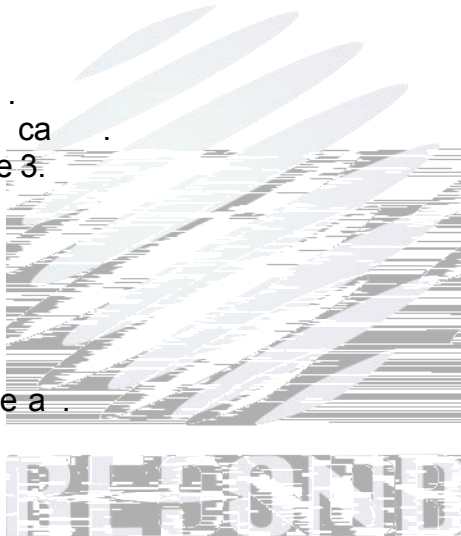
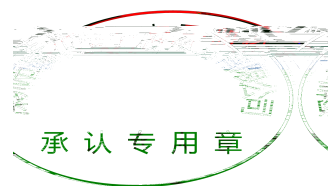


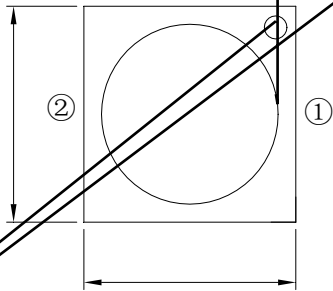
T d c e e EMC ac a e, a a e ab . a be de a ca f  
 ec a d e .S e( ): 3.00 X3.00 X2.10 .

L f a d a e.  
 Pea a e e =850 .  
 Pb-f ee ef de a ca .  
 M e e e e e :Le e 3.  
 R HS c a .

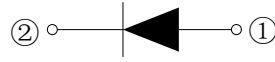


S e a ce e .  
 l f a ed l a f ca e a .  
 Mac e e .



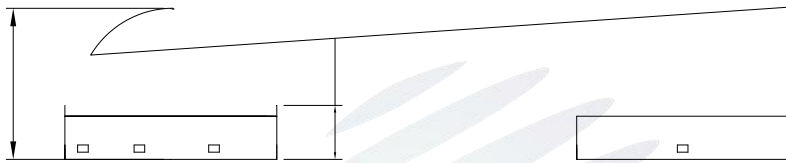


F .1-1 T e

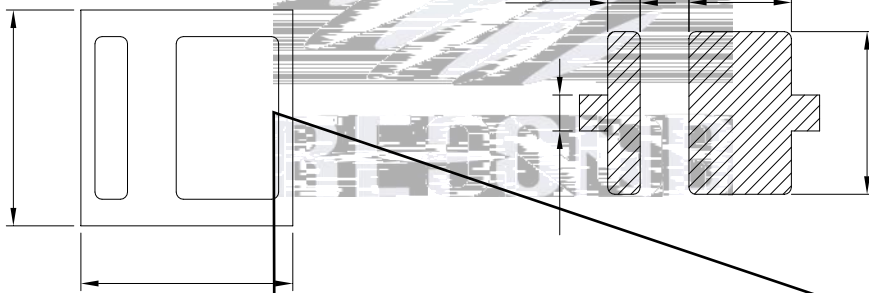


① Anode  
② Cathode

F .1-2 P a



F .1-3 S de e



F .1-4 B e

F .1-5 S de a e

N e

1. A d e a e e e .

2. A d e e a ce a e ±0.2 e e e ed.

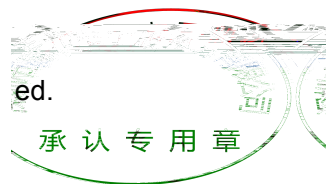


Table 1-1 Electrical Characteristics at T = 25 °C

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Reverse Current	$I_R$	$V_R=5V$	---	---	10	μA
Forward Voltage	$V_F$	$I_F=500 \mu A$	1.4	1.6	2.0	V
Peak Wavelength	$\lambda$	$I_F=500 \mu A$	830	850	---	nm
Secondary Radiation Bandwidth		$I_F=500 \mu A$	---	40	---	nm
Thermal Resistance	$\theta_{j-c}$	$I_F=500 \mu A$	280	350	450	°C/W
Viewing Angle	2θ	$I_F=500 \mu A$	---	90	---	degrees
Thermal Resistance	$R_{THJ-S}$	$I_F=500 \mu A$	---	16	---	°C/W

