

# Winding Type Chip Inductor

SWF1608RIV-SERIES

## 1. Features

1. Ferrite core wire wound construction.
2. High Reliability due to wire wound type construction.
3. Small footprint as well as low profile.
4. 100% Lead (Pb) & Halogen-Free and RoHS compliant.
5. Operating temperature-55~+125°C (Including self - temperature rise).
6. These products provide low DC resistance and high current.
7. Precision inductance tolerance is available.
8. High reliability -Reliability comply with AEC-Q200.
9. Application for DC power line.



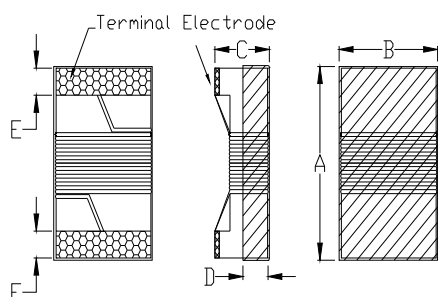
Digital camera and other electronic equipment

Personal computers, Hard disk drives

Mobile Device / Handheld Device / LowProfile Device / Panel

xDSL modem and Cable modem

## 2. Dimensions



Size	A	B	C	D	E
SWF1608	1.60±0.20	1.00±0.20	1.00±0.10	0.60 ref.	0.35±0.10

Unit:mm

## 3. Part Numbering

<b>SWF</b>	<b>1608</b>	<b>R</b>	<b>I</b>	<b>V</b>	-	<b>2R2</b>	<b>K</b>
A	B	C	D	E		F	G

A: Series

B: Dimension

L x W

C: Control S/N

D: Material

I3C

E: Category Code

V=Vehicle

F: Inductance

2R2=2.20uH

G: Inductance Tolerance

K=±10%, M=±20%

## 4. Specification

TAI-TECH Part Number	Inductance (uH)	Tolerance	Test Frequency (Hz)	Q/MHz Typ.	SRF (MHz) Typ.	DCR (Ω) ±30%	Isat (mA) Typ.	Irms (mA) Typ.
SWF1608RIV-R10□	0.10	K,M	0.5V/7.9M	13/7.9	1150	0.063	1700	1400
SWF1608RIV-R15□	0.15	K,M	0.5V/7.9M	13/7.9	1050	0.074	1700	1300
SWF1608RIV-R27□	0.27	K,M	0.5V/7.9M	13/7.9	1000	0.12	1400	1100
SWF1608RIV-R33□	0.33	K,M	0.5V/7.9M	13/7.9	1100	0.13	1300	1000
SWF1608RIV-R47□	0.47	K,M	0.5V/7.9M	13/7.9	900	0.18	1100	900
SWF1608RIV-R56□	0.56	K,M	0.5V/7.9M	13/7.9	630	0.20	1100	800

