



SPECIFICATION FOR APPROVAL

CUSTOMER :

VENDOR : MAGIC TECHNOLOGY CO.,LTD.

PRODUCTS : Shielded Molding - SMD

PART NO : WSRPG0603A-R33M-AG

CUST NO :

DATE : 2013.01.22

SALES DEP. :

E-MAIL :

PURCHASER CONFIRMED

<i>APPROVAL NO.</i>	<i>APPROVAL BY</i>	

MAGIC ENGINEER DEPT.

<i>APPROVAL BY</i>	<i>CHECK BY</i>	<i>DRAWN BY</i>
<i>TAN ZI YANG</i>	<i>WANG L I</i>	<i>LU CHENG</i>

美築科技股份有限公司

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TEL:0755-27222227 FAX:0755-27222476

蘇 州 廠: 蘇州市吳中區胥口鎮繁豐路東端

TEL:0512-66218588 FAX:0512-66210828

重 慶 廠: 重慶市九龍坡區金鳳鎮金鳳電子信息產業園

TEL: 023-65747007 FAX: 023-65747001

<http://www.magictec.com.tw>

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QWRD10承認書B

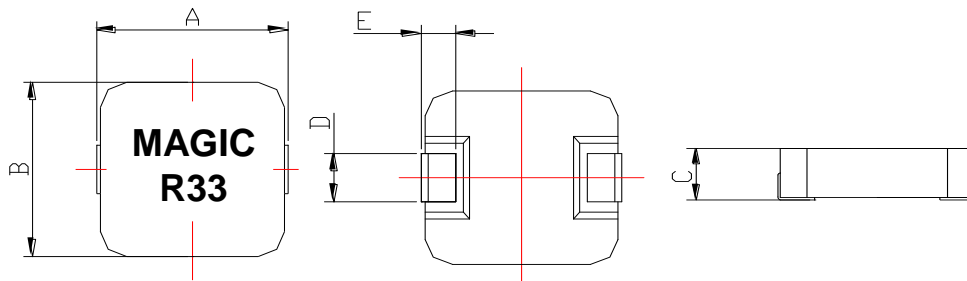
SPECIFICATION FOR APPROVAL

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CUSTOMER : _____ DATE : 2013.01.22
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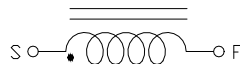
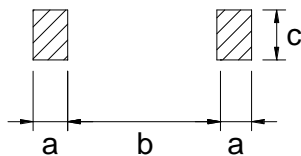
1.MECHANICAL & DIMENSIONS

(UNIT: mm)



PCB Pattern

Equivalent Circuit



REMARK

灰色coating

2.ELECTRICAL REQUIREMENTS:

PARAMETER	SPECIFICATION	CONDITION	TEST INSTRUMENTS
L0	0.33 ± 20% uH	100KHz/0.25V	■CH-1062A LCR METER
DCR	3.9 max mohm	@25 ± 5°C	■CH-16502BC IMPEDANCE METER
I-sat	30.0 (Typ) Amps	75% L0	■CH-3302 LCR METER + CH-1320 BIAS
I rms	20.0(Typ) Amps	ΔT ≤ 40°C	■DIGITAL THERMOMETER: DM6801A

3.TEMPERATURE RATING:

Operating -20°C ~ 125°C

4.PRODUCT IDENTIFICATION:

W **SRPG** **0603A** - **R33** **M** - **AG**
A **B** **C** **D** **E** **F**

A: RoHS part number.

B: Series Name.

C: Dimensions and shape.

D: Inductance. (Exp. 0.33uH = R33)

E: Inductance Tolerance. (M±20% , K±10%)

F: Powder material.

