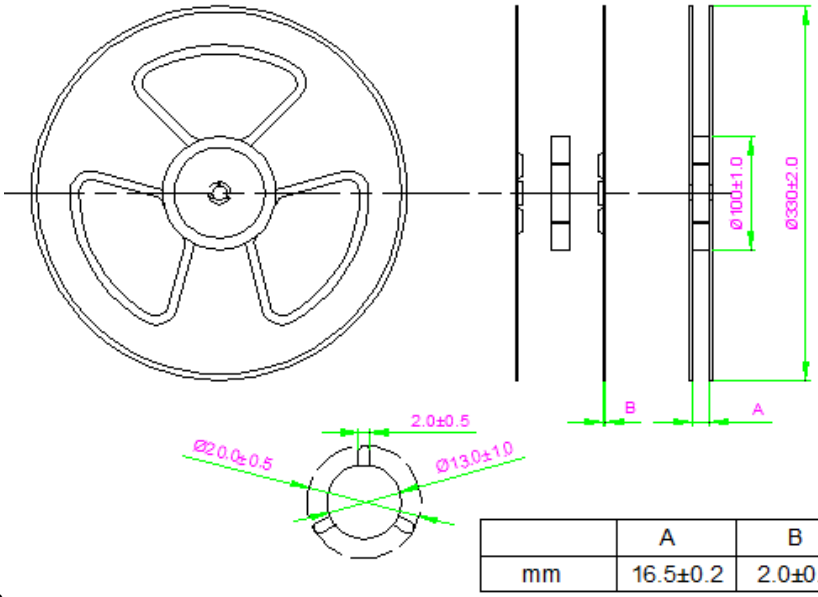


A0	B0	K0	t
7.2±0.10	7.5±0.10	6.6±0.15	0.35±0.05

2. Cover Tape: Heat Sealing

3. Tape Sealing: Using Masking tape

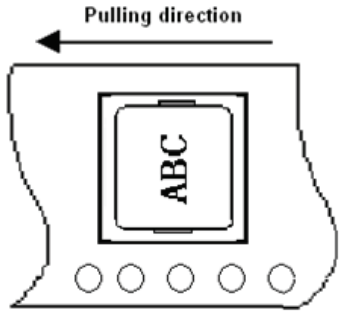
4. Reel Dimensions (500Pcs/Reel)



	A	B
mm	16.5±0.2	2.0±0.2

Colour:Blue

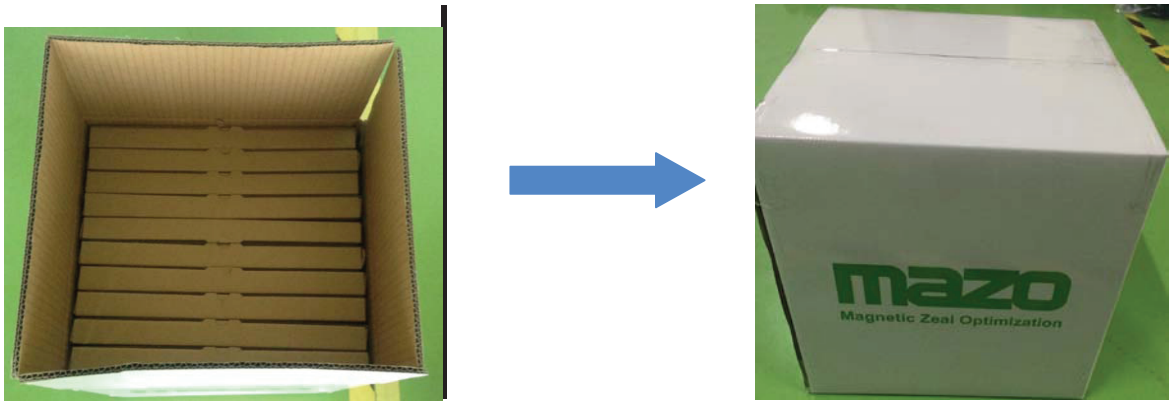
5. Packaging Direction



Before the 420 + 20 mm space; After the 220 + 20 mm space;

