SPECIFICATIONS

Customer	
Product Name	**Wire Wound Chip Inductors**
Sunlord Part Number	**SDWL-FD Series**
Customer Part Number	

[☒New Released, ☐Revised] **SPEC No.: SDWL04150000**

Rev.	Effective Date	Changed Contents	Change Reasons	Approved By
01	/	New release	/	Weibei Zhao

【This SPEC is total 1 pages including specifications and appendix.】

【RoHS Compliant Parts 】

Approved By	Checked By	Issued By

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【For Customer approval Only】 Date:_____

Qualification Status: ☐ Full ☐ Restricted ☐ Rejected

Approved By	Verified By	Re-checked By	Checked By

Comments:

_____

Caution：

All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications.

1. Aircraft equipment
2. Aerospace equipment
3. Undersea equipment
4. nuclear control equipment
5. military equipment
6. Power plant equipment
7. Medical equipment
8. Transportation equipment (automobiles, trains, ships,etc.)
9. Traffic signal equipment
10. Disaster prevention / crime prevention equipment
11. Data-processing equipment
12. Applications of similar complexity or with reliability requirements comparable to the applications listed in the above

1. Scope

This specification applies to the SDWL-FD Series of wire wound chip inductor.

2. Product Description and Identification (Part Number)

1) Description

Wire Wound Chip Inductor, SDWLXXXXFD, XXXμH±X% @XXXMHz, XXXΩ, XXXmA

2) Product Identification (Part Number)

SDWL	XXXX	FD	XXX	□	T	F
①	②	③	④	⑤	⑥	⑦

① Type	
SDWL	Wire wound chip inductor

② External Dimensions [mm]
2520~3225~4532

③ Material Code
FD

④ Nominal Inductance	
Example	Nominal Value
1R0	1.0μH
100	10μH
101	100μH

⑤ Inductance Tolerance	
K	±10%
M	±20%

⑦ HSF Products
Hazardous Substance Free Products

⑥ Packing	
T	Tape Carrier Package

3. Electrical Characteristics

Please refer to Appendix A

1) Operating and storage temperature range (individual chip without packing): **-40℃ to +105℃**

2) Storage temperature range (packaging conditions): -10℃~+40℃ and RH 70% (Max.)

4. Shape and Dimensions

1) Chip body:

Dimensions and recommended PCB pattern for reflow soldering: See **Fig.4-1**, **Fig.4-2** and **Table 4-1**.

2) Dimensions: See **Fig.4-1**

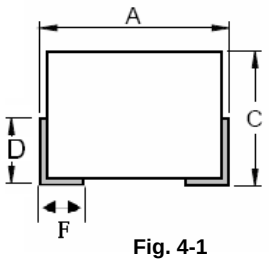


Fig. 4-1

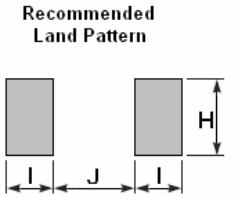
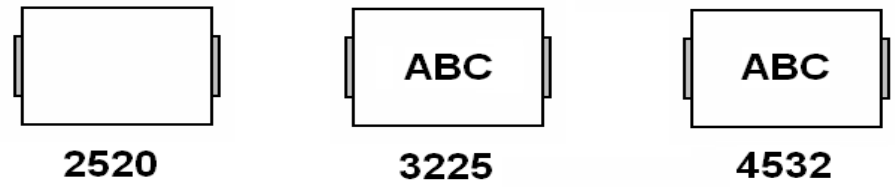


Fig. 4-2

Marking



ABC: Nominal Inductance **Marking mode: Laser etching**

[Table 4-1]

Unit: mm

Series	A	B	C	D typ	E	F	I typ.	J typ.	H typ.
SDWL2520FD	**2.5±0.2**	**2.0±0.2**	**1.8±0.2**	**0.5**	**1.4±0.1**	**0.4±0.1**	**1.0**	**1.5**	**1.5**
SDWL3225FD	**3.2±0.4**	**2.5±0.2**	**2.2±0.2**	**0.5**	**1.9±0.1**	**0.4±0.1**	**1.2**	**2.0**	**2.0**
SDWL4532FD	**4.5±0.4**	**3.2±0.2**	**3.2±0.2**	**1.7**	**1.2±0.2**	**1.0±0.3**	**1.5**	**2.2**	**1.6**