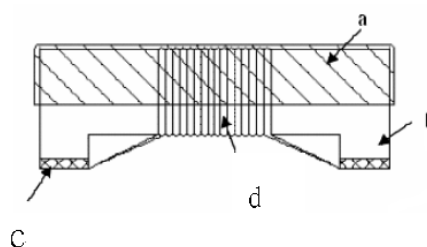
TAI-TECH Part Number	Inductance (uH)	Tolerance	Test Frequency (Hz)	Q/MHz Typ.	SRF (MHz) Typ.	DCR ( $\Omega$ ) $\pm 30\%$	Isat (mA) Typ.	Irms (mA) Typ.
SWF1608RIV-R68□	0.68	K,M	0.5V/7.9M	13/7.9	510	0.22	900	750
SWF1608RIV-1R0□	1.0	K,M	0.5V/7.9M	16/7.9	390	0.32	860	700
SWF1608RIV-1R5□	1.5	K,M	0.5V/7.9M	16/7.9	160	0.40	720	600
SWF1608RIV-2R2□	2.2	K,M	0.5V/7.9M	16/7.9	103	0.56	600	580
SWF1608RIV-3R3□	3.3	K,M	0.5V/7.9M	16/7.9	66	0.70	500	500
SWF1608RIV-4R7□	4.7	K,M	0.5V/7.9M	16/7.9	51	0.97	400	420
SWF1608RIV-5R6□	5.6	K,M	0.5V/7.9M	16/7.9	47	1.10	380	380
SWF1608RIV-6R8□	6.8	K,M	0.5V/7.9M	16/7.9	43	1.50	340	340
SWF1608RIV-8R2□	8.2	K,M	0.5V/7.9M	16/7.9	40	1.68	300	300
SWF1608RIV-100□	10	K,M	0.5V/2.5M	14/2.5	36	1.85	280	280
SWF1608RIV-150□	15	K,M	0.5V/2.5M	14/2.5	29	2.60	240	240
SWF1608RIV-180□	18	K,M	0.5V/2.5M	14/2.5	28	2.90	220	220
SWF1608RIV-220□	22	K,M	0.5V/2.5M	14/2.5	24	3.61	200	200

Note:

- Measurement board data  
Material : FR4  
Board dimensions : 100 X 50 X 1.6t mm  
Pattern dimensions: 45 X 30 mm (Double side board)  
Pattern thickness : 50  $\mu$  m
- All test data referenced to 25°C ambient

## 5. Materials

No.	Description	Specification
a.	Upper Plate	UV Glue
b.	Core	Ferrite Core
c.	Termination	Ag/Ni/Sn
d.	Wire	Enameled Copper Wire



Note:

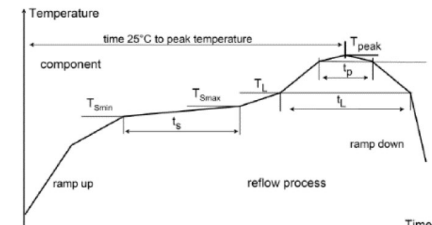
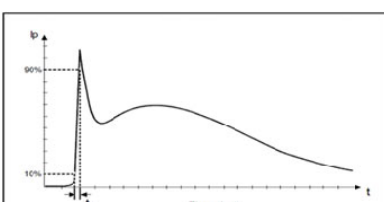
Conformal coating:

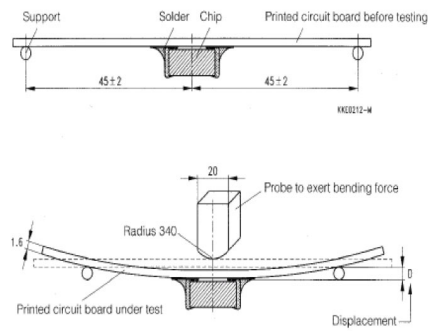
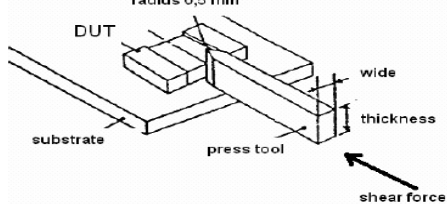
- The inductance value may change due to high cure-stress of resin to be used for coating/molding products.
- An open circuit issue may occur by mechanical stress caused by the resin, amount/cured shape of resin, or operating condition etc. Please pay careful attention when selecting resin in case of coating/molding process. Prior to use the coating resin, please make sure no reliability issue is observed.