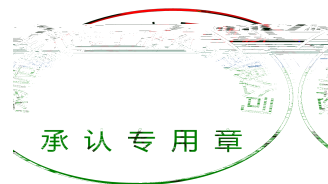
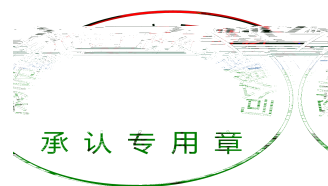


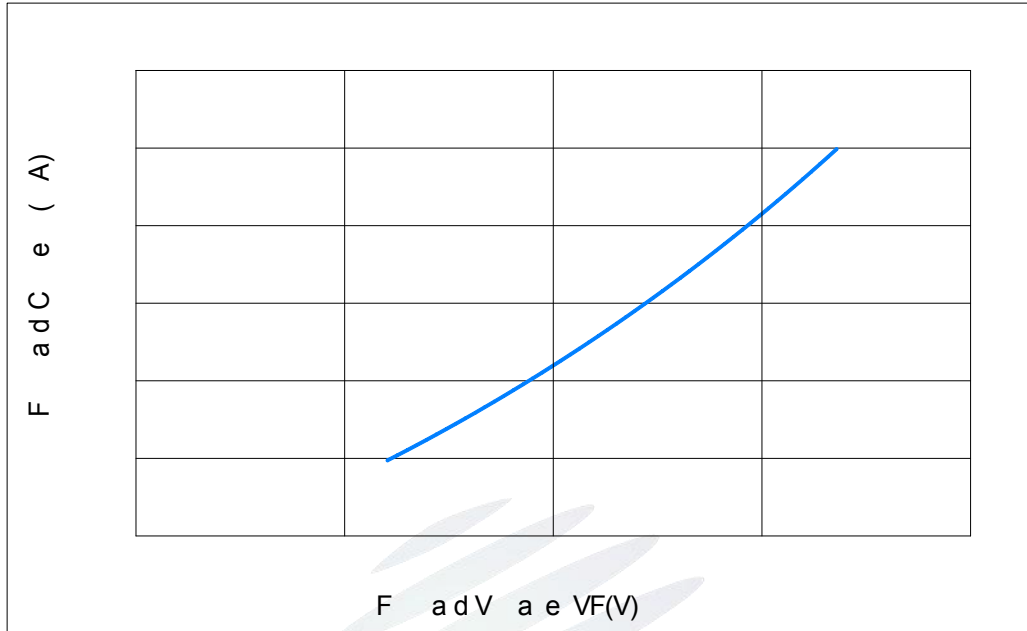
Table 1-2 Absolute Maximum Ratings at T<sub>a</sub> = 25 °C

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>D</sub>	0.9	W
Forward Current	I <sub>F</sub>	500	A
Reverse Voltage	V <sub>R</sub>	5	V
Electrostatic Discharge (HBM)	E <sub>SD</sub>	2000	V
Operating Temperature	T <sub>OPR</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +100	°C
Junction Temperature	T <sub>J</sub>	115	°C