5. Electrical Characteristics

SDWL2520FD TYPE

Part Number	Inductance	*Typ*. Quality Factor	L/Q Test Condition	Min. Self-resonant Frequency	DC Resistance （±30%）	Max. Rated Current
Units	μH	-	MHZ	MHZ	Ω	mA
Symbol	L	Q	Freq.	S.R.F	DCR	Ir
SDWL2520FD1R0MTF	1.0±20%	20	7.96	200	0.34	475
SDWL2520FD1R5MTF	1.5±20%	20	7.96	165	0.42	435
SDWL2520FD2R2MTF	2.2±20%	20	7.96	95	0.50	390
SDWL2520FD3R3MTF	3.3±20%	20	7.96	55	0.65	340
SDWL2520FD4R7MTF	4.7±20%	20	7.96	43	0.80	285
SDWL2520FD6R8MTF	6.8±20%	20	7.96	39	1.00	275
SDWL2520FD100KTF	10±10%	30	2.52	32	1.69	210
SDWL2520FD150KTF	15±10%	30	2.52	21	2.20	175
SDWL2520FD220KTF	22±10%	30	2.52	18	2.80	160
SDWL2520FD330KTF	33±10%	30	2.52	16	4.20	120

SDWL3225FD TYPE

Part Number	Inductance	*Typ*. Quality Factor	L/Q Test Condition	Min. Self-resonant Frequency	DC Resistance （±30%）	Max. Rated Current
Units	μH	-	MHZ	MHZ	Ω	mA
Symbol	L	Q	Freq.	S.R.F	DCR	Ir
SDWL3225FD1R0MTF	1.0±20%	10	7.96	100	0.06	1000
SDWL3225FD1R5MTF	1.5±20%	10	7.96	80	0.11	830
SDWL3225FD2R2MTF	2.2±20%	10	7.96	68	0.13	770
SDWL3225FD3R3MTF	3.3±20%	10	7.96	54	0.16	690
SDWL3225FD4R7MTF	4.7±20%	15	7.96	46	0.20	620
SDWL3225FD6R8MTF	6.8±20%	15	7.96	38	0.27	530
SDWL3225FD100KTF	10±10%	15	2.52	30	0.36	450
SDWL3225FD150KTF	15±10%	15	2.52	26	0.56	370
SDWL3225FD220KTF	22±10%	15	2.52	21	0.77	300
SDWL3225FD330KTF	33±10%	15	2.52	17	1.10	240
SDWL3225FD470KTF	47±10%	15	2.52	14	1.64	180
SDWL3225FD680KTF	68±10%	15	2.52	12	2.80	140
SDWL3225FD101KTF	100±10%	15	0.796	10	3.70	120
SDWL3225FD151KTF	150±10%	20	0.796	8	6.10	100
SDWL3225FD221KTF	220±10%	20	0.796	7	8.40	80
SDWL3225FD331KTF	330±10%	20	0.796	6	12.3	70