6. Reel Packaging: Vacuumizing with Nitrogen, and with 2 desiccant

7. Out Box Packaging: (10 Reel/Box)

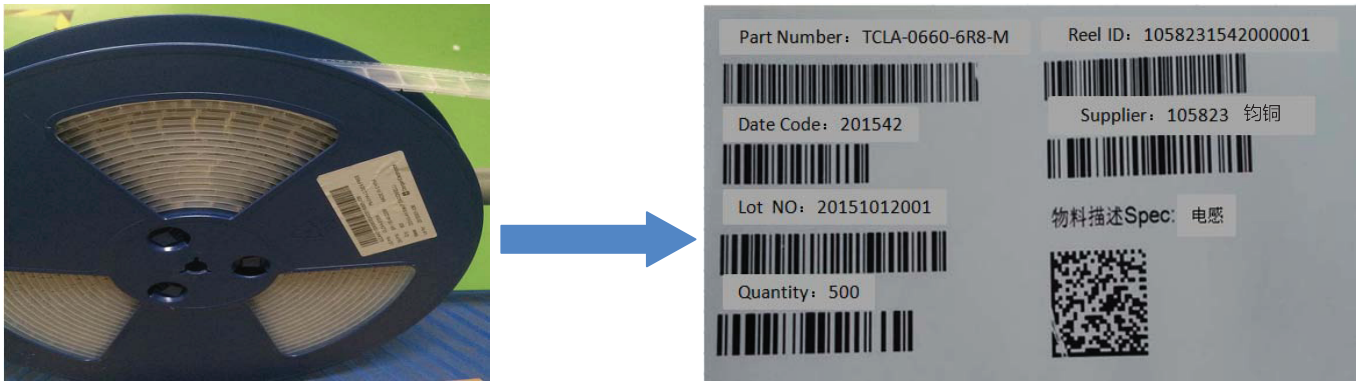


8. Label

8.1 Reel Label

Position(The same side with the holes on carrier)

Labeling Details



8.2 Out Box Label

Position

Labeling Details

Part No: TCLA-0660-8R2-M

QTY: 5000 **PCS**

出货日期: 20150923

mazo 昆山玛冀电子有限公司

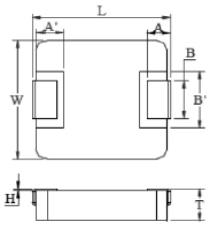
Test Report

NO:MZ/QD-04-11(A/1)

Customer: TCL Part No: MPCA-0660-6R8-M Ship Qty: 50PCS

Ship Date: 2015/9/15 Remark: CS

Test Items	L0	DCR	Idc	Isat	L	W	T	A	B	H
Units	(uH)	(m Ω)	(5A)	(7.5A)	mm	mm	mm	mm	mm	mm
Target	6.8	18.0	△T ≈	Chg ≈	7.00	6.60	5.80	1.60	3.00	0
Range	±20 %	MAX 22	40°C	30%	±0.3	±0.2	±0.2	±0.3	±0.3	~+0.15
1	5.681	19.72	17.4	24.85%	7.15	6.60	5.94	1.36	3.03	0.04
2	5.762	19.96	16.8	26.60%	7.22	6.61	5.94	1.39	3.03	0.05
3	5.671	19.95	16.5	24.72%	7.20	6.59	5.92	1.34	3.00	0.04
4	5.665	19.91	17.3	26.17%	7.20	6.60	5.95	1.35	3.01	0.02
5	5.647	19.74	16.2	24.84%	7.21	6.59	5.92	1.33	3.03	0.05
6	5.695	19.83	17.0	25.19%	7.26	6.60	5.95	1.34	3.02	0.04
7	5.835	19.88	16.9	26.39%	7.17	6.61	5.92	1.35	3.00	0.07
8	5.695	19.90	16.6	24.68%	7.18	6.60	5.93	1.37	3.01	0.06
9	5.604	20.02	16.7	24.35%	7.10	6.62	5.89	1.33	3.01	0.06
10	5.601	19.76	17.2	24.78%	7.18	6.62	5.97	1.35	3.03	0.05
MAX	5.835	20.02	17.4	26.60%	7.26	6.62	5.97	1.39	3.03	0.07
MIN	5.601	19.72	16.2	24.35%	7.10	6.59	5.89	1.33	3.00	0.02
$\bar{X}$	5.686	19.87	16.9	25.26%	7.19	6.60	5.93	1.35	3.02	0.05
R	0.234	0.30	1.2	2.25%	0.16	0.03	0.08	0.06	0.03	0.05



Code	Dimensions
L	7.0±0.3
W	6.6±0.2
T	5.8±0.2
A	1.6±0.3
B	3.0±0.3
H	0~+0.15
Unit:mm	

