



產品承認書/規格書

CUSTOMER.

DATE: 2009/09/22

MESSRS. 佳得股份有限公司

SUBMIT NO. WH09092202

Product Specification/Approval Sheet

PART TYPE: TDK POWER INDUCTORS

CUST. P/N:

TDK P/N: SLF12575T-220M4R0-PF

本承認書內容若貴公司確認無誤,懇請於下方承認欄內簽章寄回

Please confirm your acceptance of this approval sheet by return fax.

台北市內湖區 114 洲子街 102 號 3F
3F., NO.102, CHOW TZE STREET.
NEI-HU WARD 114, TAIPEI,
TAIWAN, R.O.C.
TEL NO. (02)2657-5178
FAX NO. (02)2657-5173

單位主管	業務擔當
	業務部 2009.09.22 黃英全

文浩實業 承認書 INDEX

[illegible]



TDK TAIWAN CORPORATION

6TH FL., 260 TUN HWA N. RD.,
TAIPEI, TAIWAN, REPUBLIC OF CHINA

TEL: 02-27125090

FAX: 02-27123090

or



TDK XIAMEN CO., LTD.

321 TONGJI SOUTH ROAD,
JIMEI DISTRICT, XIAMEN,
FUJIAN, CHINA (361021)

TEL: 0592-6150338

FAX: 0592-6150320

PRODUCT SPECIFICATION

WIN-HOUSE CO., LTD.

SPEC. NO : CA14294A

DATE: SEP. 12, 2005

CUSTOMER'S PRODUCT NAME:

TDK PRODUCT NAME:

SLF12575T-TYPE-PF

THIS SPECIFICATION IS:

- ☐ FULLY ACCEPTED
☐ DENIED
☐ ACCEPTED UNDER THE FOLLOWING CONDITIONS

SIGNATURE:

DATE:

NAME(PRINT):

TITLE:

ELECTRONIC COMPONENTS DIV.
COIL & TRANSFORMER MFG. DEPT.

ELECTRONIC COMPONENTS DIV.
COIL & TRANSFORMER MFG. DEPT.

FACTORY:

159 SEC. 1 CHUNG SHAN N. RD.,
TATUNG LI, YANG MEI, TAoyUAN,
TAIWAN, REPUBLIC OF CHINA
TEL: 03-4784111
FAX: 03-4757322

or

FACTORY:

321 TONGJI SOUTH ROAD,
JIMEI DISTRICT, XIAMEN,
FUJIAN, CHINA (361021)
TEL: 0592-6150338
FAX: 0592-6150322

PRODUCT SPECIFICATION

TDK PT/NO:

SLF12575T-TYPE-PF

SPEC. NO.

CA14294A

I . SCOPE :

This specification applies to the high current type SMD inductors for
SLF12575T-○○○□△△△-PF

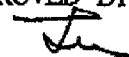
II . INDEX :

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℃, Humidity=35~85% But if needed, then test condition should be Temp.=20±2℃, Humidity=65±5%		

III . MANUFACTURING LOCATION

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

APPROVED BY



Feb. 17, 2003

CHECKED BY



Feb. 14, 2003

MADE BY



Feb. 14, 2003

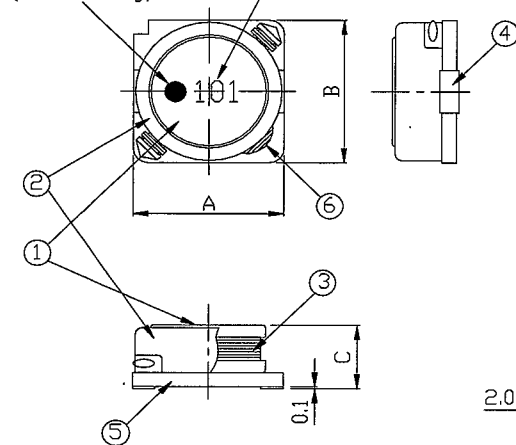
PRODUCT SPECIFICATION

TDK PT/NO:
SLF12575T-TYPE-PF

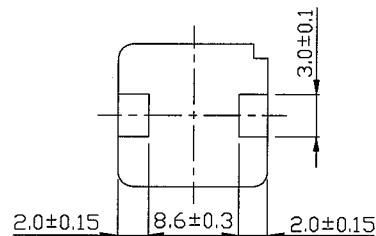
SPEC. NO.
CA14294A

(1) SHAPES AND DIMENSIONS

POLARITY MARK
(St. winding)