DRAWN BY :	CHECKED BY :	APPROVED BY :
LU CHENG	WANG LI	TAN ZI YANG

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 MG PART : WSRPG0603A-R33M-AG PAGE NO : 3 /9
 MG P/NO : _____ MG NO : _____

5.TESTING DATA:

PARAMETER	L0	DCR	I-sat	I rms	
UNIT	uH	mohm	Amps	Amps	
SPECIFICATION	0.33 ± 20%	3.9 max	30.0 (Typ)	20.0(Typ)	
CONDITION	100KHz/0.25V	@25 ± 5℃	75% L0	ΔT ≤ 40℃	
1	0.30	3.75	OK	OK	
2	0.35	3.74			
3	0.32	3.72			
4	0.34	3.75			
5	0.31	3.70			
6	0.34	3.72			
7	0.32	3.70			
8	0.33	3.75			
9	0.34	3.72			
10	0.33	3.70			
MEAN	0.33	3.73			
R	0.05	0.05			

6.AMBIENT CONDITION

TEMPERATURE	25 ± 5℃	HUMIDITY	60 ± 10%
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7.TEST DATA

NO	A	B	C	D	E			
	7.6 Max	6.8 Max	3.0 Max	2.9±0.5	1.6±0.5			
1	7.50	6.70	2.86	2.92	1.64			
2	7.48	6.72	2.87	2.95	1.65			
3	7.50	6.73	2.85	2.94	1.62			
4	7.51	6.74	2.86	2.96	1.65			
5	7.49	6.73	2.85	2.91	1.63			
6	7.48	6.73	2.85	2.98	1.64			
7	7.50	6.70	2.87	3.01	1.63			
8	7.49	6.70	2.85	3.05	1.64			
9	7.46	6.72	2.84	2.94	1.64			
10	7.49	6.73	2.84	3.02	1.65			
MEAN	7.49	6.72	2.85	2.97	1.64			
R	0.05	0.04	0.03	0.14	0.03			

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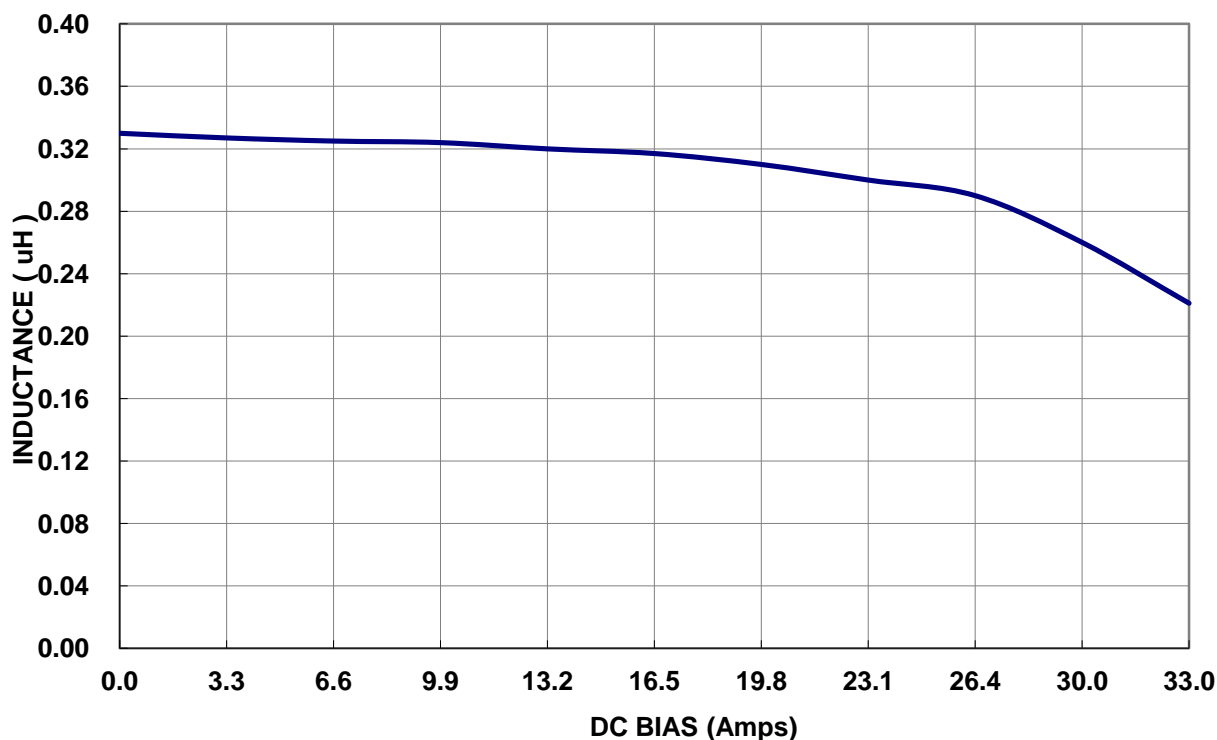
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MG PART : WSRPG0603A-R33M-AG PAGE NO : 4 / 9
MG P/NO : _____ MG NO : _____