Test	Inductance WK-3260B 100 KHz 1V	Remarks:
Instruments	DCR AX-1152D	PASS
Environment	25 Degree Celcius; Humidity 65%	

Approved	Checked	Report By
Darren		Judy

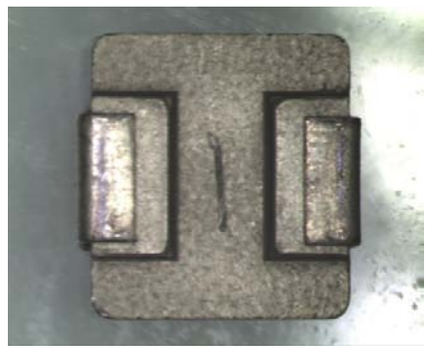
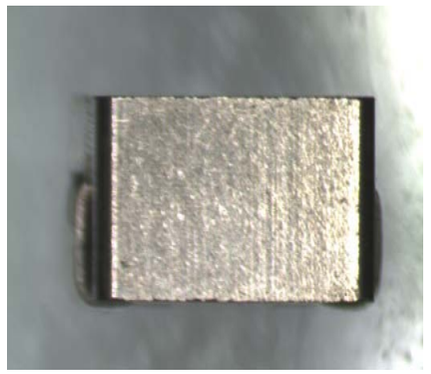
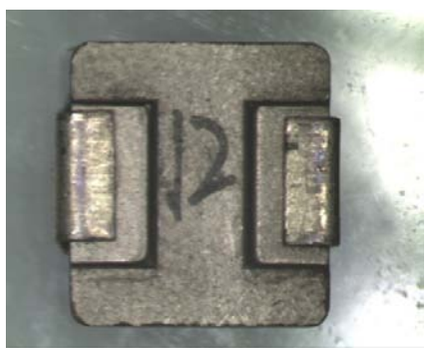
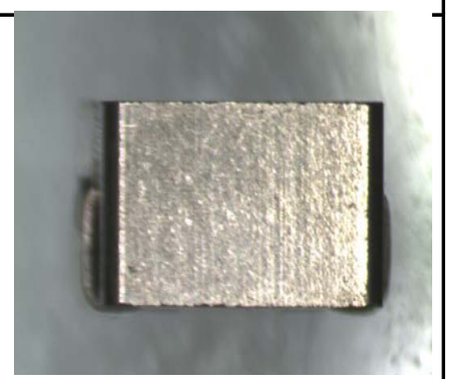
KunShan MAZO tech CO.,Ltd.

Inductance ORT Test Report

NO:MZ/QD-04-24(A/2)

Customer	Part P/N.	NO.	Test Project	result	Test Date	Ship Date	Remark
	TCLA-0660-6R8-M	1	High Temperature &Humidity (1)	PASS	9/13		A6 20150822-5
		2	High Temperature &Humidity (2)	PASS	9/13		
		3	IR Reflow	PASS	9/14		

IR Reflow Test Image

Part NO.	60 ℃95%RH After IR Reflow		
MPCA-0630-6R8-M			
MPCA-0630-6R8-M	85 ℃85%RH After IR Reflow		
			

Approved: Alex chao Checked: Report By: Ella yuan

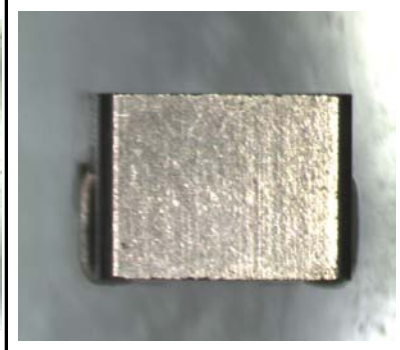
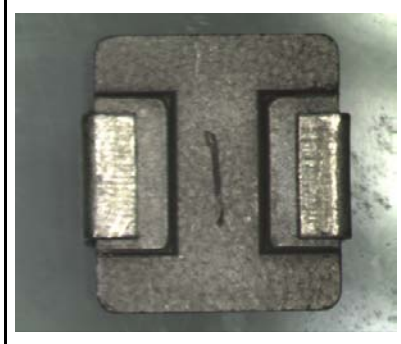
High Temperature&Humidity

