

TDK XIAMEN CO., LTD.
321~339 TONGJI SOUTH ROAD
JIMEI, XIAMEN, CHINA
TEL:0592-6150333-153
FAX:0592-6150320

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: NAME(PRINT): TITLE:	DATE:	<u> </u>

COIL MFG. DEPARTMENT

FACTORY:

TDK XIAMEN CO., LTD. 321~339 TONGJI SOUTH ROAD JIMEI, XIAMEN, CHINA

TEL: 0592-6150333-153 FAX: 0592-6151982

ESTABLISH AND DISUSE RECORD OF SPECIFICATION

TDK ITEM	SLF704	40T-1R0M100-T3PF	ODECITICATION NO	VOL	000.400	
CUSTOMER ITEM			SPECIFICATION NO. XCA-		-02049C	
EDITION	DATE	ESTA. AND DISU. CONTENT	ESTA. AND DISU. RE	EASON	SPARE	
A	2010. 02. 24	NEW PRODUCT			/	
В	2011. 07. 07	Electric Characteristic changed:Making a condition in the 100kHz/0.1V and 500kHz/0.1V of the Electric Characteristic	Customer Reque	est		
C	2012. 06. 16	change the direction of tape	Customer Reque	est		
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PRODUCT SPECI	FICATION	CUSTOMER: MESSRS.	
TDK PT/NO:	SPEC. NO.	CUSTOMER PT/NO:	
SLF7040T-1R0M100-T3PF	XCA-02049C		

I . SCOPE:

This specification applies to the high current type SMD inductors for SLF7040T- $\bigcirc\bigcirc\bigcirc\bigcirc\triangle\triangle\triangle$ -T3PF

 Π . INDEX:

LISTED ITEM		ATTACHEMENT & TABLES	PAGE
1. SHAPES AND DIMENSIONS	-15	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	9	Please see (7)	8/9 , 9/9

8. TANDARD TEST CONDITIONS

Unless otherwise specified, test condition should be Temp. = $20\pm15^{\circ}$ C, Humidity= $35\sim85\%$

But if needed, then test condition should be Temp. $=20\pm2^{\circ}\text{C}$,

Humidity= $65\pm5\%$

III. MANUFACTURING LOCATION

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

APPROVED BY

CONFIRMED BY

Ni Niangton

CHECKED BY

MADE BY

I'm Tudhang

m/m

m/m

m/m

PRODUCT SPECIFICATION

CUSTOMER: MESSRS.

TDK PT/NO:

SPEC. NO.

CUSTOMER PT/NO:

A: 7.0 ± 0.2

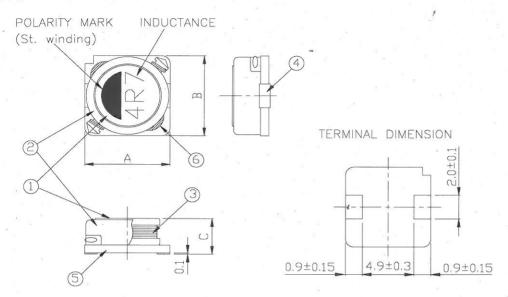
B: 7.0 ± 0.2

C: 4.0 ± 0.2

SLF7040T-1R0M100-T3PF

XCA-02049C

(1) SHAPES AND DIMENSIONS



(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°C Max.
- (3)-2 Ambient temperature +65°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

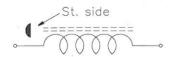
PRODUCT SPECIFICATION TDK PT/NO: SPEC. NO. CUSTOMER PT/NO: SLF7040T-1R0M100-T3PF XCA-02049C CUSTOMER: MESSRS.

TARLE.

	INDUCTANCE at 100kHz/0.1V			INDUCTANCE at 100kHz/0.1V INDUCTANCE at 500kHz/0.1V						
			RATED DO	CURRENT			RATED DO	CURRENT		
TDK PT/NO.	L _{0A} (μH)	L _{10A} (μH)	Irat	(A)	L _{0A} (μH)	L _{10A} (μH)	Irat	(A)	RESISTANCE	MARKING
SLF7040T-	±20%	typ.	$IDC_1(A)$	IDC ₂ (A)	±23%	typ.	$IDC_1(A)$	IDC ₂ (A)	$RDC(m\Omega)$	
1ROM100-T3PF	1.0	0.8	10.0	10.0	1.0	0.8	10.0	10.0	5.39±20%	1R0
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		(A. 2)							38	
									34	