SDWL4532FD TYPE

Part Number	Inductance	Min. Quality Factor	L/Q Test Condition	Min. Self-resonant Frequency	Max. DC Resistance	Max. Rated Current
Units	μH	-	MHZ	MHZ	Ω	mA
Symbol	L	Q	Freq.	S.R.F	DCR	Ir
SDWL4532FD1R0KTF	1.0±10%	10	7.96	180	0.11	1050
SDWL4532FD1R2KTF	1.2±10%	10	7.96	160	0.12	1000
SDWL4532FD1R5KTF	1.5±10%	10	7.96	130	0.15	950
SDWL4532FD1R8KTF	1.8±10%	10	7.96	100	0.16	900
SDWL4532FD2R2KTF	2.2±10%	10	7.96	80	0.18	850
SDWL4532FD2R7KTF	2.7±10%	10	7.96	60	0.20	800
SDWL4532FD3R3KTF	3.3±10%	10	7.96	45	0.22	750
SDWL4532FD3R9KTF	3.9±10%	10	7.96	40	0.24	700
SDWL4532FD4R7KTF	4.7±10%	10	7.96	35	0.27	650
SDWL4532FD5R6KTF	5.6±10%	10	7.96	30	0.30	650
SDWL4532FD6R8KTF	6.8±10%	10	7.96	28	0.35	600
SDWL4532FD8R2KTF	8.2±10%	10	7.96	25	0.40	600
SDWL4532FD100KTF	10±10%	10	2.52	22	0.50	550
SDWL4532FD120KTF	12±10%	10	2.52	21	0.60	500
SDWL4532FD150KTF	15±10%	10	2.52	20	0.70	450

SDWL4532FD180KTF	18±10%	10	2.52	19	0.80	400
SDWL4532FD220KTF	22±10%	10	2.52	18	0.90	370
SDWL4532FD270KTF	27±10%	10	2.52	16	1.20	330
SDWL4532FD330KTF	33±10%	10	2.52	14	1.40	300
SDWL4532FD390KTF	39±10%	10	2.52	12	1.60	280
SDWL4532FD470KTF	47±10%	10	2.52	11.5	1.90	260
SDWL4532FD560KTF	56±10%	10	2.52	11	2.20	240
SDWL4532FD680KTF	68±10%	10	2.52	10	2.60	220
SDWL4532FD820KTF	82±10%	10	2.52	9	3.50	200
SDWL4532FD101KTF	100±10%	20	0.796	8	4.00	180
SDWL4532FD121KTF	120±10%	20	0.796	7.5	4.50	160
SDWL4532FD151KTF	150±10%	20	0.796	7	6.50	140
SDWL4532FD181KTF	180±10%	20	0.796	6.5	7.50	120
SDWL4532FD221KTF	220±10%	20	0.796	5.5	9.00	120
SDWL4532FD271KTF	270±10%	20	0.796	5	11.0	100
SDWL4532FD331KTF	330±10%	20	0.796	4	13.0	90
SDWL4532FD391KTF	390±10%	20	0.796	3	14.0	85
SDWL4532FD471KTF	470±10%	20	0.796	3	16.0	75
SDWL4532FD561KTF	560±10%	20	0.796	3	18.0	70
SDWL4532FD681KTF	680±10%	20	0.796	2.5	22.8	65

6. Test and Measurement Procedures

6.1 Test Conditions

6.1.1 Unless otherwise specified, the standard atmospheric conditions for measurement/test as:

a. Ambient Temperature: 20±15℃
b. Relative Humidity: 65±20%
c. Air Pressure: 86 KPa to 106 KPa

6.1.2 If any doubt on the results, measurements/tests should be made within the following limits:

a. Ambient Temperature: 20±2℃
b. Relative Humidity: 65±5%
c. Air Pressure: 86KPa to 106 KPa

6.2 Visual Examination

a. Inspection Equipment: 10 X magnifier

6.3 Electrical Test

6.3.1 DC Resistance (DCR)

a. Refer to **Item 5**.
b. Test equipment (Analyzer): High Accuracy Milliohmmeter-HP4338B or equivalent

6.3.2 Inductance (L)

a. Refer to **Item 5**.
b. Test equipment:
High Accuracy RF Impedance /Material Analyzer-HP4284A or equivalent
Test fixture: HP16197A
Test signal: -20dBm or 50mV
c. Test frequency refers to **Item 5**.

6.3.3 Q Factor (Q)

a. Refer to **Item 5**.
b. Test equipment (Analyzer):
High Accuracy RF Impedance /Material Analyzer-HP4284A or equivalent
Test fixture: HP16197A
c. Test frequency refers to **Item 5**.