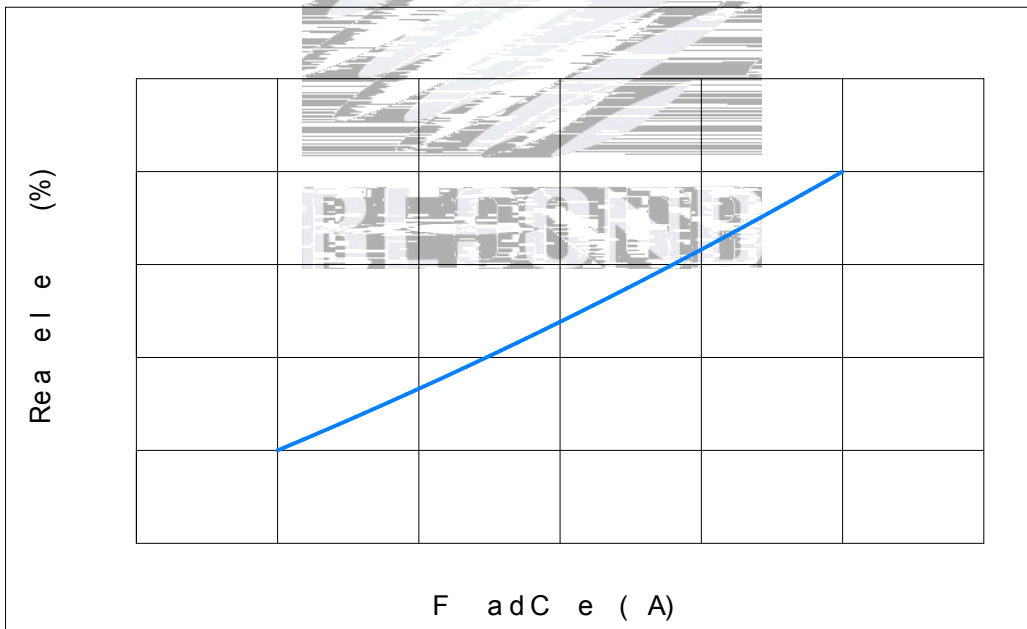
Note:

1. I<sub>D</sub> is limited by thermal resistance.
2. The reverse voltage should not exceed 0.1V.
3. The maximum forward current I<sub>F</sub> is limited by R<sub>θJC</sub> / R<sub>θJA</sub> : 10%.
4. The maximum power dissipation P<sub>D</sub> is limited by thermal resistance.