## 6. Reliability and Test Condition

Item	Performance	Test Condition
Operating temperature	-55~+125℃ (Including self - temperature rise)	
Storage temperature	-55~+125℃ (on board)	
<b>Electrical Performance Test</b>		
Inductance	Refer to standard electrical characteristic list	Keysight E4991B, Keysight 4980AL Agilent-4287, Agilent-4285
Q		
SRF		Keysight E4991B
DCR		Agilent-34420A Agilent-4338B
ISAT		Applied the current to coils, the inductance change shall be less than 20% to initial value.
IRMS	$\Delta T \leq 40^{\circ}\text{C}$	Heat Rated Current (I <sub>rms</sub> ) will cause the coil temperature rise $\Delta T(^{\circ}\text{C})$ without core loss. 1. Applied the allowed DC current. 2. Temperature measured by digital surface thermometer

Reliability Test																														
High Temperature Exposure(Storage) AEC-Q200		Preconditioning: Run through reflow for 3 times. ( IPC/JEDECJ-STD-020F Classification Reflow Profiles) Unpowered Temperature : 125±2℃ Upper Temperature: maximum specified operating temperature or maximum specified storage temperature (whichever is higher). Minimum test temperature shall be 85℃ (For ferrite EMI suppressors/filters only) Duration : 1000hrs Min. Measured at room temperature after placing for 24±4 hrs.																												
Temperature Cycling AEC-Q200	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within±15% of initial value and shall not exceed the specification value	Preconditioning: Run through reflow for 3 times. ( IPC/JEDECJ-STD-020F Classification Reflow Profiles) Unpowered Lower Temperature of the Chamber: -40℃ (For Inductors/Transformers) -55℃ (For ferrite EMI suppressors/filters) Upper Temperature of the Chamber: maximum specified operating temperature and shall not exceed 125℃ Condition for 1 cycle Step1 : -40±2℃ 30min Min. Step2 : 125±2℃ transition time 1min MAX. Step3 : 125±2℃ 30min Min. Step4 : Dwell Time (Soak Time) 15 minutes minimum, 30 minutes minimum if component weighs above 28g Transition Time: 1 minute maximum Number of cycles : 1000 Measured at room temperature at least 24 hours after test conclusion.																												
Humidity Bias (AEC-Q200)		Preconditioning: Run through reflow for 3 times. ( IPC/JEDEC J-STD-020F Classification Reflow Profiles) Unpowered(For Inductors/Transformers) Apply 10% of maximum rated power. ( For ferrite EMI suppressors/filters ) Humidity : 85±3% R.H, Temperature : 85℃ ±2℃ Duration: 1000hrs Min. Measured at room temperature after placing for 24±4hrs.																												