INDUCTANCE (uH) VS DC BIAS (Amps)

PART NO.	WSRPG0603A-R33M-AG					
0.0 A	0.33	% L0				
3.3 A	0.33	99.09%				
6.6 A	0.33	98.48%				
9.9 A	0.32	98.18%				
13.2 A	0.32	96.97%				
16.5 A	0.32	96.06%				
19.8 A	0.31	93.94%				
23.1 A	0.30	90.91%				
26.4 A	0.29	87.88%				
30.0 A	0.26	78.79%				
33.0 A	0.22	66.97%				

CONDITION: 100KHz , 0.25Vrms



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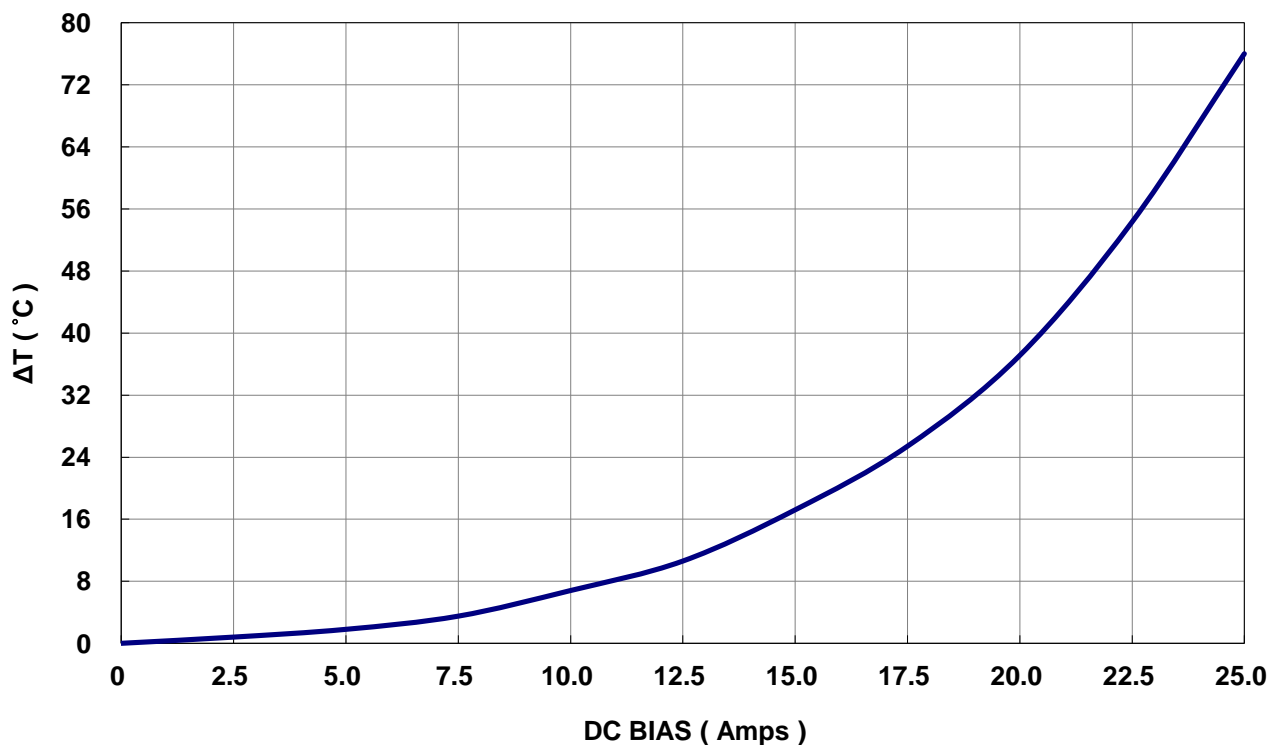
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CUSTOMER :	DATE :	2013.01.22
CUST P/NO :	REV NO:	A
MG PART : WSRPG0603A-R33M-AG	PAGE NO :	5 / 9
MG P/NO :	MG NO :	