5. The maximum junction temperature T<sub>J</sub> is limited by thermal resistance.
6. The maximum power dissipation P<sub>D</sub> is limited by thermal resistance.
7. ESD is tested by 90% at 2000V ESD (HBM). ESD is tested by 90% at 2000V ESD (HBM).

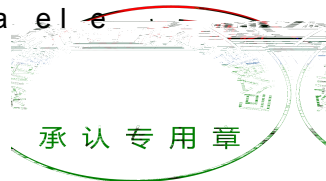


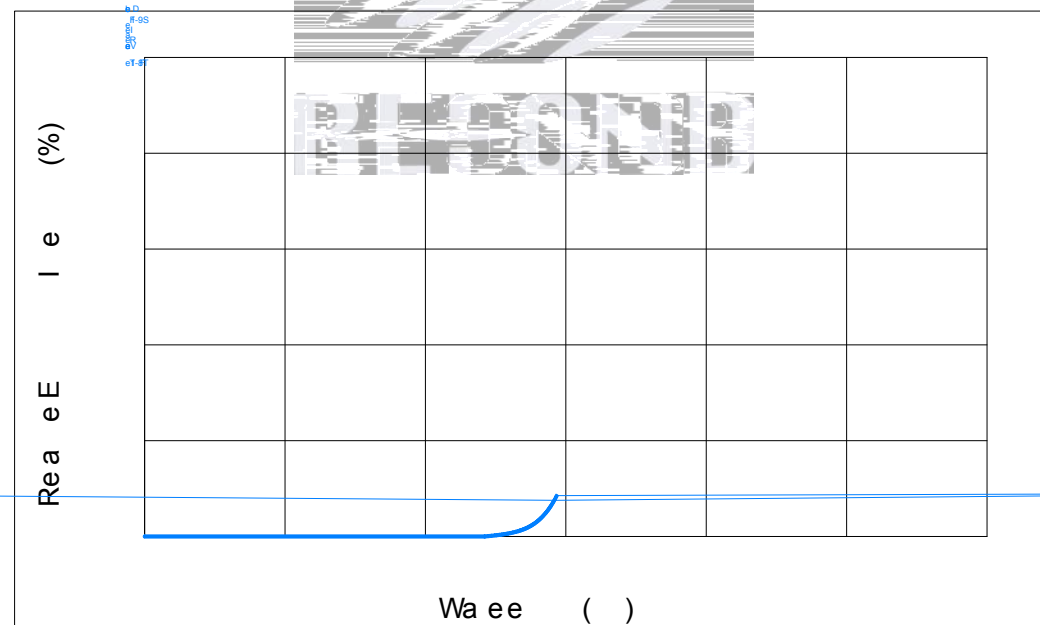
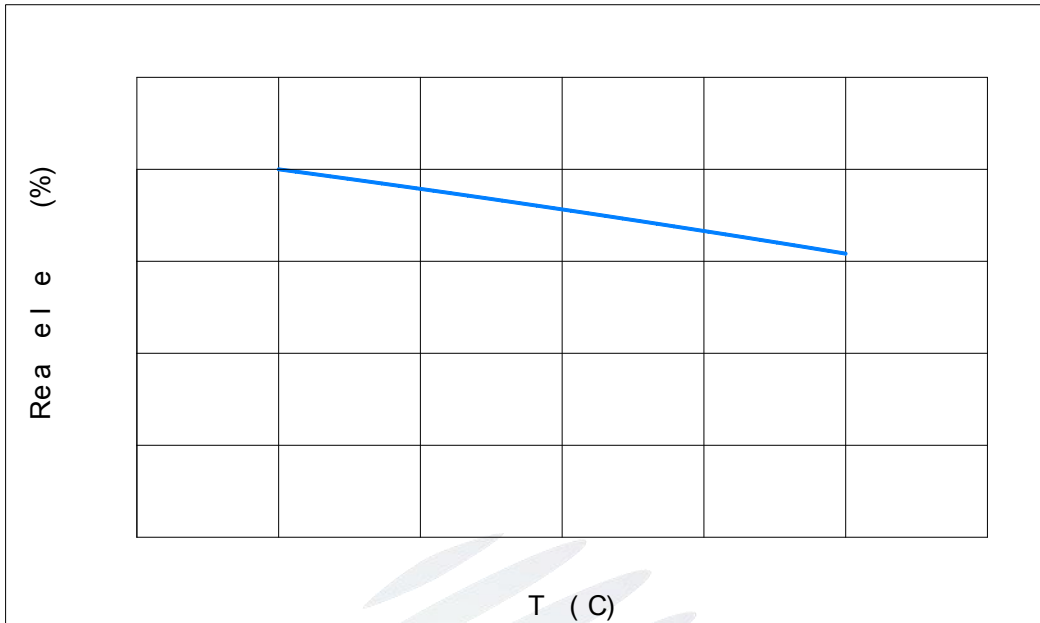