High Temperature Operating Life (AEC-Q200)		Preconditioning: Run through reflow for 3 times. ( IPC/JEDECJ-STD-020F Classification Reflow Profiles) Temperature : 125±2℃ Upper Temperature of the Chamber: maximum specified operating temperature (not including heat rise) at maximum rated power and shall not exceed 125℃.( For Inductors/Transformers) Temperature of the Chamber: maximum specified operating temperature up to 150℃ ( For ferrite EMI suppressors/filters ) Duration : 1000hrs Min. with 100% rated current. Measured at room temperature after placing for 24±4 hrs. Rated IL applied.( For ferrite EMI suppressors/filters )																												
External Visual	Appearance : No damage.	Inspect device construction, marking and workmanship. Pre and Post Electrical Test not required.																												
Physical Dimension	According to the product specification size measurement	Verify physical dimensions to the applicable component detail specification. Pre and Post Electrical Test not required.																												
Terminal Strength (for axial and radial THT components)	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within±15% of initial value and shall not exceed the specification value	Test THT component lead integrity only. Test Condition A (pull test) <table><tr><th>Nominal cross- sectional area (mm<sup>2</sup>)</th><th>Force (N)</th></tr><tr><td>≤ 0.05</td><td>1</td></tr><tr><td>0.06 to 0.10</td><td>2.5</td></tr><tr><td>0.11 to 0.20</td><td>5</td></tr><tr><td>0.21 to 0.50</td><td>10</td></tr><tr><td>0.51 to 1.20</td><td>20</td></tr><tr><td>&gt; 1.20</td><td>40</td></tr></table> Test Condition C (wire-lead bend test): <table><tr><th>Section Modulus (Zx) (mm<sup>3</sup>)</th><th>Force (N)</th></tr><tr><td>≤ 1.5x10<sup>-3</sup></td><td>0.5</td></tr><tr><td>1.6x10<sup>-3</sup> to 4.2x10<sup>-3</sup></td><td>1.25</td></tr><tr><td>4.3x10<sup>-3</sup> to 1.2x10<sup>-2</sup></td><td>2.5</td></tr><tr><td>1.3x10<sup>-2</sup> to 0.5x10<sup>-1</sup></td><td>5</td></tr><tr><td>0.6x10<sup>-1</sup> to 1.9x10<sup>-1</sup></td><td>10</td></tr><tr><td>&gt; 1.9x10<sup>-1</sup></td><td>20</td></tr></table> For round terminations: ZX = (πd3)/32 where d is the lead diameter. For strip terminations: ZX = (ba2)/6 where is the thickness of the rectangular strip perpendicular to the bending axis, b is the other dimension of the rectangular strip.	Nominal cross- sectional area (mm <sup>2</sup> )	Force (N)	≤ 0.05	1	0.06 to 0.10	2.5	0.11 to 0.20	5	0.21 to 0.50	10	0.51 to 1.20	20	> 1.20	40	Section Modulus (Zx) (mm <sup>3</sup> )	Force (N)	≤ 1.5x10 <sup>-3</sup>	0.5	1.6x10 <sup>-3</sup> to 4.2x10 <sup>-3</sup>	1.25	4.3x10 <sup>-3</sup> to 1.2x10 <sup>-2</sup>	2.5	1.3x10 <sup>-2</sup> to 0.5x10 <sup>-1</sup>	5	0.6x10 <sup>-1</sup> to 1.9x10 <sup>-1</sup>	10	> 1.9x10 <sup>-1</sup>	20
Nominal cross- sectional area (mm <sup>2</sup> )	Force (N)																													
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1.3x10 <sup>-2</sup> to 0.5x10 <sup>-1</sup>	5																													
0.6x10 <sup>-1</sup> to 1.9x10 <sup>-1</sup>	10																													
> 1.9x10 <sup>-1</sup>	20																													