Test machine: Temp.&humidity Chamber

Test condition: 60℃95%RH 24+4/-0 hours

Criteria: △L≦±5.0% Without obvious defect

Sample	Before testing		After testing		Change Rate	
	OCL	DCR	OCL	DCR	OCL	DCR
1	5.763	19.56	5.684	19.68	-1.37%	0.61%
2	5.681	19.72	5.598	19.80	-1.46%	0.41%
3	5.762	19.96	5.661	20.01	-1.75%	0.25%
4	5.671	19.95	5.582	20.03	-1.57%	0.40%
5	5.665	19.91	5.558	20.03	-1.89%	0.60%
6	5.647	19.74	5.589	19.89	-1.03%	0.76%
7	5.695	19.83	5.589	19.98	-1.86%	0.76%
8	5.835	19.88	5.784	20.00	-0.87%	0.60%
9	5.695	19.90	5.589	20.00	-1.86%	0.50%
10	5.604	20.02	5.586	20.10	-0.32%	0.40%
11	5.601	19.76	5.489	19.89	-2.00%	0.66%
MAX	5.835	20.02	5.784	20.10	-0.32%	0.76%
MIN	5.601	19.56	5.489	19.68	-2.00%	0.25%
AVG	5.693	19.84	5.610	19.95	-1.45%	0.54%

Before testing			
After testing			

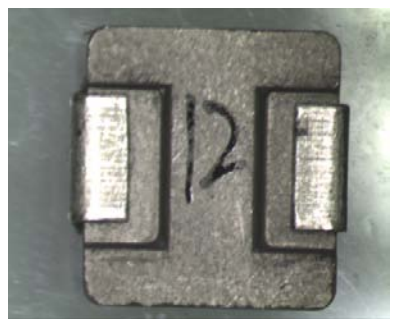
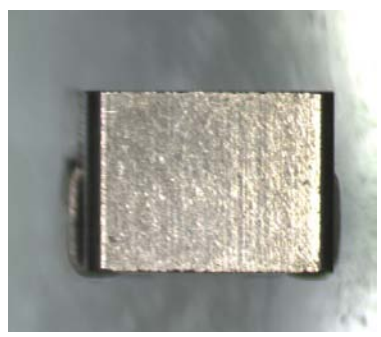
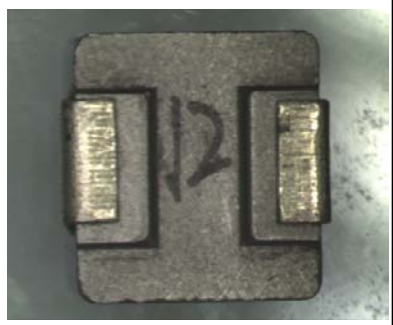
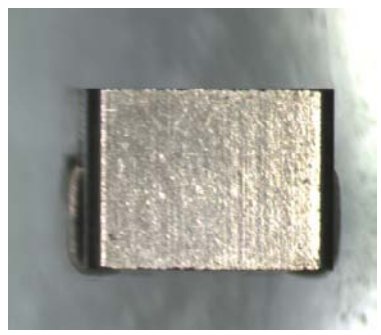
High Temperature&Humidity

Test machine: Temp.&humidity Chamber

Test condition: 85℃85%RH 24+4/-0 hours

Criteria: △L≦±5.0% Without obvious defect

Sample	Before testing		After testing		Change Rate	
	OCL	DCR	OCL	DCR	OCL	DCR
1	5.687	19.74	5.589	19.89	-1.72%	0.76%
2	5.695	19.83	5.589	19.98	-1.86%	0.76%
3	5.835	19.88	5.784	19.98	-0.87%	0.50%
4	5.695	19.90	5.589	20.00	-1.86%	0.50%
5	5.604	20.02	5.586	20.10	-0.32%	0.40%
6	5.601	19.76	5.489	19.89	-2.00%	0.66%
7	5.763	19.56	5.684	19.68	-1.37%	0.61%
8	5.681	19.72	5.598	19.80	-1.46%	0.41%
9	5.762	19.96	5.661	20.01	-1.75%	0.25%
10	5.671	19.95	5.582	20.03	-1.57%	0.40%
11	5.665	19.91	5.558	20.03	-1.89%	0.60%
MAX	5.835	20.02	5.784	20.10	-0.32%	0.76%
MIN	5.601	19.56	5.489	19.68	-2.00%	0.25%
AVG	5.696	19.84	5.610	19.94	-1.52%	0.53%