TEMPERATURE RISE ΔT (°C) VS DC BIAS (Amps)

PART NO.	WSRPG0603A-R33M-AG					
0 A	0	0 Minutes				
2.5 A	0.8	5 Minutes				
5.0 A	1.8	10 Minutes				
7.5 A	3.5	15 Minutes				
10.0 A	6.8	20 Minutes				
12.5 A	10.6	25 Minutes				
15.0 A	17.2	30 Minutes				
17.5 A	25.4	35 Minutes				
20.0 A	37.1	40 Minutes				
22.5 A	54.3	45 Minutes				
25.0 A	76.0	50 Minutes				

CONDITION: 100KHz , 0.25Vrms



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Reliability and Testing Conditions / Pin Type Power Inductors

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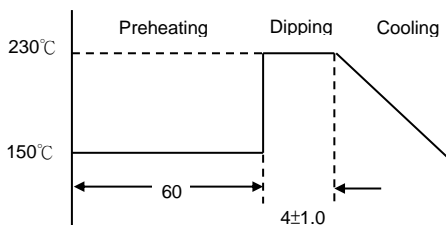
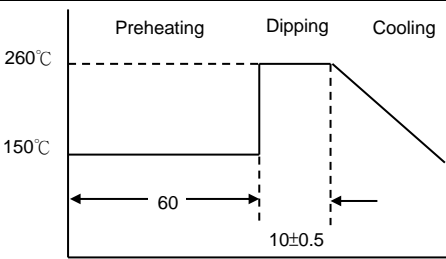
Item	Specification	Conditions															
Operating temperature range	-20°C ~ +125°C																
Storage temperature and humidity range	25±5°C , 70% RH Max																
Solderability	More than 90% of the terminal electrode should be covered with solder.	 <p>Unit: Second</p>															
Solder Heat Resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	 <p>Unit: Second</p>															
Heat resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 500 hours in 125±5°C and 2 hour drying under normal condition.															
Cold resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 500 hours in -40±5°C and 2 hour drying under normal condition.															
Thermal shock	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	<p>After 10 cycles of following condition.</p> <table border="1"> <thead> <tr> <th>Step</th><th>Temperature (°C)</th><th>Times (min.)</th></tr> </thead> <tbody> <tr> <td>1</td><td>-40±5°C</td><td>30</td></tr> <tr> <td>2</td><td>Room Temperature</td><td>Within 3</td></tr> <tr> <td>3</td><td>125±5°C</td><td>30</td></tr> <tr> <td>4</td><td>Room Temperature</td><td>Within 3</td></tr> </tbody> </table>	Step	Temperature (°C)	Times (min.)	1	-40±5°C	30	2	Room Temperature	Within 3	3	125±5°C	30	4	Room Temperature	Within 3
Step	Temperature (°C)	Times (min.)															
1	-40±5°C	30															
2	Room Temperature	Within 3															
3	125±5°C	30															
4	Room Temperature	Within 3															
Humidity Resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 500 hours in 40±2°C and 90 to 95% humidity , and 2 hour drying under normal condition.															
Vibration Test	Inductance within ±5% of initial value and appearance shall not break.	After vibration for 1hour, In each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P Amplitudes.															