Item	Performance	Test Condition																																														
Resistance to Solvents		Add an Aqueous wash chemical and follow chemical manufacturer's recommended parameters (i.e. solution temperature and immersion time). Applicable to ink marked components and not laser marked components																																														
Mechanical Shock		<table><tr><th>Type</th><th>Peak value (g's)</th><th>Normal duration (D) (ms)</th><th>Wave form</th><th>Velocity change (Vi)ft/sec</th></tr><tr><td>SMD</td><td>100</td><td>6</td><td>Half-sine</td><td>12.3</td></tr><tr><td>THT</td><td>100</td><td>6</td><td>Half-sine</td><td>12.3</td></tr></table> 3 shocks in each direction along 3 perpendicular axes. (18 shocks).	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec	SMD	100	6	Half-sine	12.3	THT	100	6	Half-sine	12.3																															
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SMD	100	6	Half-sine	12.3																																												
THT	100	6	Half-sine	12.3																																												
Vibration		Preconditioning: Run through reflow for 3 times. ( IPC/JEDEC J-STD-020F Classification Reflow Profiles) Oscillation Frequency : 10Hz~2kHz~10Hz for 20 minutes Equipment : Vibration checker Total Amplitude : 5g Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations)																																														
Resistance to Soldering Heat	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within±15% of initial value and shall not exceed the specification value	Test condition : THT: Conditions B or C <table><tr><th>Solder technique simulation</th><th>Test condition</th><th>Temperature (°C)</th><th>Time(s)</th><th>Temperature ramp/immersion and emersion rate</th><th>Number of heat cycles</th></tr><tr><td>Dip</td><td>B</td><td>260 ±5 (solder temp)</td><td>10±1</td><td>25mm/s ±6mm/s</td><td>1</td></tr><tr><td>Wave: Topside board-mou nt product</td><td>C</td><td>260 ±5 (solder temp)</td><td>20±1</td><td></td><td>1</td></tr></table>  Depth: completely cover the termination SMD: Condition K, time above 217°C, 60s-150s · Number of heat cycles:3 Continental  <table><tr><th>Component Size</th><th>Ramp up to 150°C</th><th>T<sub>min</sub></th><th>t<sub>s</sub></th><th>T<sub>max</sub></th><th>T<sub>L</sub></th><th>t<sub>L</sub></th><th>T<sub>peak</sub>*</th><th>t<sub>p</sub>**</th><th>time 25°C to peak</th><th>Ramp down</th></tr><tr><td>Thickness &lt; 1.5mm or Thickness 1.5mm-2.5mm and volume &lt; 350 mm<sup>3</sup></td><td rowspan="3">3.0±0.1°C/s (The component shall be specified for usage in serial production with up to 3.0°C/s)</td><td rowspan="3">≥190°C</td><td rowspan="3">≥110s</td><td rowspan="3">≥200°C</td><td rowspan="3">≥217°C</td><td rowspan="3">≥50s</td><td>≥260°C</td><td>≥40s</td><td rowspan="3">6.0±0.1°C/s (The component shall be specified for usage in serial production with up to 6.0°C/s)</td><td rowspan="3">≥300s</td></tr><tr><td>Thickness 1.5mm-2.5mm and volume 350-2000 mm<sup>3</sup> or Thickness &gt; 2.5mm and volume &lt; 350 mm<sup>3</sup></td><td>≥250°C</td><td>≥30s</td></tr><tr><td>Thickness 1.5mm-2.5mm and volume &gt; 2000 mm<sup>3</sup> or Thickness &gt; 2.5mm and volume &gt; 350 mm<sup>3</sup></td><td>≥245°C</td><td>≥30s</td></tr></table> Table 1: Minimum requirements for lead-free soldering *peak temperature is measured on the centre top of the component package **tp : measured @ Tpeak-5°C	Solder technique simulation	Test condition	Temperature (°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	Dip	B	260 ±5 (solder temp)	10±1	25mm/s ±6mm/s	1	Wave: Topside board-mou nt product	C	260 ±5 (solder temp)	20±1		1	Component Size	Ramp up to 150°C	T <sub>min</sub>	t <sub>s</sub>	T <sub>max</sub>	T <sub>L</sub>	t <sub>L</sub>	T <sub>peak</sub> *	t <sub>p</sub> **	time 25°C to peak	Ramp down	Thickness < 1.5mm or Thickness 1.5mm-2.5mm and volume < 350 mm <sup>3</sup>	3.0±0.1°C/s (The component shall be specified for usage in serial production with up to 3.0°C/s)	≥190°C	≥110s	≥200°C	≥217°C	≥50s	≥260°C	≥40s	6.0±0.1°C/s (The component shall be specified for usage in serial production with up to 6.0°C/s)	≥300s	Thickness 1.5mm-2.5mm and volume 350-2000 mm <sup>3</sup> or Thickness > 2.5mm and volume < 350 mm <sup>3</sup>	≥250°C	≥30s	Thickness 1.5mm-2.5mm and volume > 2000 mm <sup>3</sup> or Thickness > 2.5mm and volume > 350 mm <sup>3</sup>	≥245°C	≥30s
Solder technique simulation	Test condition	Temperature (°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles																																											
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Component Size	Ramp up to 150°C	T <sub>min</sub>	t <sub>s</sub>	T <sub>max</sub>	T <sub>L</sub>	t <sub>L</sub>	T <sub>peak</sub> *	t <sub>p</sub> **	time 25°C to peak	Ramp down																																						
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ESD		Direct Contact and Air Discharge PASSIVE COMPONENT HBM ESD Discharge Waveform to a Coaxial Target Test method: AEC-Q200-002 Test mode : Contact Discharge Discharge level : 4 KV (Level: 2 )  																																														