TERMINAL DIMENSION



A : 12.5 ± 0.2 m/m
B : 12.5 ± 0.2 m/m
C : 7.5 ± 0.34 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 $-20^{\circ}\text{C} \sim +105^{\circ}\text{C}$
(Including self temp. rise)

(3)-4 Storage temperature range $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$

MATERIALS

NO.	ITEM	DESCRIPTION & TYPE	UL NO.	MANUFACTURER
1	DR CORE	FERRITE		TDK CORP.
2	RING CORE	FERRITE		TDK CORP.
3	WIRE	POLYURETHANE ENAMELLED COPPER WIRE	E174837 E169536 E164823 E189722	JUNG SHING WIRE CO., LTD. HUI HONG WRIE CO., LTD. FLOODLIT ENTERPRISE CO., LTD. SALOM ELECTRIC (XIAMEN) CO., LTD.
4	TERMINAL	SOLDER PLATED		SAKURAMOTO
5	BASE	PHENOLIC RESIN PM-9820	E41429	SUMITOMO BAKELITE CO., LTD.
6	ADHESIVE	EPOXY RESIN (BLUE or GRAY)		SHAW HUOW ENTERPRISE CO., LTD. SHIKOKU

PRODUCT SPECIFICATION

TDK PT/NO:
SLF12575T-TYPE-PF

SPEC. NO.
CA14294A

TABLE

TDK PT/NO. SLF12575T-	INDUCTANCE L(μ H)	TEST FREQ. OF L	RESISTANCE RDC(Ω) Max	RATED DC CURRENT Irat (A)		MARKING
				IDC1(A)	IDC2(A)	
1R2M8R2-PF	1.2 $\pm$ 30%	1 KHz, 1V	8.3m	13	8.2	●1R2
2R7N7R0-PF	2.7 $\pm$ 30%	"	11.3m	10	7.0	●2R7
3R9N6R7-PF	3.9 $\pm$ 30%	"	12.5m	9.0	6.7	●3R9
4R7N6R5-PF	4.7 $\pm$ 30%	"	13.2m	8.4	6.5	●4R7
5R6M6R3-PF	5.6 $\pm$ 20%	"	13.9m	7.8	6.3	●5R6
5R6N6R3-PF	5.6 $\pm$ 20%	"	13.9m	7.8	6.3	●5R6
6R8M5R9-PF	6.8 $\pm$ 20%	"	15.7m	7.2	5.9	●6R8
6R8N5R9-PF	6.8 $\pm$ 30%	"	15.7m	7.2	5.9	●6R8
100M5R4-PF	10 $\pm$ 20%	"	18.7m	5.5	5.4	●100
120M5R1-PF	12 $\pm$ 20%	"	20.4m	5.1	5.2	●120
150M4R7-PF	15 $\pm$ 20%	"	22.1m	4.7	5.0	●150
220M4R0-PF	22 $\pm$ 20%	"	31.6m	4.0	4.0	●220
330M3R2-PF	33 $\pm$ 20%	"	47.4m	3.2	3.4	●330
470M2R7-PF	47 $\pm$ 20%	"	63.4m	2.7	3.0	●470
680M2R0-PF	68 $\pm$ 20%	"	93.4m	2.0	2.4	●680
101M1R9-PF	100 $\pm$ 20%	"	0.15	1.9	1.9	●101
151M1R5-PF	150 $\pm$ 20%	"	0.21	1.5	1.6	●151
221M1R3-PF	220 $\pm$ 20%	"	0.31	1.3	1.3	●221
331M1R0-PF	330 $\pm$ 20%	"	0.41	1.0	1.1	●331
471MR80-PF	470 $\pm$ 20%	"	0.72	0.8	0.8	●471
681MR70-PF	680 $\pm$ 20%	"	1.02	0.7	0.7	●681

※ IDC1 : BASED ON INDUCTANCE CHANGE (Δ L/L₀ : $\leq -15\%$)

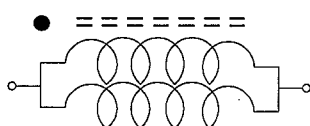
IDC2 : BASED ON TEMPERATURE RISE (Δ T : 40°C TYP.)