Figure 1. Re-flow Soldering

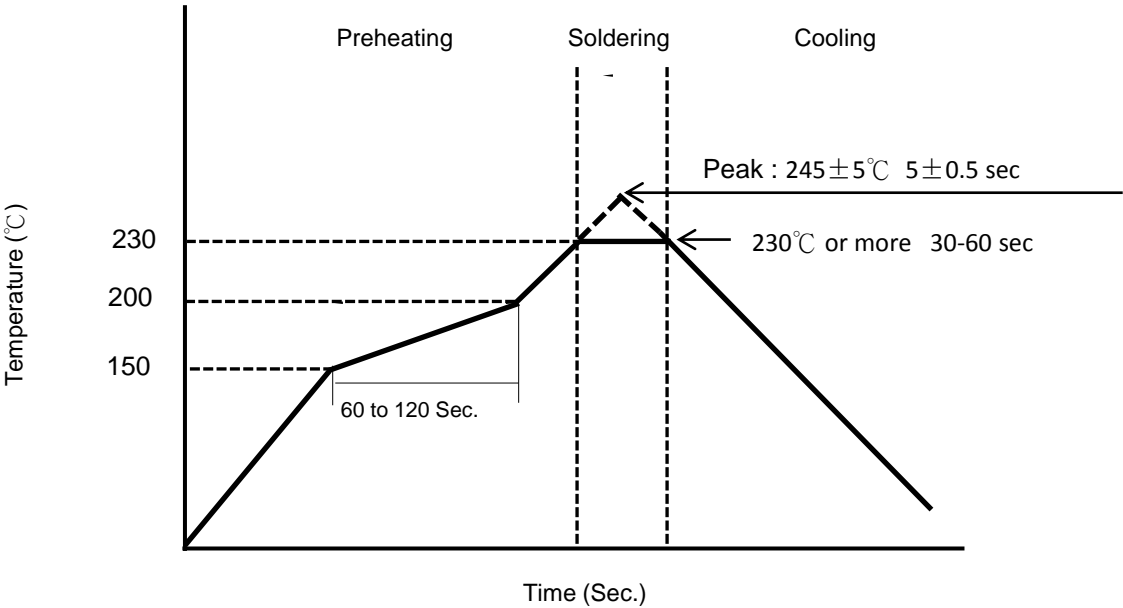
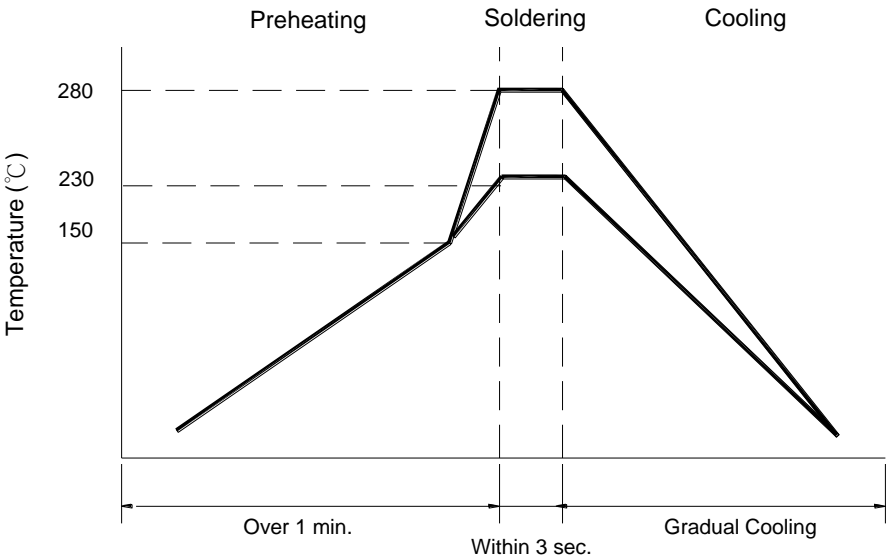