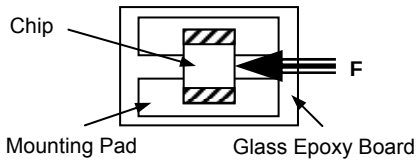
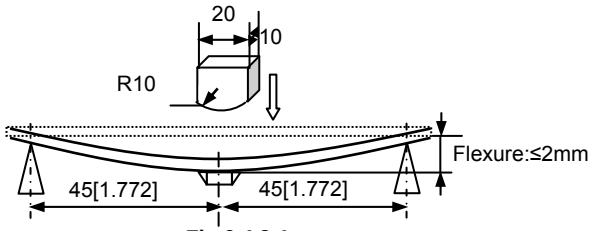
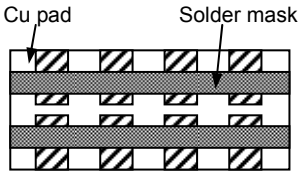
6.3.4 Self-Resonant Frequency (SRF)

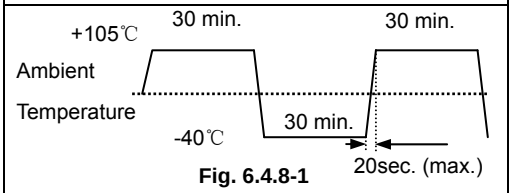
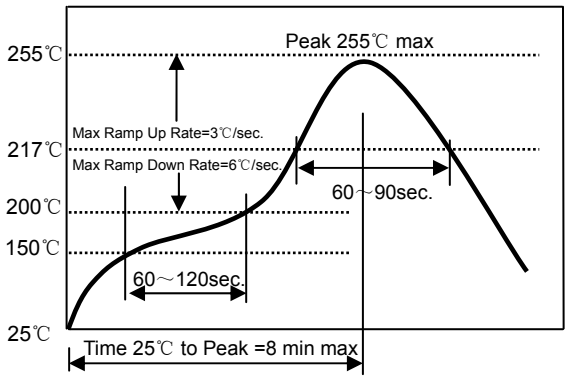
a. Refer to **Item 5**.
b. Test equipment:
High Accuracy Impedance /Material Analyzer-HP4284A or equivalent
Test fixture: HP16197A
Test signal: -20dBm or 50mV

6.3.5 Rated Current:

a. Refer to **Item 5**.
b. Definition of Rated Current (Ir): With the condition of the DC current pass, the inductance decrease by **10%** of the standard value, compare to the temperature rise by **20℃**, the smaller is Rated Current.(reference environment temperature:20℃)

6.4 Reliability Test

Items	Requirements	Test Methods and Remarks
6.4.1 Terminal Strength	No removal or split of the termination or other defects shall occur.  **Fig.6.4.1-1**	① Solder the inductor to the testing jig (glass epoxy board shown in (**Fig. 6.4.1-1**) using eutectic solder. Then apply a force in the direction of the arrow. ② 10N force. ③ Keep time: 10±1s ④ Speed:1.0mm/s
6.4.2 Resistance to Flexure	No visible mechanical damage. Unit: mm [inch]	① Solder the inductors to the test jig. Using a eutectic solder. Then apply a force in the direction shown **Fig. 6.4.2-1**. ② Flexure: 2mm ③ Pressurizing Speed: 0.5mm/sec. ④ Keep time:≥30 sec.  **Fig.6.4.2-1**
6.4.3 Vibration	① No visible mechanical damage. ② Inductance shall be within ±10% of the initial value.  Glass Epoxy Board **Fig. 6.4.3-1**	① Solder the inductor to the testing jig (glass epoxy board shown in **Fig.6.4.3-1**) and using eutectic solder. ② The inductor shall be subjected to a simple harmonic motion having total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 55 Hz. ③ The frequency range from 10 to 55 Hz and return to 10 Hz shall be traversed in approximately 1 minute. This motion shall be applied for a period of 2 hours in each 3mutually perpendicular directions (total of 6 hours)
6.4.4 Dropping	① No visible mechanical damage. ② Inductance shall be within ±10% of the initial value.	Drop chip inductor 10 times on a concrete floor from a height of 100 cm.
6.4.5 Temperature Characteristics	Inductance change should be within ±10% of initial value measuring at 20℃.	Temperature range: -40℃ to +105℃ Reference temperature: +20℃
6.4.6 Insulation Resistance	① The insulation resistance shall be not less than $1x10^9\Omega$. ② There shall be no other damage or problems.	① After a metal band with a width of 1 mm has been wound around the center portion of the sample, a DC250V voltage shall be applied across this hand and the leads ② Duration: 30sec.
6.4.7 Dielectric Withstanding Voltage	There shall be no other damage or problems.	After a metal band with a width of 1 mm has been wound around the center portion of the sample, an AC100V voltage shall be applied for 1 minute across this hand and the leads.