RATED DC CURRENT : THE LESS VALUE WHICH IS IDC1 OR IDC2

(4) ELECTRICAL SCHEMATICS

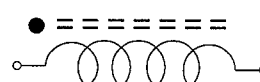
(4)-1 1.2 μ H $\sim$ 68 μ H

St. side



(4)-2 100 μ H $\sim$ 220 μ H

St. side



PRODUCT SPECIFICATION

TDK PT/NO:

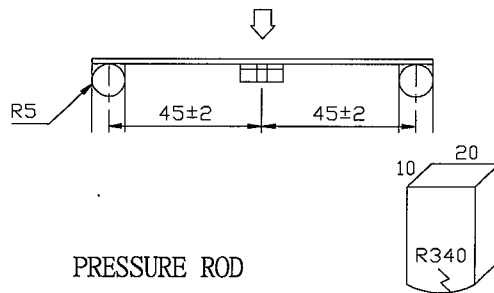
SLF12575T-TYPE-PF

SPEC. NO.

CA14294A

(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 30 seconds) PCB dimension shall the page 7/9 F(Pressurization)  figure-1
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 1.52mm 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		Flux (rosin (JIS-K-5902) , 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 1.0mm below for 3±1 seconds fully in molten solder H63A (JIS-Z-3282) with a temperature of 230±5°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.

PRODUCT SPECIFICATION

TDK PT/NO:

SLF12575T-TYPE-PF

SPEC. NO.

CA14294A

MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
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.

ELECTRICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
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
Temperature characteristics	$\Delta L/L_{20^\circ\text{C}} \leq \pm 10\%$ $0 \sim 2000 \text{ ppm}/^\circ\text{C}$	The test shall be performed after the sample has stabilized in an ambient temperature of -20 to $+85^\circ\text{C}$, and the value calculated based on the value applicable in a normal temperature and normal humidity shall be $\Delta L/L_{20^\circ\text{C}} \leq \pm 10\%$. Measurement Equipments : HP IMPEDANCE ANALYZER (at 10 KHz)

PRODUCT SPECIFICATION

TDK PT/NO:
SLF12575T-TYPE-PF

SPEC. NO.
CA14294A

ENVIROMENT CHARACTERISTICS

TEST ITEM	SPECIFICATION	TEST DETAILS															
High temperature storage	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be left for 96 ± 4 hours in an atmosphere with a temperature of $85 \pm 2^\circ\text{C}$ 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	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be left for 96 ± 4 hours in an atmosphere with a temperature of $-25 \pm 3^\circ\text{C}$. 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	$\Delta L/Lo \leq \pm 5\%$ 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. table 2 <table border="1"> <thead> <tr> <th></th><th>Temperature</th><th>Duration</th></tr> </thead> <tbody> <tr> <td>1</td><td>$-25 \pm 3^\circ\text{C}$ (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>$85 \pm 2^\circ\text{C}$ (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>		Temperature	Duration	1	$-25 \pm 3^\circ\text{C}$ (Thermostat No.1)	30 min.	2	Standard atmospheric	5 sec. or less No.1→No.2	3	$85 \pm 2^\circ\text{C}$ (Thermostat No.2)	30 min.	4	Standard atmospheric	5 sec. or less No.2→No.1
	Temperature	Duration															
1	$-25 \pm 3^\circ\text{C}$ (Thermostat No.1)	30 min.															
2	Standard atmospheric	5 sec. or less No.1→No.2															
3	$85 \pm 2^\circ\text{C}$ (Thermostat No.2)	30 min.															
4	Standard atmospheric	5 sec. or less No.2→No.1															
Moisuture storage	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be left for 96 ± 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.																	

PRODUCT SPECIFICATION

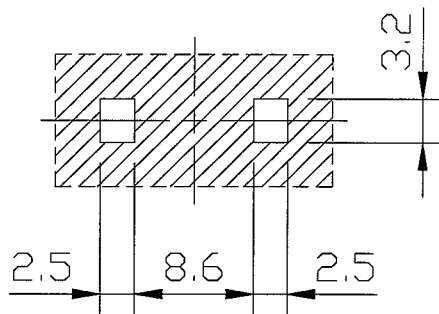
TDK PT/NO:
SLF12575T-TYPE-PF

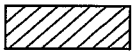
SPEC. NO.
CA14294A

(6) LAND DIMENSION (Ref.)