Before testing			
After testing			

IR Reflow Test

Test machine: Reflow

Test condition: Preheat 150℃,Retention time 245±5℃ for 2±0.5s

Criteria: △L≦±5.0% Without obvious defect

Sample	Before testing		After testing		Change Rate	
	OCL	DCR	OCL	DCR	OCL	DCR
1	5.762	19.96	5.661	19.94	-1.75%	-0.10%
2	5.671	19.95	5.582	20.03	-1.57%	0.40%
3	5.665	19.91	5.558	20.03	-1.89%	0.60%
4	5.604	20.02	5.586	20.10	-0.32%	0.40%
5	5.604	20.02	5.586	19.98	-0.32%	-0.20%
6	5.601	19.76	5.489	19.89	-2.00%	0.66%
7	5.763	19.56	5.684	19.68	-1.37%	0.61%
8	5.681	19.72	5.598	19.80	-1.46%	0.41%
9	5.762	19.96	5.661	20.01	-1.75%	0.25%
10	5.671	19.95	5.582	20.03	-1.57%	0.40%
11	5.665	19.91	5.558	20.03	-1.89%	0.60%
12	5.687	19.74	5.589	19.89	-1.72%	0.76%
13	5.695	19.83	5.589	19.98	-1.86%	0.76%
14	5.835	19.88	5.784	19.98	-0.87%	0.50%
15	5.695	19.90	5.589	19.94	-1.86%	0.20%
16	5.604	20.02	5.586	20.10	-0.32%	0.40%
17	5.601	19.76	5.489	19.83	-2.00%	0.35%
18	5.763	19.56	5.684	19.68	-1.37%	0.61%
19	5.681	19.72	5.598	19.80	-1.46%	0.41%
20	5.762	19.96	5.661	20.01	-1.75%	0.25%
21	5.671	19.95	5.582	20.03	-1.57%	0.40%
22	5.665	19.91	5.558	20.03	-1.89%	0.60%
MAX	5.835	20.02	5.784	20.10	-0.32%	0.76%
MIN	5.601	19.56	5.489	19.68	-2.00%	-0.20%
AVG	5.687	19.86	5.602	19.95	-1.48%	0.42%

mazo 昆山玛冀电子有限公司

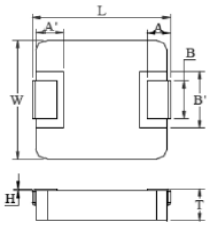
Test Report

NO:MZ/QD-04-11(A/1)

Customer: TCL Part No: MPCA-0660-8R2-M Ship Qty: 50PCS

Ship Date: 2015/9/15 Remark: CS

Test Items	L0	DCR	Idc	Isat	L	W	T	A	B	H
Units	(uH)	(m Ω)	(5A)	(6A)	mm	mm	mm	mm	mm	mm
Target	8.2	28.0	△T ≈	Chg ≈	7.00	6.60	5.80	1.60	3.00	0
Range	±20 %	MAX	40°C	30%	±0.3	±0.2	±0.2	±0.3	±0.3	~+0.15
1	7.145	25.98	15.3	22.58%	7.19	6.60	5.93	1.22	3.02	0.03
2	7.050	26.08	14.7	22.39%	7.13	6.59	5.91	1.29	3.05	0.04
3	6.936	26.29	15.0	22.00%	7.14	6.60	5.90	1.23	3.04	0.03
4	6.906	26.28	14.2	22.31%	7.11	6.61	5.93	1.22	3.05	0.04
5	7.094	26.03	15.1	22.21%	7.11	6.61	5.97	1.17	3.06	0.05
6	6.947	25.97	15.3	22.07%	7.16	6.66	5.90	1.19	3.04	0.06
7	7.024	26.42	15.2	22.25%	7.19	6.60	5.93	1.26	3.02	0.04
8	6.921	25.96	14.3	22.67%	7.12	6.60	5.91	1.22	3.05	0.04
9	6.918	26.19	14.8	21.81%	7.15	6.60	5.91	1.22	3.04	0.03
10	7.023	26.16	15.1	22.22%	7.17	6.60	5.93	1.20	3.04	0.04
MAX	7.145	26.42	15.3	22.67%	7.19	6.66	5.97	1.29	3.06	0.06
MIN	6.906	25.96	14.2	21.81%	7.11	6.59	5.90	1.17	3.02	0.03
$\bar{X}$	6.996	26.14	14.9	22.25%	7.15	6.61	5.92	1.22	3.04	0.04
R	0.239	0.46	1.1	0.86%	0.08	0.07	0.07	0.12	0.04	0.03



Code	Dimensions
L	7.0±0.3
W	6.6±0.2
T	5.8±0.2
A	1.6±0.3
B	3.0±0.3
H	0~+0.15
Unit:mm	