% IDC1: BASED ON INDUCTANCE CHANGE (\triangle L/Lo: \le -20%) IDC2: BASED ON TEMPERATURE RISE (\triangle T: 40°C TYP.) RATED DC CURRENT: THE LESS VALUE WHICH IS IDC1 OR IDC2

(4) ELECTRICAL SCHEMATICS



PRODUCT SPECI	FICATION	CUSTOMER: MESSRS.	
TDK PT/NO:	SPEC. NO.	CUSTOMER PT/NO:	
SLF7040T-1R0M100-T3PF	XCA-02049C		

(5) RELIABILITY TEST METHOD

TEST	ITEM	SPECIFICATION	TEST DETAILS
Substrate	bending	△L/Lo≦±5%	The sample shall be soldered onto the printed
			circuit board in figure 1 and a load applied
		There shall be	unitil the figure in the arrow direction is made
	no mechanical	approximately 3mm.	
		damage or elec-	(keep time 3~5 seconds, speed: 0.5mm/sec)
		trical damege.	PCB dimension shall the page 7/9
			F(Pressurization)
		8	
			R5 45±2 45±2
			10 20
		s s	
		g *	PRESSURE ROD R340
		1 2 2	
			figure-1
/ibration		△L/Lo≦±5%	The sample shall be soldered onto the printed
			circuit board and when a vibration having an
		There shall be	amplitude of 1.5mm and a frequency of from
		no mechanical	10 to 55Hz/1 minute repeated should be applied
		damage.	
		* * * * * * * * * * * * * * * * * * * *	(A total of 6 hours)
Solderabil	itv	New solder	Flux (rosin, isopropyl alcohol{JIS-K-1522})
M22)		W	shall be coated over the whole of the sample
,		More than 90%	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 couered with new solder smoothly when
			the sample is taken out of the solder bath.

PRODUCT SPECIFICATION CUSTOMER: MESSRS. TDK PT/NO: SPEC. NO. CUSTOMER PT/NO: SLF7040T-1R0M100-T3PF XCA-02049C

MECHANICAL.

TEST ITEM	SPECIFICATION	TEST DETAILS
Resistance to	There shall be	Temperature profile of reflow soldering
Soldering heat	no damage or	
(reflow soldering)	problems.	soldering (Peak temperature 260±3°C,10secMAX)
	s .	Pre-heating 30 sec min 30 sec min Slow cooling (Stored at room temperature)
		Pre-heating Slow cooling
	8	(Stored at room temperature)
•		S 50 -/ ()
		1 to 2 min 10 sec. 2 min. or more
		The specimen shall be passed through the reflow
		oven with the condition shown in the above pro-
		file for 1 time.
	21 2 U A ER	The specimen shall be stored at standard atmosph-
		eric conditions for 1 hour, after which the measu-
	g**	rement shall be made.

ELECTRICAL

TEST ITEM		SPECIFICATION
Insulation	There shall be	DC 100V voltage shall be applied across this sam-
resistance	no other	ple of top surface and the terminal.
	damage or	The insulation resistance shall be more than
80 60 / 61 N 60	problems.	$1 \times 10^8 \Omega$.
Dielectric	There shall be	AC 100V voltage shall be applied for 1 minute
withstand	no other	acrosset the top surface and the terminal of this
voltage	damage or	sample.(current:1mA)
	problems.	
Temperature	△L/L20°C ≤±15%	The test shall be performed after the sample has
characteristics	0~2000 ppm/°C	stabilized in an ambient temperature of -40 to
		$+85^{\circ}\mathrm{C}$,and the value calculated based on the value
<i>*</i>		applicable in a normal temperature and narmal
		humidity shall be △L/L20°c≤±15%.
		Measurement Equipments:
. 1		HP IMPEDANCE ANALYZER (at 10 KHz)

PRODUCT SPECIFICATION

CUSTOMER: MESSRS.

TDK PT/NO:

SPEC. NO.