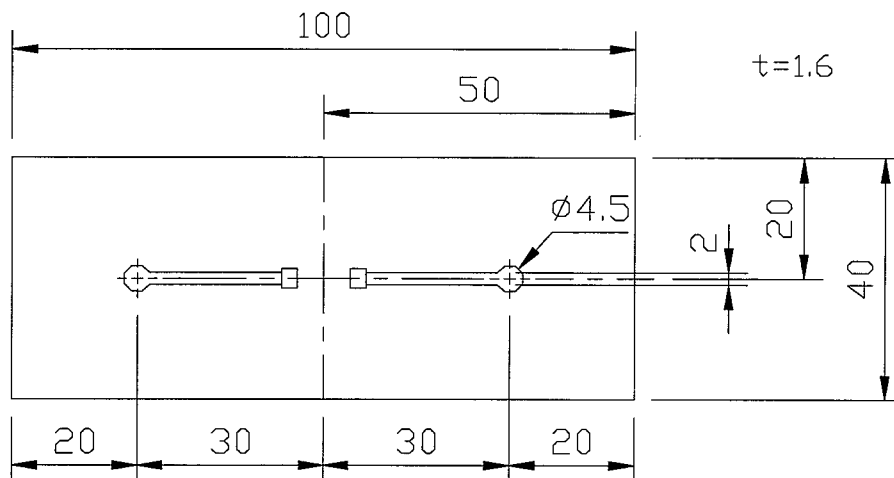
PCB: GLASS EPOXY $t=1.6\text{mm}$

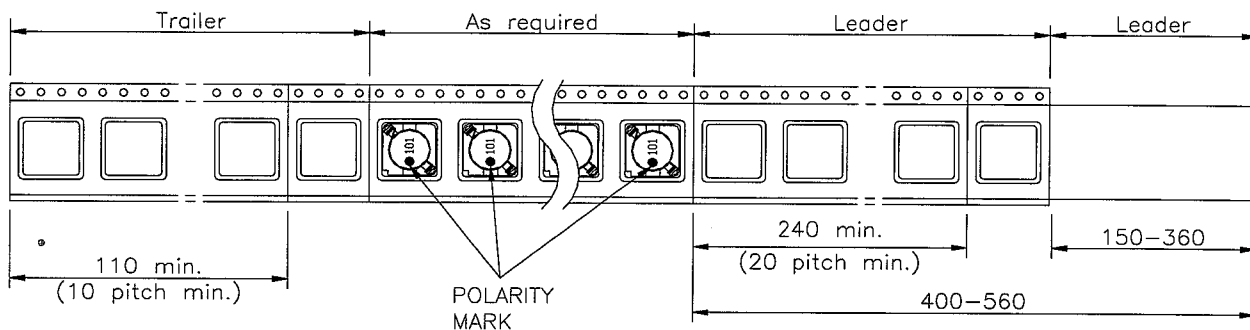
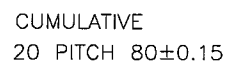
(6)-1 LAND PATTERN DIMENSIONS (STANDARD PATTERN)



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

(6)-2 SUBSTRATE BENDING TEST BENDING TEST BOARD





UNIT: m/m

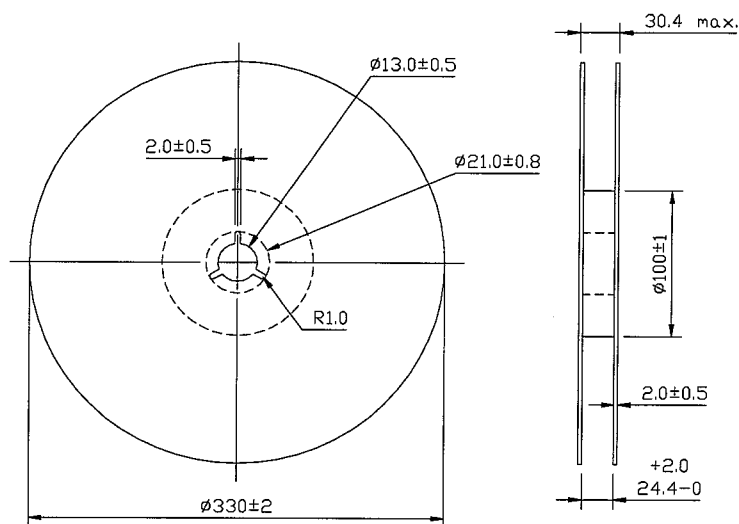
PRODUCT SPECIFICATION

TDK PT/NO:
SLF12575T-TYPE-PF

SPEC. NO.
CA14294A

(7)-3 REEL DIMENSIONS

(REEL DIMENSIONS: EIAJ-RC-1009B)



(7)-4 QUANTITY

500pcs/Reel

(7)-5 OUTER BOX

4 Reel/Box

Box size : $350 \times 350 \times 130$

(7)-6 MARKING

The following items shall be marked each unit pack.

Customer

Insp. no.

Customer pt/no.

Date

L(μ H) & Tol.

Lot no.

TDK Item no.

Quantity

TDK pt/no.

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