



TDK XIAMEN CO ., LTD.  
321~339 TONGJI SOUTH ROAD  
JIMEI, XIAMEN, CHINA  
TEL:0592-6150333-153  
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## PRODUCT SPECIFICATION

SPEC. NO. XCA-02049C

SUNLORD - 希姆通

DATE: 2012.06.16

CUSTOMER'S PT/NO.

TDK PT/NO.

SLF7040T-1R0M100-T3PF

THIS SPECIFICATION IS:

- FULLY ACCEPTED  
 DENIED  
 ACCEPTED UNDER THE FOLLOWING CONDITIONS

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME(PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_

COIL MFG. DEPARTMENT

FACTORY:

TDK XIAMEN CO ., LTD.  
321~339 TONGJI SOUTH ROAD  
JIMEI, XIAMEN, CHINA  
TEL: 0592-6150333-153  
FAX: 0592-6151982



**PRODUCT SPECIFICATION**

CUSTOMER: MESSRS.

TDK PT/NO:

SLF7040T-1ROM100-T3PF

SPEC. NO.

XCA-02049C

CUSTOMER PT/NO:

**I . SCOPE :**

This specification applies to the high current type SMD inductors for  
SLF7040T-○○○□△△△-T3PF

**II . INDEX :**

LISTED ITEM	ATTACHEMENT & TABLES	PAGE
1. SHAPES AND DIMENSIONS	Please see (1)	2/9
2. ELECTRICAL SPECIFICATIONS	Please see (2)	2/9 , 3/9
3. CHARACTERISTICS	Please see (3)	2/9
4. ELECTRICAL SCHEMATICS	Please see (4)	3/9
5. RELIABILITY TEST METHOD	Please see (5)	4/9 , 5/9 , 6/9
6. LAND DIMENSION (Ref.)	Please see (6)	7/9
7. PACKAGING	Please see (7)	8/9 , 9/9
8. TANDARD TEST CONDITIONS	Unless otherwise specified, test condition should be Temp.=20±15°C, Humidity=35~85% But if needed, then test condition should be Temp.=20±2°C, Humidity=65±5%	

**III . MANUFACTURING LOCATION**

- 1) YANGMEI in TAIWAN
- 2) XIAMEN in CHINA

APPROVED BY

Lin 40

CONFIRMED BY

Li Xianglong  
2012.6.20

CHECKED BY

MADE BY

Lin Yucheng 6/8

# PRODUCT SPECIFICATION

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SPEC. NO.

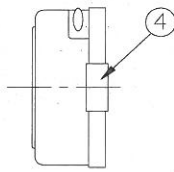
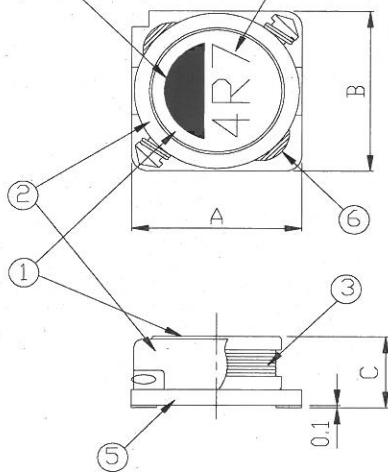
XCA-02049C

CUSTOMER PT/NO:

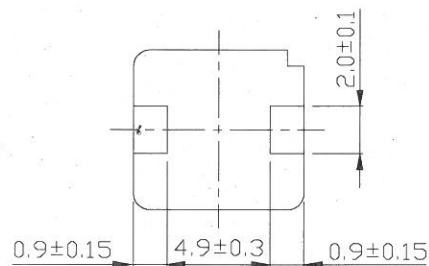
## (1) SHAPES AND DIMENSIONS

POLARITY MARK  
(St. winding)

INDUCTANCE



TERMINAL DIMENSION



A :  $7.0 \pm 0.2$  m/m  
B :  $7.0 \pm 0.2$  m/m  
C :  $4.0 \pm 0.2$  m/m

## (2) ELECTRICAL SPECIFICATIONS

SEE TABLE 1

TEST INSTRUMENTS

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

RDC : AD-5812 DIGITAL LOW-OHMMETER (or equivalent)

## (3) CHARACTERISTICS

(3)-1 Temperature rise .....  $+40^{\circ}\text{C}$  Max.(3)-2 Ambient temperature .....  $+65^{\circ}\text{C}$  Max.(3)-3 Operate temperature range .....  $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$   
(Including self temp. rise)(3)-4 Storage temperature range .....  $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$ 