Item	Performance	Test Condition																																
Solderability	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within±15% of initial value and shall not exceed the specification value	Through-hole Technology (THT: Method A1, Coating Durability Category 2) • SMD: Method B1, Coating Durability Category 2 Method D, Coating Durability Category 2 • Magnification 50x • Pre and Post Electrical Test not required. • Non-soldered type mounting/attach are not applicable.																																
		<table><tr><td>參照</td><td>Method A1</td><td>Method B1</td><td>Method D</td></tr><tr><td>焊接工藝</td><td>再流焊</td><td>其他器件的再流焊</td><td>無鉛焊接</td></tr><tr><td>焊接類型</td><td>錫銀銅焊料</td><td>錫銀銅焊料</td><td>錫銀銅焊料</td></tr><tr><td>浸入助焊劑時</td><td>5-10s</td><td>5-10s</td><td>5-10s</td></tr><tr><td>浸入錫爐角度</td><td>20 ° ~45 °</td><td>20 ° ~45 °</td><td>20 ° ~45 °</td></tr><tr><td>焊料溫度</td><td>245±5°C</td><td>245±5°C</td><td>260±5°C</td></tr><tr><td>浸入焊料時間</td><td>5+0/-0.5s</td><td>5+0/-0.5s</td><td>30+5/-0s</td></tr><tr><td>浸入和提出速</td><td>25±6mm/s</td><td>25±6mm/s</td><td>25±6mm/s</td></tr></table>	參照	Method A1	Method B1	Method D	焊接工藝	再流焊	其他器件的再流焊	無鉛焊接	焊接類型	錫銀銅焊料	錫銀銅焊料	錫銀銅焊料	浸入助焊劑時	5-10s	5-10s	5-10s	浸入錫爐角度	20 ° ~45 °	20 ° ~45 °	20 ° ~45 °	焊料溫度	245±5°C	245±5°C	260±5°C	浸入焊料時間	5+0/-0.5s	5+0/-0.5s	30+5/-0s	浸入和提出速	25±6mm/s	25±6mm/s	25±6mm/s
		參照	Method A1	Method B1	Method D																													
		焊接工藝	再流焊	其他器件的再流焊	無鉛焊接																													
		焊接類型	錫銀銅焊料	錫銀銅焊料	錫銀銅焊料																													
		浸入助焊劑時	5-10s	5-10s	5-10s																													
		浸入錫爐角度	20 ° ~45 °	20 ° ~45 °	20 ° ~45 °																													
		焊料溫度	245±5°C	245±5°C	260±5°C																													
		浸入焊料時間	5+0/-0.5s	5+0/-0.5s	30+5/-0s																													
		浸入和提出速	25±6mm/s	25±6mm/s	25±6mm/s																													
Electrical Characterization	Refer Specification for Approval	Parametrically test per lot and sample size requirements, summary to show Min, Max, Mean and Standard deviation at room as well as Min and Max operating temperatures. Pre and Post Electrical Test not required																																
Flammability	In accordance with Referenced Standards	UL-94 or IEC 60695-11-5																																
Board Flex (SMD)	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within±15% of initial value and shall not exceed the specification value	Preconditioning: Run through reflow for 3 times. (IPC/JEDEC J-STD-020F Classification Reflow Profiles) Place the 100mm X 40mm board into a fixture similar to the one shown in below Figure with the component facing down. The apparatus shall consist of mechanical means to apply a force which will bend the board (D) x = 2 mm minimum. The duration of the applied forces shall be 60 (+ 5) sec. The force is to be applied only once to the board.																																
		<div></div>																																
Terminal Strength(SMD)		<div><p>AEC-Q200,TAI-TECH SPEC 5N / 5±1 SECONDS</p><p>radius 0,5 mm</p></div>																																