Test	Inductance WK-3260B 100 KHz 1V	Remarks:
Instruments	DCR AX-1152D	PASS
Environment	25 Degree Celcius; Humidity 65%	

Approved	Checked	Report By
Darren		Judy

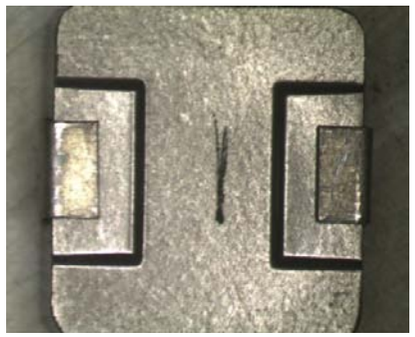
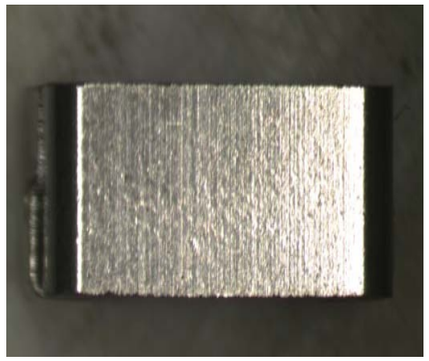
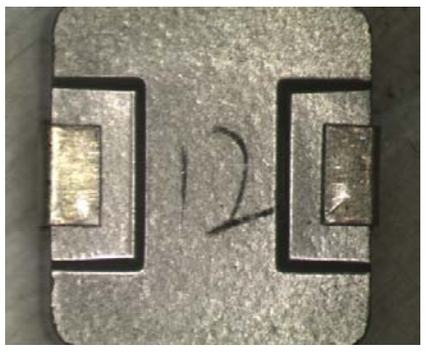
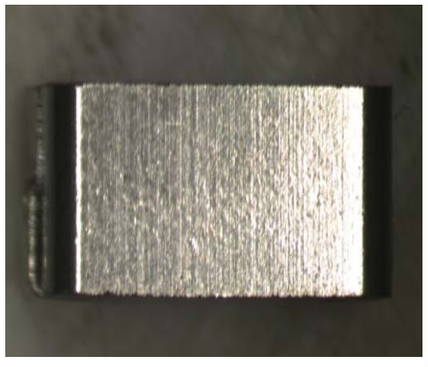
KunShan MAZO tech CO.,Ltd.

Inductance ORT Test Report

NO:MZ/QD-04-24(A/2)

Customer	Part P/N.	NO.	Test Project	result	Test Date	Ship Date	Remark
	TCLA-0660-8R2-M	1	High Temperature &Humidity (1)	PASS	9/13		A1 20150822-5
		2	High Temperature &Humidity (2)	PASS	9/13		
		3	IR Reflow	PASS	9/14		

IR Reflow Test Image

Part NO.	60 ℃95%RH After IR Reflow		
LPCA-1040-8R2-M			
	85 ℃85%RH After IR Reflow		
LPCA-1040-8R2-M			

Approved: Alex chao Checked: Report By: Ella yuan

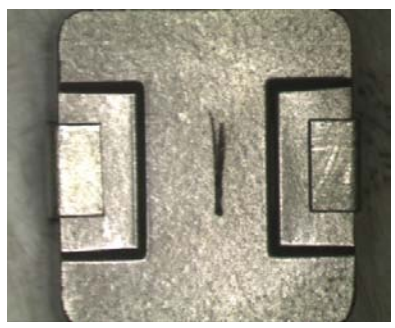
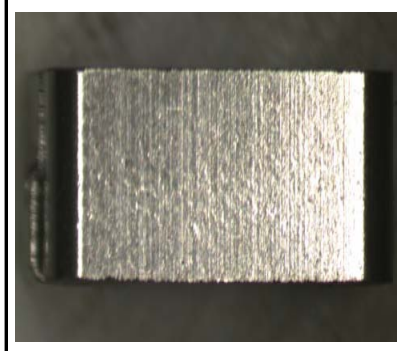
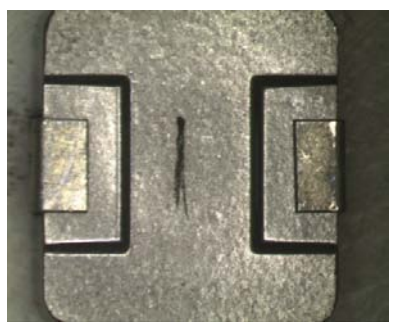
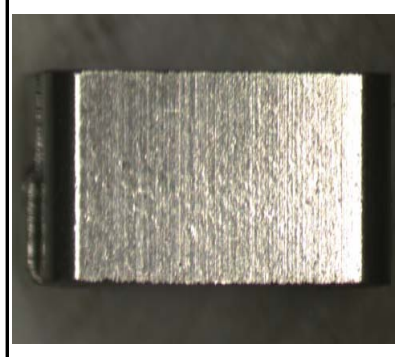
High Temperature&Humidity