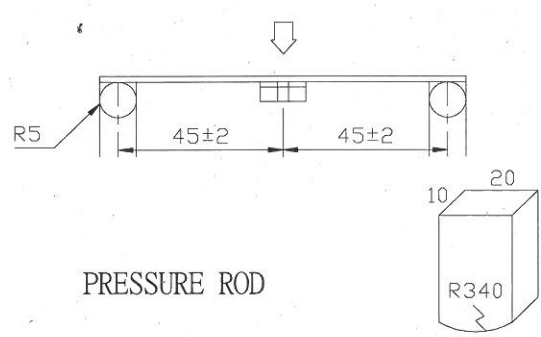
## MATERIALS

NO.	ITEM	DESCRIPTION & TYPE
1	DR CORE	FERRITE
2	RING CORE	FERRITE
3	WIRE	COPPER WIRE
4	TERMINAL	TINNED COPPER SHEET
5	BASE	PM9820
6	ADHESIVE	EPOXY RESIN
7	SOLDER	Sn-Cu



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**(5) RELIABILITY TEST METHOD**  
**MECHANICAL**

TEST ITEM	SPECIFICATION	TEST DETAILS
Substrate bending	$\Delta L/L_0 \leq \pm 5\%$  There shall be no mechanical damage or electrical damage.	The sample shall be soldered onto the printed circuit board in figure 1 and a load applied until the figure in the arrow direction is made approximately 3mm. (keep time 3~5 seconds, speed: 0.5mm/sec) PCB dimension shall the page 7/9 F(Pressurization) <div style="text-align: center;">  <p>figure-1</p> </div>
Vibration	$\Delta L/L_0 \leq \pm 5\%$  There shall be no mechanical damage.	The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.5mm and a frequency of from 10 to 55Hz/1 minute repeated should be applied  (A total of 6 hours)
Solderability (M22)	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°C and after it has been immersed to a depth 0.5mm below for 3±0.2 seconds fully in molten solder M22 with a temperature of 245±2°C. More than 90% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath.

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## MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	<p>Temperature profile of reflow soldering</p> <p>The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time.</p> <p>The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.</p>

## ELECTRICAL

TEST ITEM	SPECIFICATION	
Insulation resistance	There shall be no other damage or problems.	DC 100V voltage shall be applied across this sample of top surface and the terminal. The insulation resistance shall be more than $1 \times 10^8 \Omega$ .
Dielectric withstand voltage	There shall be no other damage or problems.	AC 100V voltage shall be applied for 1 minute across the top surface and the terminal of this sample. (current: 1mA)
Temperature characteristics	$\Delta L/L_{20^\circ\text{C}} \leq \pm 15\%$ 0~2000 ppm/°C	The test shall be performed after the sample has stabilized in an ambient temperature of -40 to +85°C, and the value calculated based on the value applicable in a normal temperature and normal humidity shall be $\Delta L/L_{20^\circ\text{C}} \leq \pm 15\%$ . Measurement Equipments : HP IMPEDANCE ANALYZER (at 10 KHz)

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## ENVIRONMENT CHARACTERISTICS

TEST ITEM	SPECIFICATION	TEST DETAILS															
High temperature storage	$\Delta L/L_0 \leq \pm 5\%$  There shall be no mechanical damage.	The sample shall be left for $96 \pm 4$ hours in an atmosphere with a temperature of $105 \pm 2^\circ\text{C}$ 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.															
Low temperature storage	$\Delta L/L_0 \leq \pm 5\%$  There shall be no mechanical damage.	The sample shall be left for $96 \pm 4$ hours in an atmosphere with a temperature of $-40 \pm 3^\circ\text{C}$ . 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.															
Change of temperature	$\Delta L/L_0 \leq \pm 5\%$  There shall be no other damage of problems	The sample shall be subject to 5 continuous 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.  <div style="text-align: center;"> <p><b>table 2</b></p> <table border="1"> <thead> <tr> <th></th> <th>Temperature</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><math>-40 \pm 3^\circ\text{C}</math> (Thermostat No.1)</td> <td>30 min.</td> </tr> <tr> <td>2</td> <td>Standard atmospheric</td> <td>5 sec. or less No.1→No.2</td> </tr> <tr> <td>3</td> <td><math>+105 \pm 2^\circ\text{C}</math> (Thermostat No.2)</td> <td>30 min.</td> </tr> <tr> <td>4</td> <td>Standard atmospheric</td> <td>5 sec. or less No.2→No.1</td> </tr> </tbody> </table> </div>		Temperature	Duration	1	$-40 \pm 3^\circ\text{C}$ (Thermostat No.1)	30 min.	2	Standard atmospheric	5 sec. or less No.1→No.2	3	$+105 \pm 2^\circ\text{C}$ (Thermostat No.2)	30 min.	4	Standard atmospheric	5 sec. or less No.2→No.1
	Temperature	Duration															
1	$-40 \pm 3^\circ\text{C}$ (Thermostat No.1)	30 min.															
2	Standard atmospheric	5 sec. or less No.1→No.2															
3	$+105 \pm 2^\circ\text{C}$ (Thermostat No.2)	30 min.															
4	Standard atmospheric	5 sec. or less No.2→No.1															
Moisture storage	$\Delta L/L_0 \leq \pm 5\%$  There shall be no mechanical damage.	The sample shall be left for $96 \pm 4$ hours in a temperature of $40 \pm 2^\circ\text{C}$ 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.															
Test conditions :																	
The sample shall be reflow soldered onto the printed circuit board in every test.																	