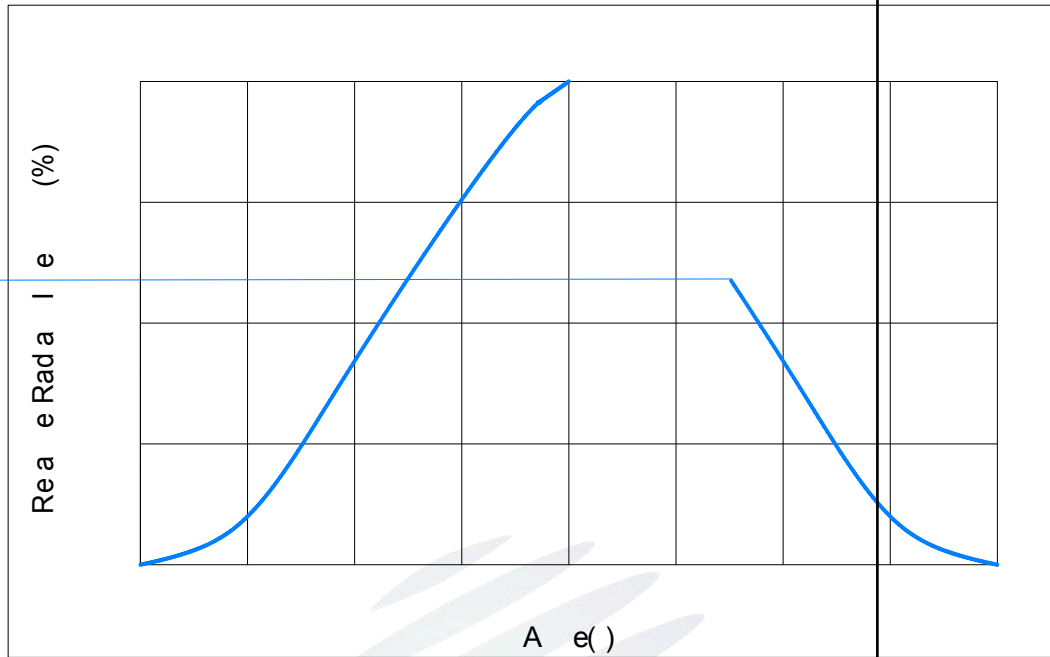
$$V_{f} = 1.6 I_{f} + 0.5$$



$$I_{r} = 1.7 I_{f} + 0.5$$

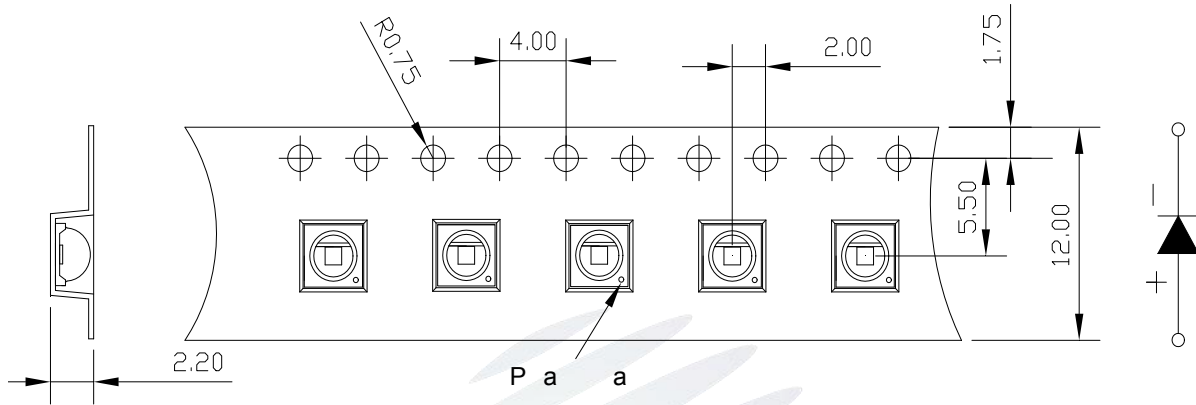




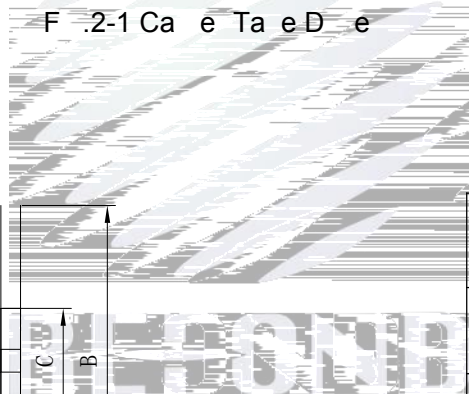


Pac a e:3000 c / ee .

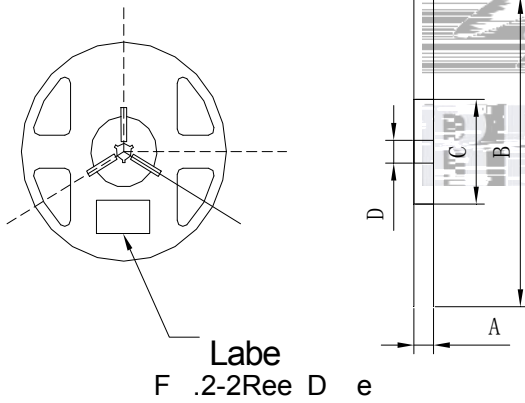
2.1.1 Ca e Ta eD e



2.1.2 Ree D e



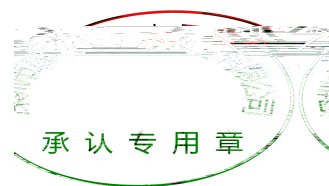
Tab e 2-1 D e



A	12.7±0.3
B	330.2 2
C	79.5 1
D	14.3 0.2

N e

T e e a ce e e ed 0.1 .U :