6.4.8 Thermal Shock	① No mechanical damage. ② Inductance shall be within ±10%of the initial value.  **Fig. 6.4.8-1**	① Temperature, Time:-40℃for 30±3 min →+105℃ for 30±3min.**(See Fig.6.4.8-1)**. ② Transforming interval: max.20 sec. ③ Tested cycle: 100 cycles ④ The chip shall be stabilized at normal condition for **1~2** hours before measuring.
6.4.9 Solderability	① No visible mechanical damage. ② Inductance change: within ±10%.	① Re-flowing Profile: Please refer to **Fig. 6.4.9-1**. ② Test board thickness: 1.0mm ③ Test board material: glass epoxy resin ④ The chip shall be stabilized at normal condition for 1~2 hours before measuring  **Fig 6.4.9-1**
6.4.10 Resistance to Soldering Heat	① No visible mechanical damage. ② Inductance shall be within ±10% of the initial value.	① Pre-heating temperature: 150℃ to 180℃ ② Pre-heating time: 3 minutes ③ Solder temperature: 260±3℃ ④ Duration: 10 sec. ⑤ The chip shall be stabilized at normal condition for 1~2 hours before measuring. ⑥ Material: Sn/3.0Ag/0.5Cu ⑦ Flux: 25% Resin and 75% ethanol in weight
6.4.11 Resistance to Low Temperature	① No mechanical damage. ② Inductance shall be within ±10% of the initial value.	① Low temperature: -40±2℃ ② Duration: 1000±12 hours; ③ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
6.4.12 Resistance to High Temperature	① No visible mechanical damage. ② Inductance shall be within ±10% of the initial value.	① High temperature: 105±2℃ ② Duration: 1000±12 hours ③ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
6.4.13 Damp Heat (Steady States)	③ No visible mechanical damage. ④ Inductance shall be within ±10% of the initial value.	① Temperature: 60±2℃ ② Humidity: 90% to 95% RH ③ Duration: 1000±12 hours ④ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
6.4.14 Resistance to Solvents	The marking on the sample shall not be erased or any other abnormality shall be apparent.	① The sample shall be immersed for 1 minute in each solution and then brushed ② This operation shall be repeated 3times for each sample Test solutions: ③ Isopropyl alcohol + mineral spirits ④ 1.1.1 trichloroethane ⑤ Azeotropic mixture(TMC)+ methylene chloride

7. Packaging, Storage and Transportation

7.1 Packaging

7.1.1 Tape Carrier Packaging:

Packaging code: T

i. Tape carrier packaging are specified in attached figure **Fig.7.1-1~3**

ii. Tape carrier packaging quantity please see the following table:

Type	2520[1008]	3225[1210]	4532[1812]
Quantity	**2K**	**2K**	**0.5K**

(1) Taping Drawings (Unit: mm)

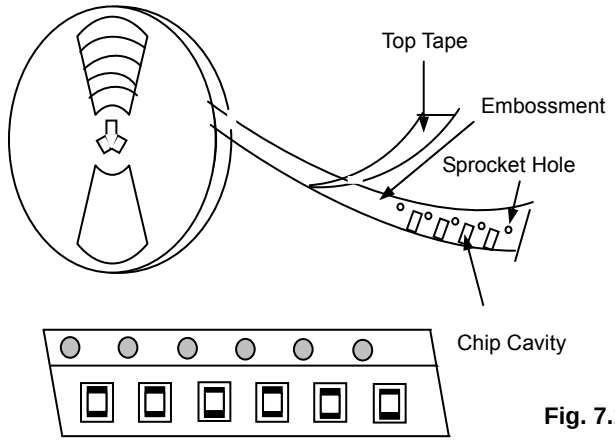


Fig. 7.1-1

Remark: The sprocket holes are to the right as the tape is pulled toward the user.