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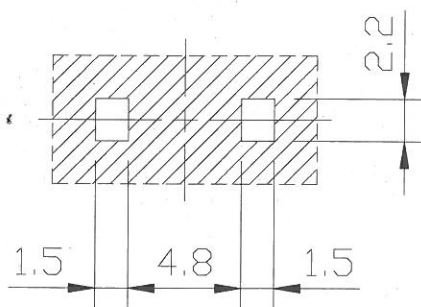

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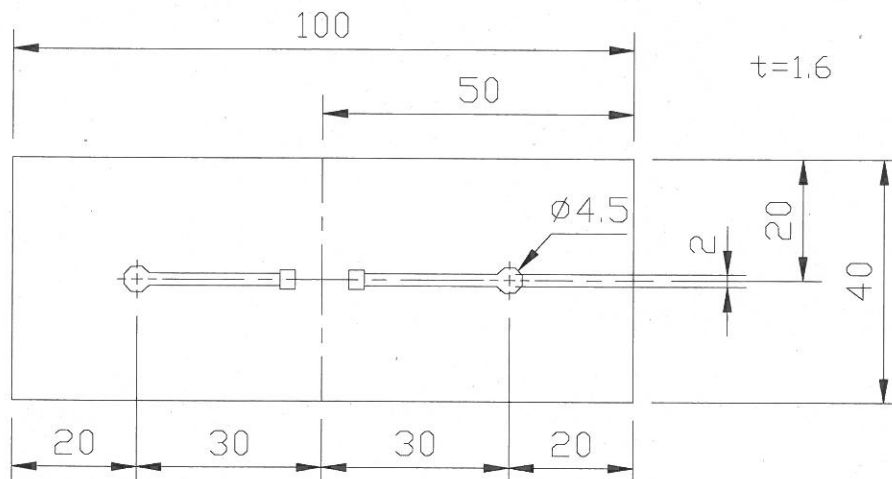
## (6) LAND DIMENSION (Ref.)

PCB: GLASS EPOXY  $t=1.6\text{mm}$ 

### (6)-1 LAND PATTERN DIMENSIONS (STANDARD PATTERN)

Solder resist Copper foil  
(0.035mm) screen:  $150\mu\text{m}$  to  $200\mu\text{m}$ 

### (6)-2 SUBSTRATE BENDING TEST BENDING TEST BOARD



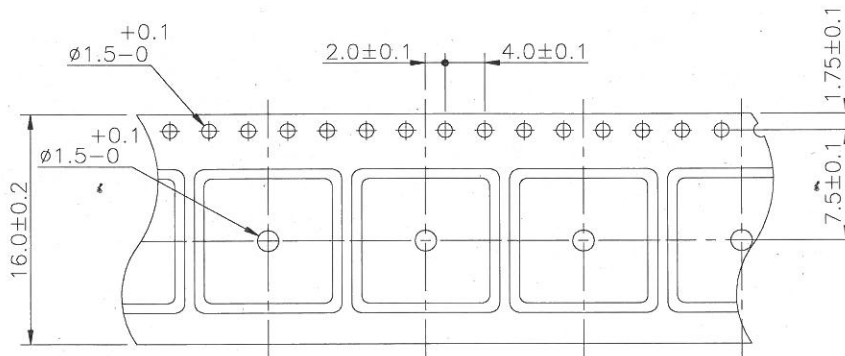
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**(7) PACKAGING**