## Note:

The main function of UV coating is for the pick and place of SMT machine.

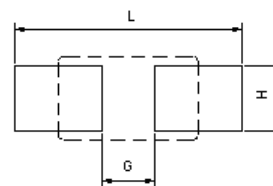
For UV coating on the top side. In rare cases, some very small cracks may appear on the coating surface after being exposed after many times of IR reflow, long times of high and low temperature, high humidity and temperature cycles.

Small cracks on UV coating will not affect functions of this product.

## 7. Soldering and Mounting

### 7-1. Recommended PC Board Pattern

Chip size						Land Patterns For Reflow Soldering			
Series	Type	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	L(mm)	G(mm)	H(mm)
SWF	1608	1.60±0.2	1.0±0.2	1.0±0.1	0.60 ref	0.35±0.1	1.92	0.92	1.02



### 7-2. Soldering

Mildly activated rosin fluxes are preferred. TAI-TECH terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

#### 7-2.1 Soldering Reflow:

Recommended temperature profiles for lead free re-flow soldering in Figure 1. Table 1.1&1.2 (J-STD-020F)

#### 7-2.2 Soldering Iron:

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended. (Figure 2.)

- Preheat circuit and products to 150°C
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 350°C tip temperature (max)
- 1.0mm tip diameter (max)
- Limit soldering time to 4~5sec.

Fig.1 Soldering Reflow

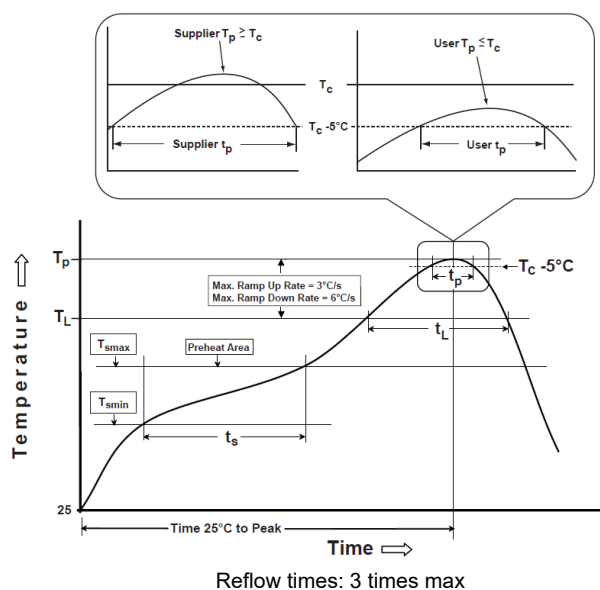
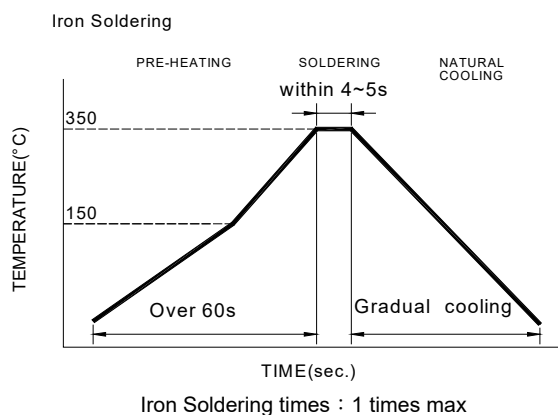


Fig.2 Iron soldering temperature profiles



**Table (1.1): Reflow Profiles**

Profile Type:	Pb-Free Assembly
Preheat -Temperature Min( $T_{smin}$ ) -Temperature Max( $T_{smax}$ ) -Time( $t_s$ )from( $T_{smin}$ to $T_{smax}$ )	150°C 200°C 60-120seconds
Ramp-up rate( $T_L$ to $T_p$ )	3°C/second max.
Liquidus temperature( $T_L$ ) Time( $t_L$ )maintained above $T_L$	217°C 60-150 seconds
Classification temperature( $T_c$ )	See Table (1.2)
Time( $t_p$ ) at $T_c - 5^\circ\text{C}$ ( $T_p$ should be equal to or less than $T_c$ .)	< 30 seconds
Ramp-down rate( $T_p$ to $T_L$ )	6°C/second max.
Time 25°C to peak temperature	8 minutes max.