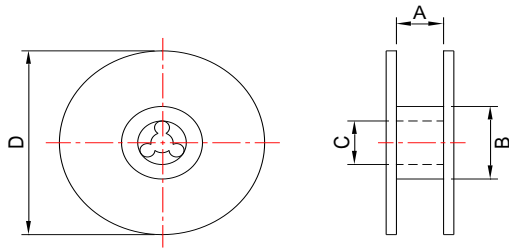
Figure 2. Hand Soldering



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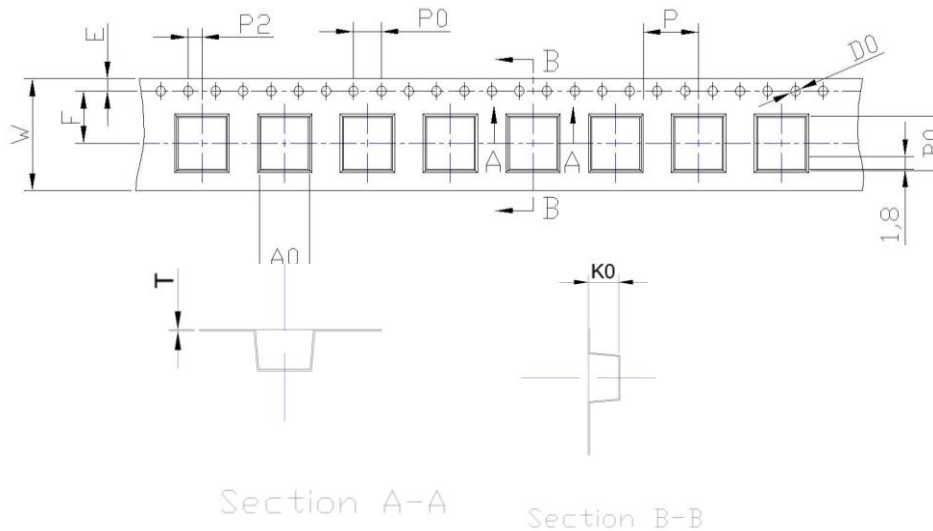
14.PACKAGING

Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13" x 16mm	16.0 ± 0.5	100 ± 2	13.5 ± 0.5	330

Tape Dimension

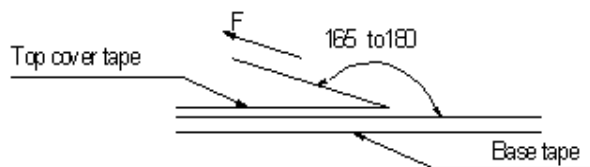


W	AO	BO	KO	P	F	E	PO	P2	T
16±0.3	6.9±0.1	7.4±0.1	3.1±0.1	12±0.3	7.5±0.1	1.75±0.1	4±0.1	2±0.1	0.35±0.05

Packaging Quantity

P/N	Chip/Reel	Inner Box	Carton
WSRPG0603A	1500pcs	3000pcs	12000pcs

Tearing Off Force



The force tearing off cove tape is 15 to 60 grams in the arrow direction under the following conditions

Room Temp (°C)	Room Humidity (%)	Room atrn (hPa)	Teaming Speed (mm/min)
5~35	45~85	860~1060	300.0

※Storage Conditions

1. Temperature and humidity conditions: Less than 40°C and 70% RH.
2. Recommended products should be used within 6 months form the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

※Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

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MATERIAL IDENTIFICATION				
ITEM	DESCRIPTION	CLASS	SGS No. UL NO.	SUPPLIERS
Powder	carbony Iron powder			MAGIC TECHNOLOGY CO.,LTD.
WIRE	AIB			PACIFIC ELECTRONICS WIRE&CABLE CO.,LTD
Paint	Gray			HSIN JENG FONG CHEM PAINT CO.LTD
Chip	ZT001			ZHENTAI INSULATION MATERIAL PRODUCT CO.,LTD
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