Test machine: Temp.&humidity Chamber

Test condition: 60℃95%RH 24+4/-0 hours

Criteria: △L≦±5.0% Without obvious defect

Sample	Before testing		After testing		Change Rate	
	OCL	DCR	OCL	DCR	OCL	DCR
1	7.094	25.98	6.987	25.78	-1.51%	-0.77%
2	6.947	26.08	6.821	25.89	-1.81%	-0.73%
3	7.024	26.29	6.987	26.06	-0.53%	-0.87%
4	6.921	26.28	6.859	26.09	-0.90%	-0.72%
5	6.918	26.03	6.789	25.98	-1.86%	-0.19%
6	7.145	25.97	7.032	25.93	-1.58%	-0.15%
7	7.050	26.42	6.966	26.38	-1.19%	-0.15%
8	6.936	25.96	6.897	25.87	-0.56%	-0.35%
9	6.906	26.19	6.879	26.09	-0.39%	-0.38%
10	7.065	26.16	6.987	26.03	-1.10%	-0.50%
11	7.089	25.89	6.998	25.79	-1.28%	-0.39%
MAX	7.145	26.42	7.032	26.38	-0.39%	-0.15%
MIN	6.906	25.89	6.789	25.78	-1.86%	-0.87%
AVG	7.009	26.11	6.927	25.99	-1.16%	-0.47%

Before testing			
After testing			

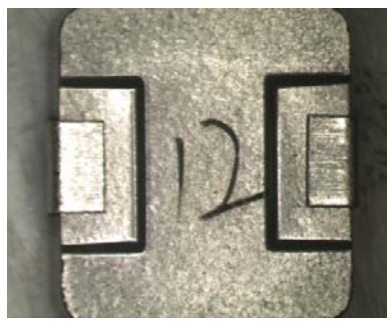
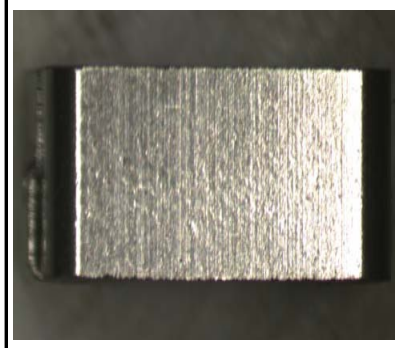
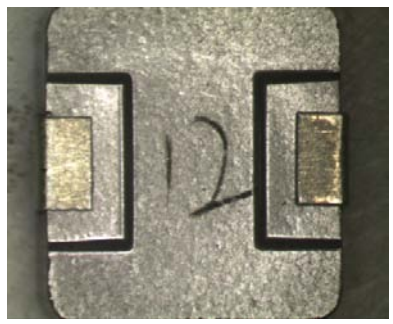
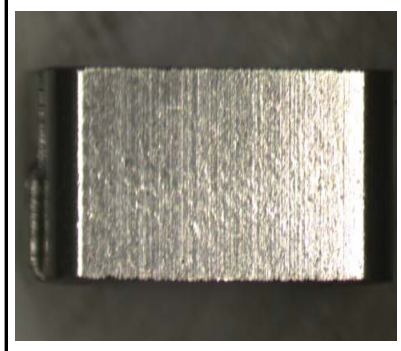
High Temperature&Humidity