### 2.1.3 Label Form Specification

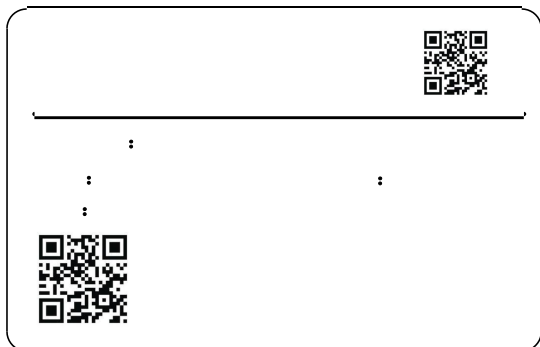


Figure 2-3 Label Form Specification

Table 2-2 Label Form Specification

PART NO	Part Number
SPEC NO	Specification Number
LOT NO	Lot Number
BIN CODE	Barcode
Model	Trademark
WLP	Product Name
V <sub>F</sub>	Product Version
QTY	Quantity
DATE	Made Date

### 2.2 Material Preparation Process

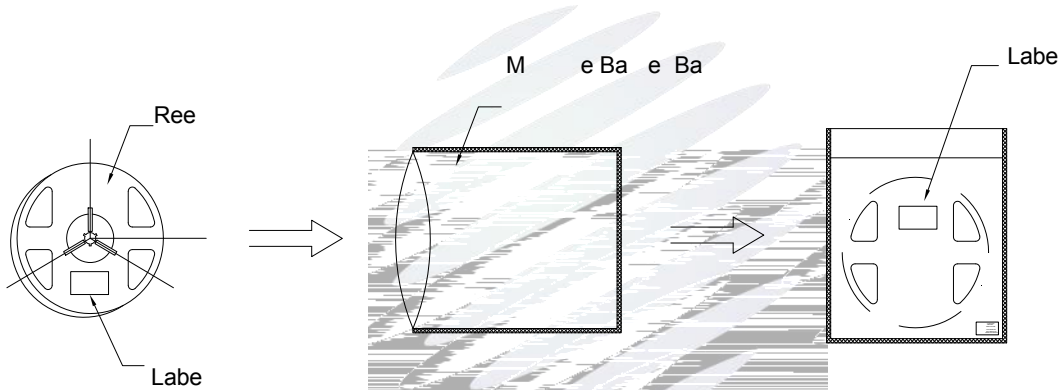


Figure 2-4 Material Preparation Process

### 2.3 Cardboard

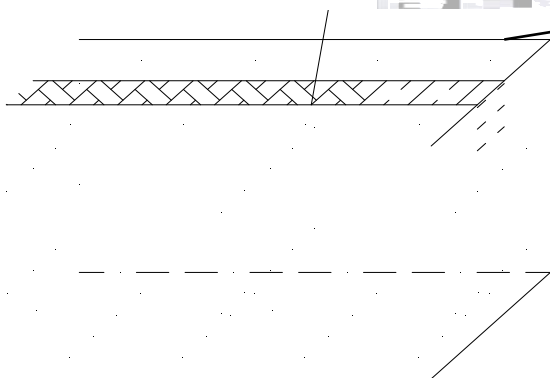


Figure 2-5 Cardboard

Table 2-3 Reference Temperature and Condition

Temperature	Ref. Standard	Temperature and Condition	Time	Quantity	Ac/Re
Reference	JESD22-B106	Temperature: 260 °C T=10 sec	3 sec.	10 pcs	0/1
Temperature Cycle	JESD22-A106	100 °C 30 min. 5 min. -40 °C 30 min.	100 cycles	10 Pcs.	0/1
Temperature Stress	JESD22-A104	-40 15 10 100 15	300 cycles	10 pcs.	0/1
High Temperature Stress	JESD22-A103	Temperature: 100 °C	1000 cycles	10 pcs	0/1
Low Temperature Stress	JESD22-A119	Temperature: -40 °C	1000 cycles	10 pcs.	0/1
Life Test	JESD22-A108	Ta=25 °C If=500 A	1000 cycles	10 pcs.	0/1
High Temperature High Humidity Life Test	JESD22-A101	85 °C / 85%RH IF=500 A	1000 cycles	10 pcs.	0/1