(2) Taping Dimensions (Unit: mm)

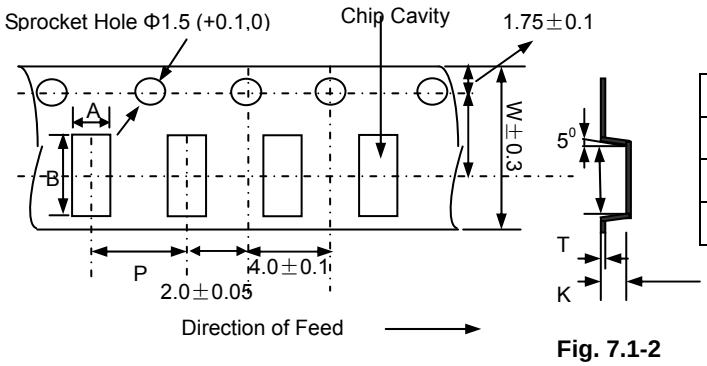
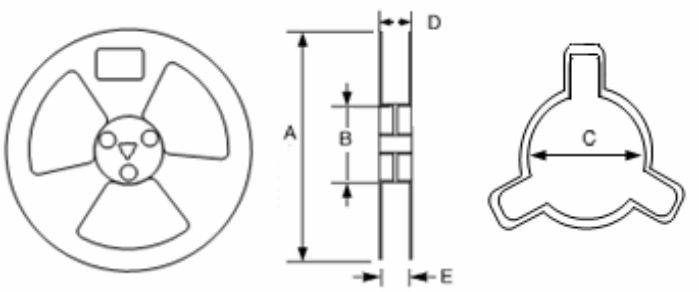


Fig. 7.1-2

Embossed Tape

Type	A	B	P	W	K	T max
2520	2.3±0.1	2.7±0.1	4.0±0.1	8.0	2.1±0.1	0.3
3225	2.8±0.1	3.5±0.1	4.0±0.1	8.0	2.3±0.1	0.3
4532	3.7±0.2	4.9±0.2	8.0±0.1	12.0	3.5±0.1	0.6

(3) Reel Dimensions (Unit: mm)



Type	A	B	C	D	E
2520	180	60	13	13	9
3225	180	60	13	13	9
4532	180	60	13	16.5	14

Fig. 7.1-3

7.2 Storage

(1) The solderability of the external electrodes may deteriorate if packages are stored in high humidity. Besides, to ensure packing material's good state, packages must be stored at -10℃ to 40℃ and 70% RH Max.

(2) The solderability of the external electrodes may deteriorate if packages are exposed to dust of harmful gas (e.g. HCl, sulfurous gas of H_2S).

(3) Packaging materials may deform if packages are exposed directly to sunlight.

(4) Minimum packages, such as polyvinyl heat-seal packages shall not be opened until they are used. If opened, use the reels as soon as possible.

(5) Solderability shall be guaranteed for a period of time from the date of delivery on condition that they are stored at the specified

environment. For those parts, which passed more than the time shall be checked solderability before using.

(6) For magnetic products, keep clear of anything that may generate magnetic fields to avoid change of products performance.

(7) To avoid any damage to products, do not load mechanic force on products or place heavy goods on products, and exclude strong vibration or drop.

(8)In case of storage over 12 months, solderability shall be checked before actual usage.

8. Warning and Attentions

8.1 Precautions on Use

(1) Always wear static control bands to protect against ESD.

(2) Any devices used with the products (soldering irons, measuring instruments) should be properly grounded.

(3) Keep bare hands and metal conductors (i.e., metal desk) away from electrodes or conductive areas that lead to electrodes.

(4) Preheat when soldering.