Test machine: Temp.&humidity Chamber

Test condition: 85℃85%RH 24+4/-0 hours

Criteria: △L≦±5.0% Without obvious defect

Sample	Before testing		After testing		Change Rate	
	OCL	DCR	OCL	DCR	OCL	DCR
1	7.145	26.03	7.032	25.9	-1.58%	-0.38%
2	7.050	26.38	6.966	26.4	-1.19%	0.00%
3	6.936	25.96	6.897	25.9	-0.56%	-0.35%
4	6.928	26.19	6.879	26.1	-0.71%	-0.38%
5	7.098	26.18	6.987	26.0	-1.56%	-0.57%
6	7.089	25.89	6.998	25.8	-1.28%	-0.39%
7	7.068	25.98	6.987	25.8	-1.15%	-0.77%
8	6.947	26.08	6.821	25.9	-1.81%	-0.73%
9	7.024	26.29	6.987	26.1	-0.53%	-0.87%
10	6.921	26.28	6.859	26.1	-0.90%	-0.72%
11	6.918	26.03	6.789	26.0	-1.86%	-0.19%
MAX	7.145	26.38	7.032	26.38	-0.53%	0.00%
MIN	6.918	25.89	6.789	25.78	-1.86%	-0.87%
AVG	7.011	26.12	6.927	25.99	-1.19%	-0.49%

Before testing			
After testing			

IR Reflow Test

Test machine：Reflow

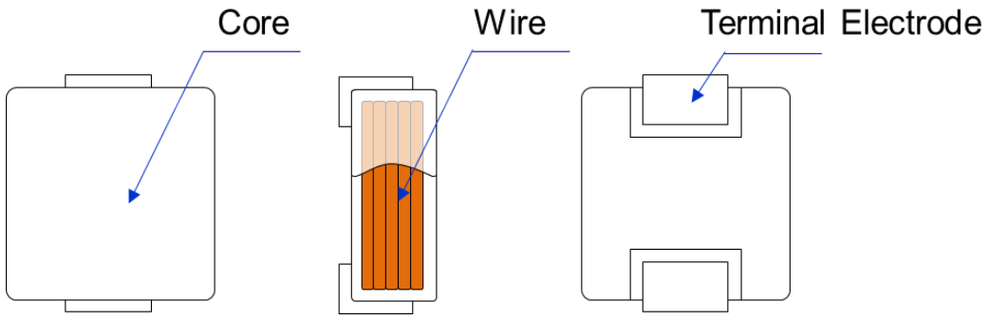
Test condition：Preheat 150℃,Retention time 245±5℃ for 2±0.5s

Criteria：△L≦±5.0% Without obvious defect

Sample	Before testing		After testing		Change Rate	
	OCL	DCR	OCL	DCR	OCL	DCR
1	7.068	25.98	6.987	25.8	-1.15%	-0.77%
2	6.947	26.08	6.821	25.9	-1.81%	-0.73%
3	7.024	26.29	6.987	26.1	-0.53%	-0.87%
4	6.921	26.28	6.859	26.1	-0.90%	-0.72%
5	7.145	26.03	7.032	25.9	-1.58%	-0.38%
6	7.050	26.38	6.966	26.4	-1.19%	0.00%
7	6.936	25.96	6.897	25.9	-0.56%	-0.35%
8	6.928	26.19	6.879	26.1	-0.71%	-0.38%
9	7.098	26.18	6.987	26.0	-1.56%	-0.57%
10	7.089	25.89	6.998	25.8	-1.28%	-0.39%
11	7.066	23.2	7.104	23.19	0.54%	-0.22%
12	7.145	26.03	7.032	25.9	-1.58%	-0.38%
13	7.050	26.38	6.966	26.4	-1.19%	0.00%
14	6.936	25.96	6.897	25.9	-0.56%	-0.35%
15	6.928	26.19	6.879	26.1	-0.71%	-0.38%
16	7.098	26.18	6.987	26.0	-1.56%	-0.57%
17	7.089	25.89	6.998	25.8	-1.28%	-0.39%
18	7.068	25.98	6.987	25.8	-1.15%	-0.77%
19	6.947	26.08	6.821	25.9	-1.81%	-0.73%
20	7.024	26.29	6.987	26.1	-0.53%	-0.87%
21	6.921	26.28	6.859	26.1	-0.90%	-0.72%
22	6.918	26.03	6.789	26.0	-1.86%	-0.19%
MAX	7.145	26.38	7.104	26.38	0.54%	0.00%
MIN	6.918	23.24	6.789	23.19	-1.86%	-0.87%
AVG	7.018	25.99	6.942	25.86	-1.09%	-0.49%

SPECIFICATION FOR APPROVAL

材料清單



No.	Item	Materials	Vender	Remark
1	Core	Alloy Iron Powder	Kun Shan MAZO	
2	Wire	Copper Wire+Coating Layer	荣星电线	
3	Terminal Electrode	sheet copper+ tin coating	昆山詣揚精密電子	