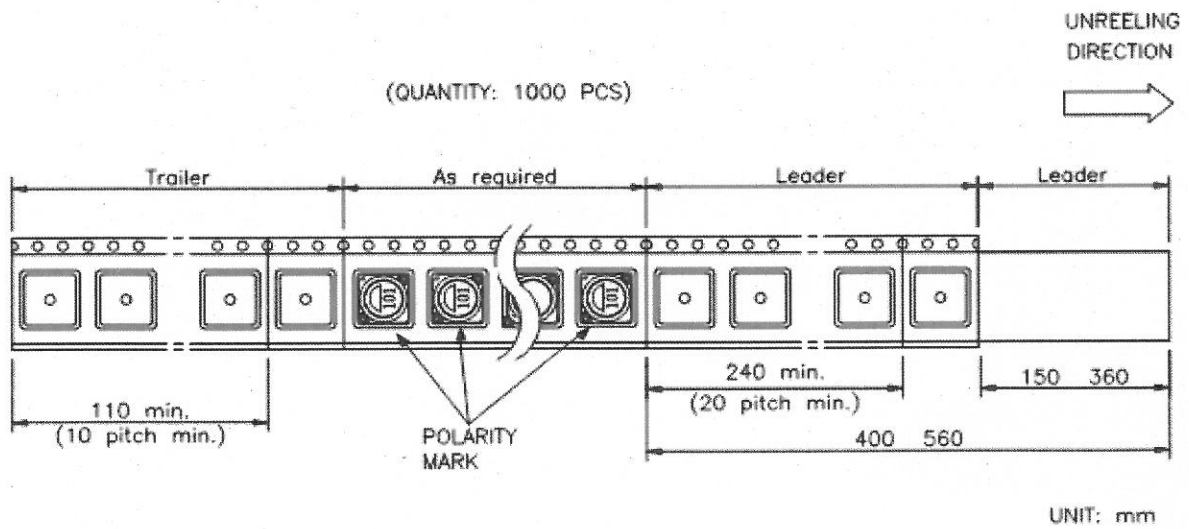
(PACKAGING FORMAT: EIAJ-RC-1009B)

**(7)-1 CARRIER TAPE DIMENSIONS**



CUMULATIVE  
20 PITCH 80±0.15

**(7)-2 TAPING DIMENSIONS**



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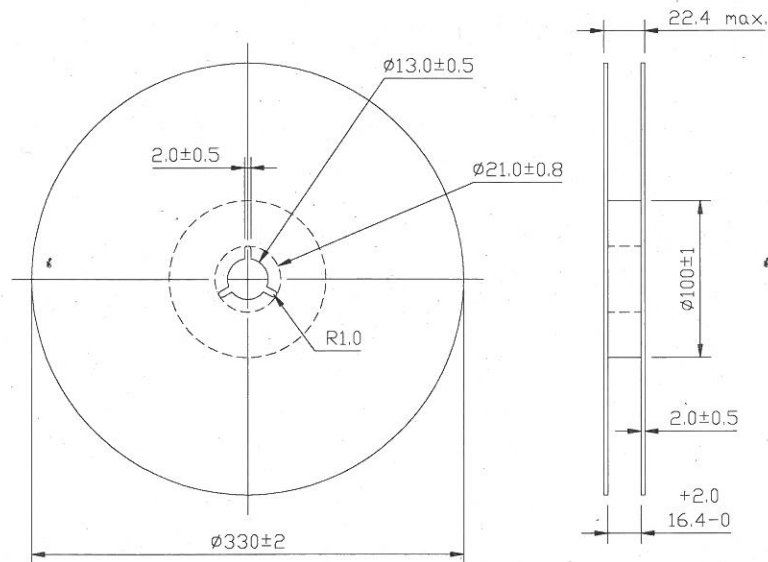
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CUSTOMER PT/NO:

## (7)-3 REEL DIMENSIONS

(REEL DIMENSIONS: EIAJ-RC-1009B)



## (7)-4 QUANTITY

1000pcs/Reel

## (7)-5 OUTER BOX

5 Reel/Box

Box size : 350×350×130

## (7)-6 MARKING

The following items shall be marked each unit pack.

- |  |                                    |
|--|------------------------------------|
| <input type="checkbox"/> Customer            | <input type="checkbox"/> Insp. no. |
| <input type="checkbox"/> Customer pt/no.     | <input type="checkbox"/> Date      |
| <input type="checkbox"/> L( $\mu$ H ) & Tol. | <input type="checkbox"/> Lot no.   |
| <input type="checkbox"/> TDK Item no.        | <input type="checkbox"/> Quantity  |
| <input type="checkbox"/> TDK pt/no.          |                                    |

(7)-7 The products are packaged so that no damage will be sustained.