SLF7040T-1R0M100-T3PF

XCA-02049C

CUSTOMER PT/NO:

ENVIROMENT CHARACTERISTICS

ENVIROMENT CH	T				
TEST ITEM	SPECIFICATION	TEST DETAILS			
High temperature	△L/Lo≦±5%	The sample shall be left for 96±4 hours in an			
storage		atmospere with a temperature of 105±2°C and a nor-			
	There shall be	mal humidity. Upon completion of the measurement			
	no mechanical	shall be made after the sample has been left in			
	damage.	a normal temperature and normal humidity for 1			
5 S		hour.			
Low temperature	△L/Lo≦±5%	The sample shall be left for 96±4 hours in an			
storage	# 20 H	atmosphere with a temperature of $-40\pm3^{\circ}$ C. Upon			
	There shall be	completion of the test, the measurement shall be			
	no mechanical	made after the sample has been left in a normal			
	damage.	temperature and normal humidity for 1 hour.			
Change of	△L/Lo≦±5%	The sample shall be subject to 5 continuos cycles,			
temperature		such as shown in the table 2 below and then it			
	There shall be	shall be subjected to standard stmospheric condi-			
	no other dama-	tions for 1 hour, after which measurement shall			
	ge of problems	be made.			
		table 2			
		Temperature Duration			
	1	1 −40±3°C 30 min.			
	n	(Themostat No.1)			
	1 n = =	2 Standard 5 sec. or less			
	# 10 1 m 20 mm	atmospheric No.1→No.2			
E and		3 +105±2°C 30 min			
		(Themostat No.2) 30 min.			
		4 Standard 5 sec. or less			
	1 2	atmospheric No.2→No.1			
Mailantena	\ I /I - / - Em	The comple shall be 1-ft for OCIA have			
Moisuture storage	$\triangle L/Lo \leq \pm 5\%$	The sample shall be left for 96±4 hours in a tem-			
	(T) 1 1 1 1	perature of $40\pm2^{\circ}$ C and a humidity(RH) of $90\sim95\%$.			
	There shall be	Upon completion of the test, the measurement shall			
	no mechanical	be made after the sample has been left in a normal			
	damage.	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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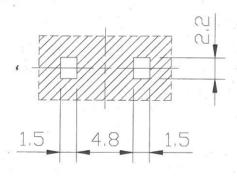
SLF7040T-1R0M100-T3PF

XCA-02049C

(6) LAND DIMENSION (Ref.)

PCB: GLASS EPOXY t = 1.6mm

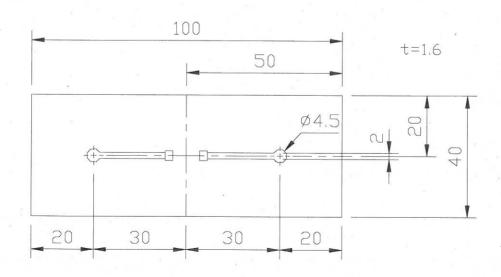
(6)-1 LAND PATTERN DIMENSIONS (STANDARD PATTERN)



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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SPEC. NO.

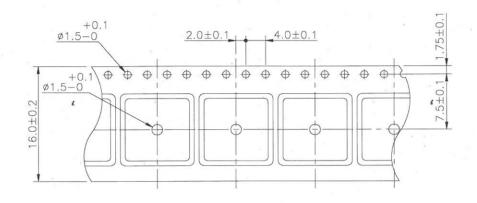
CUSTOMER PT/NO: XCA-02049C

SLF7040T-1R0M100-T3PF

(7) PACKAGING

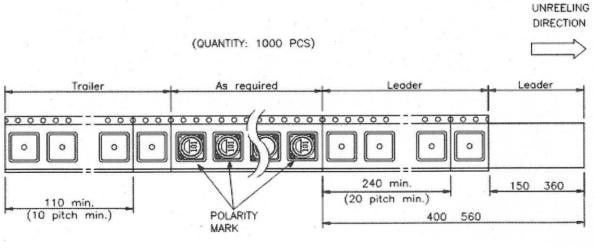
(PACKAGING FORMAT: EIAJ-RC-1009B)

(7)-1 CARRIER TAPE DIMENSIONS



CUMULATIVE 20 PITCH 80±0.15

(7)-2 TAPING DIMENSIONS

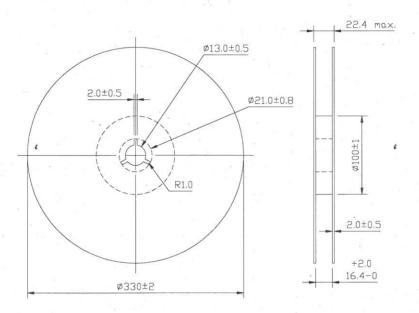


UNIT: mm

PRODUCT SPECIFICATION CUSTOMER: MESSRS. TDK PT/NO: SPEC. NO. CUSTOMER PT/NO: SLF7040T-1R0M100-T3PF XCA-02049C

(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.

Customer

- Insp. no.
- Customer pt/no.
- Date
- \square L(μ H) & To1.
- ☐ Lot no.
- ☐ TDK Item no.
- Quantity

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