**T<sub>p</sub>**: maximum peak package body temperature, **T<sub>c</sub>**: the classification temperature.

For user (customer) **T<sub>p</sub>** should be equal to or less than **T<sub>c</sub>**.

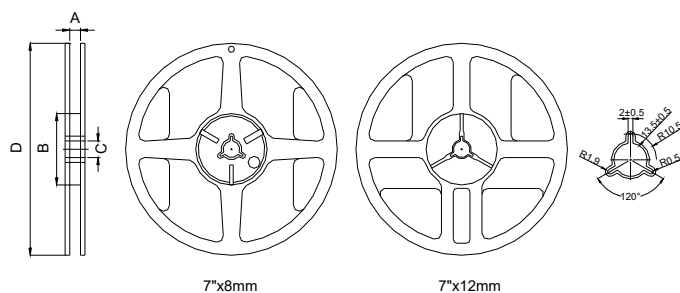
**Table (1.2) Package Thickness/Volume and Classification Temperature (T<sub>c</sub>)**

	Package Thickness	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350-2000	Volume mm <sup>3</sup> >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020F

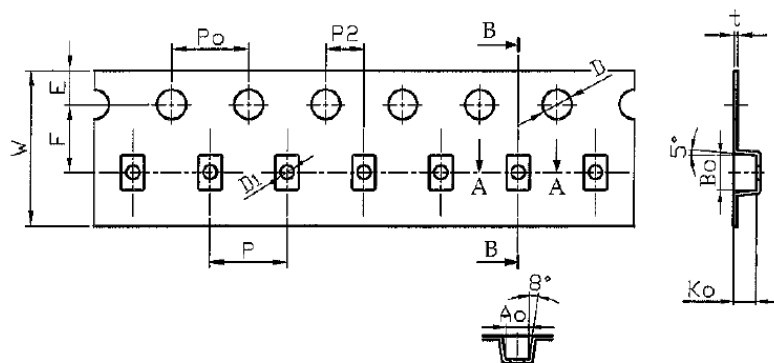
## 8. Packaging Information

### 8-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	9.0±0.5	60.0±2.0	13.5±0.5	178.0±2.0

### 8-2. Tape Dimension / 8mm(black anti-static electricity carrier tape)

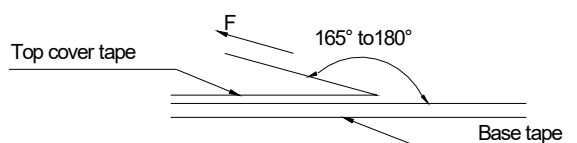


Series	W(mm)	P(mm)	E(mm)	F(mm)	P2(mm)	D(mm)	D1(mm)	Bo(mm)	Ao(mm)	Ko(mm)	Po(mm)	t(mm)
SWF1608	8.00±0.10	4.00±0.10	1.75±0.10	3.50±0.05	2.00±0.05	1.50+0.10-0.00	0.70±0.10	1.78±0.10	1.21±0.10	1.21±0.10	4.00±0.10	0.20±0.05

### 8-3. Packaging Quantity

SWF	1608
Chip / Reel	4000
Reel Size	7"x8mm

### 8-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

#### Application Notice

##### • Storage Conditions(component level)

To maintain the solderability of terminal electrodes:

1. TAI-TECH products meet IPC/JEDEC J-STD-020F standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months from the time of delivery.
4. 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.