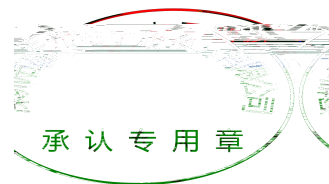


Table C e a F J d D a a e

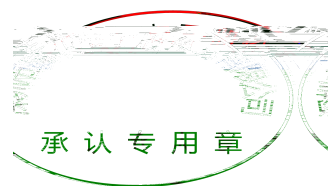
Te le	S b	Te C d	C e a F J d e e	
			M .	Ma .
F a d V a e	V <sub>F</sub>	I <sub>F</sub> =500 A	-	U.S.L*) 1.1
Re e e C e	I <sub>R</sub>	V <sub>R</sub> = 5V	-	U.S.L*) 2.0
T a a d a f	e	I <sub>F</sub> =500 A	L.S.L*) 0.7	-

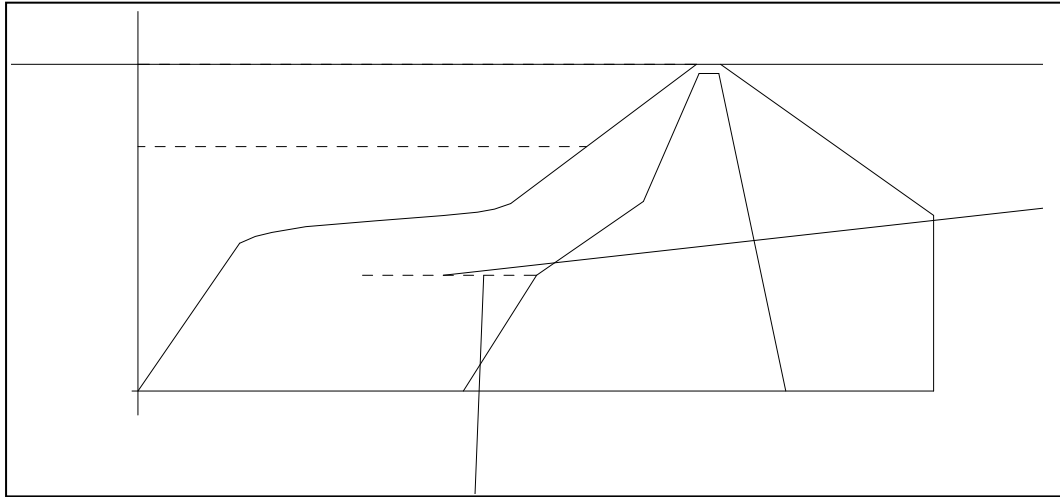
N e

U.S.L: U e a d a d e e L.S.L: L e a d a d e e

2. T e a b e e a b e b a e d e e f c a f a e / LED f Ref d' e e e e a a f , e e a b e e e a a e d e d e a d a c d . e c e a e e LED e e e a d a a e c c , d a e c d e a f a e f a c c a e c e , a e d b , e a d a a d e .

3. T e e c c a f a e d a a e e a e e d e c a c a a c e c a d c c e a e f e e f e e c e d d c . l d e c e e a a f d a e e a f a c e e .





F .3-1 SMT Ref S de I c SMT

Table 3-1 Parameters

Atmosphere	Ma 3 C/
Preheat 1: Temperature (T <sub>1</sub> )	150 C
Preheat 2: Maximum Temperature (T <sub>2</sub> )	200 C
Preheat 3: Temperature (T <sub>3</sub> )	60 -120
Temperature at peak (T <sub>L</sub> )	217 C
Temperature at peak (T <sub>L</sub> )	Ma 60
Peak/Carryover Temperature (T <sub>P</sub> )	260 C
Temperature at peak (T <sub>L</sub> )	Ma 10
Hold at 5 C	Ma 30
Cooling	Ma 6 C/
Needed after 25 C T	Ma 8 e

N e

- (1) Ref de d bed e e a e .l e ca e f e a 24 a ed de afe f ,LED be da a ed.
- (2) W e de ,d e e LED d ea .

### 3.1.1 S de l

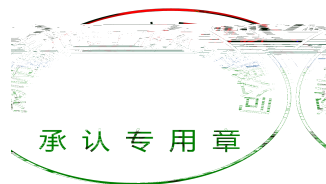
- (1) W e a d de , ee e e ea e f be e 300 e a 3 ec d
- (2) T e a d de d bed e e e.

### 3.1.2 Re a

Re a d bed e afe e LED a e bee de ed. W e e a a dab e, a d be- ead de d be ed (a be f e). l d be c f ed ad a ce e e e c a ace c f LED be da a ed b e a .