(5) Don't apply current in excess of the rated current value. It may reduce the impedance or inductance, or cause damage to components due to over-current.

(6) For magnetic products, keep clear of anything that may generate magnetic fields such as speakers and coils. Use non-magnetic tweezers when handing the chips.

(7) When soldering, the electrical characteristics may be varied due to hot energy and mechanical stress.

(8) When coating products with resin, the relatively high resin curing stress may change the electrical characteristics. For exterior coating, select resin carefully so that electrical and mechanical performance of the product is not affected. Before using, please evaluate reliability with the product mounted in your application set.

(9) When mount chips with adhesive in preliminary assembly, do appropriate check before the soldering stage, i.e., the size of land pattern, type of adhesive, amount applied, hardening of the adhesive on proper usage and amounts of adhesive to use.

(10) Mounting density: Add special attention to radiating heat of products when mounting other components nearby. The excessive heat by other products may cause deterioration at joint of this product with substrate.

(11) Since some products are constructed like an open magnetic circuit, narrow spacing between components may cause magnetic coupling.

(12) Please do not give the product any excessive mechanical shocks in transportation.

(13) Please do not touch wires by sharp terminals such as tweezers to avoid causing any damage to wires.

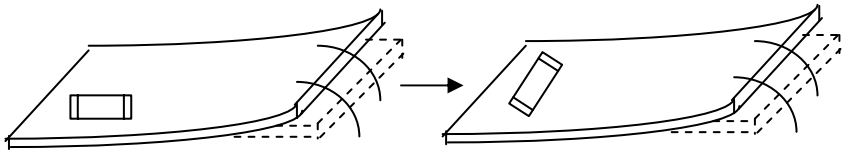
(14) Please do not add any shock and power to the soldered product to avoid causing any damage to chip body.

(15) Please do not touch the electrodes by naked hand as the solderability of the external electrodes may deteriorate by grease or oil on the skin.

8.2 PCB Bending Design

The following shall be considered when designing and laying out PCB's.

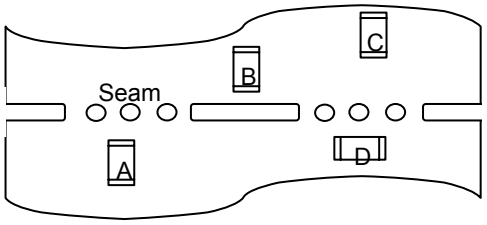
(1) PCB shall be designed so that products are not subjected to the mechanical stress from board warp or deflection.



(Poor example) (Good example)

Products shall be located in the sideways direction to the mechanical stress

(2) Products location on PCB separation.



Product shall be located carefully because they may be subjected to the mechanical stress in order of A>C=B>D.

(3) When splitting the PCB board, or insert (remove) connector, or fasten thread after mounting components, care is required so as not to give any stress of deflection or twisting to the board. Because mechanical force may cause deterioration of the bonding strength of electrode and solder, even crack of product body. Board separation should not be done manually, but by using appropriate devices.

8.3 Recommended PCB Design for SMT Land-Patterns

When chips are mounted on a PCB, the amount of solder used (size of fillet) can directly affect chip performance. Therefore, the following items must be carefully considered in the design of solder land patterns:

(1) The amount of solder applied can affect the ability of chips to withstand mechanical stresses which may lead to breaking or cracking. Therefore, when designing land-patterns it is necessary to consider the appropriate size and configuration of the solder pads which in turn determines the amount of solder necessary to form the fillets.

(2) When more than one part is jointly soldered onto the same land or pad, the pad must be designed that each component's soldering point is separated by solder-resist.

Recommended land dimensions please refer to product specification.

9. Recommended Soldering Technologies

9.1Re-flowing Profile

△ Preheat condition: 150 ~200℃/60~120sec.
△ Allowed time above 217℃: 60~90sec.
△ Max temp: 255℃
△ Max time at max temp: 10sec.
△ Solder paste: Sn/3.0Ag/0.5Cu
△ Allowed Reflow time: 2x max
Please refer to **Fig. 9.1**

[Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.]

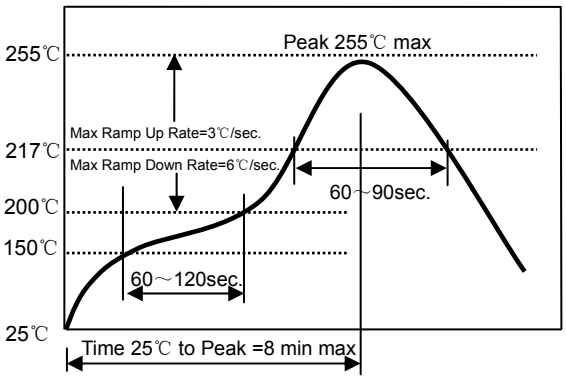


Fig. 9.1

9.2 Iron Soldering Profile

△ Iron soldering power: Max. 30W
△ Pre-heating: 150℃/60sec.
△ Soldering Tip temperature: 350℃ Max.
△ Soldering time: 3sec. Max.
△ Solder paste: Sn/3.0Ag/0.5Cu
△ Max.1 times for iron soldering
Please refer to **Fig. 9.2**.

[Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.]

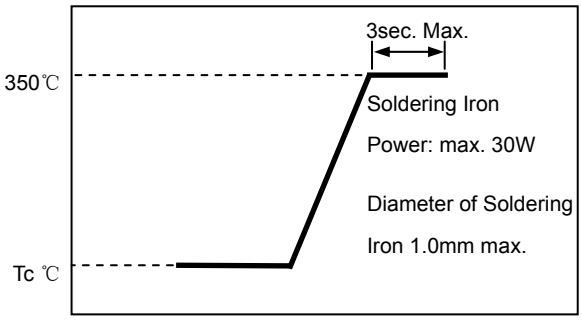


Fig. 9.2

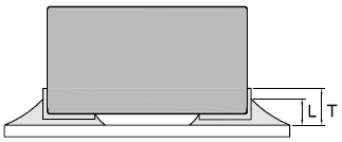
9.3 Recommended Soldering Technologies

Heat Gun Profile

△ Soldering tip temperature: 350℃ Max.
△ Hot air time: <5sec (over 5sec may cause wiring inductor short)
△ When repairing or reworking the component near inductors, take over-heat protection for Inductors

10. Solder Volume

Solder shall be used not to exceed as shown below. Exceeding solder volume may cause the failure of mechanical or electrical performance.



0 ≤L≤T

(T: height of electrode)

11. Cleaning

Products shall be cleaned on the following conditions:

(1) Cleaning temperature shall be limited to 60℃ Max. (40℃ Max. for fluoride and alcohol type cleaner.)
(2) Ultrasonic cleaning shall comply with the following conditions, avoiding the resonance phenomenon at the mounted products and PCB.
Power: 20W/l Max.
Frequency: 28 KHz to 40 KHz
Time: 5 minutes Max
Notice: Wire wound products do not recommend for ultrasonic cleaning.
(3) Cleaner
a Alternative cleaner
Isopropyl alcohol (IPA)
HCFC-225
b Aqueous agent
Surface Active Agent Type (Clean through-750H)
Hydrocarbon Type (Techno Cleaner-335)
Higher Alcohol Type (Pine Alpha ST-100S)
Alkali saponifier Type (※ Aqua Cleaner 240)
※ Alkali saponification shall be diluted to 20% volume with de-ionized water.
※ Please contact us before using other cleaner.
(4) There shall be no residual flux and residual cleaner after cleaning. In the case of using aqueousagent, product shall be dried completely after rinse with de-ionized water in order to remove the cleaner.
(5) Some products may become slightly whitened. However, product performance or usage is not affected.

12. Supplier Information

a) Supplier:

Shenzhen Sunlord Electronics Co., Ltd

b) Manufacturer:

Shenzhen Sunlord Electronics Co., Ltd.

c) Manufacturing Address:

Sunlord Industrial Park, Dafuyuan Industrial Zone, Guanlan, Shenzhen, China

Zip: 518110