### 3.1.3 Ca

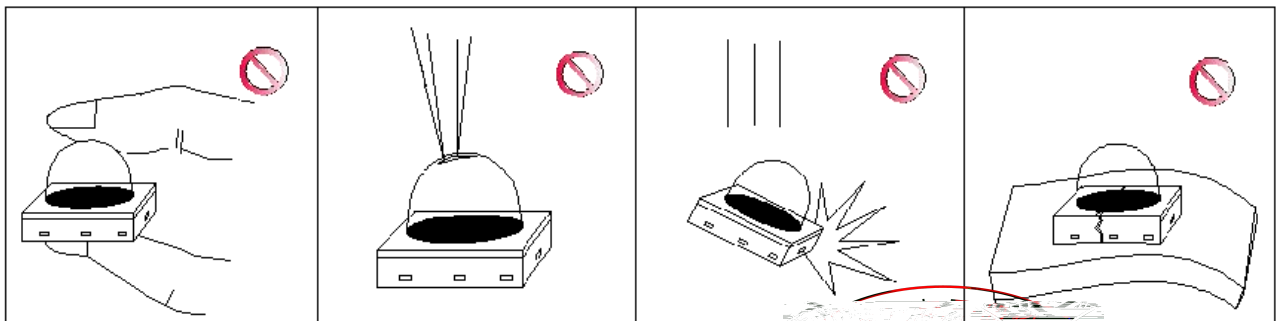
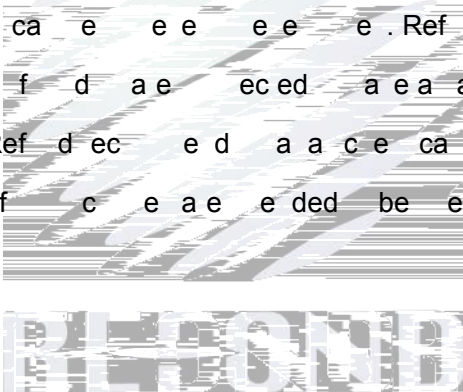
- (1) T e e ca aed a e a f e LED c e. T e ef e e LED a e a f face e f ac a e. T e e e e face be f e ce e e ab f e LED . P eca d be a e a d e e e e e ca aed a . S e e e e c e, e e e e c e e d be e .
- (2) C e d be ed a ed ( c a a ) f PCB. Af e de ,d a e c c b a d.
- (3) D a ec a ca f ce e ce b a d ec ce a e e a e afe de . D a d c de ce afe de .



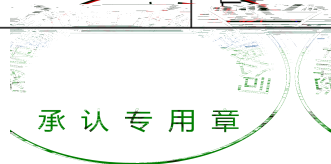
(1) LED ea e e ad f ee e c ca be e 100PPM e LED a  
 ae ae a.T dedf f a a e ad a a a ed ee .

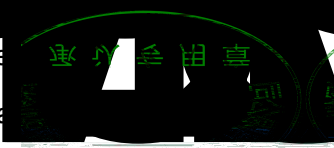
(2) l de ee e - e a ae af e e de fLED, c a ca e e af c  
 fLED, e ec e fB eee e e ed bee a 900PPM, e ec e f  
 C eee e e ed bee a 900PPM, e ac e fB eee e adC e  
 ee e ee e a ae a f ea ca dc e ed bee a 1500PPM.T  
 dedf f a a e ad a a a ed ee .

(3) VOC (V a e a cc d) e edf ae a ed ec c ff e ca  
 ee ae c ee ca a fLED add c ee ed ea ad ce e .T ee  
 ca bea fca f f ef e.K ed e f e ee f e ae a eeced  
 be ed ec c ff e ca e ee ee e .Ref dad e a a e e fa  
 ce ca ae a a ae bee f d ae eced ae a ad e e affec de ce ef a ce  
 e ab .T e f c a b ,Ref d ec ed a a ce ca ad ae a be e ed e  
 ec fca ca a de e f c e ae e ded be ed.A ac LED ,d e  
 ad e e a a a ca .



F 4-1





ca e b c e c a e, b f a ca e LED ed O c c be de ed a f ad  
 a e e ON OFF. If e e e e a e a ed LED, a ca be e e a ed e  
 LED da a



- If the appearance of the LED is affected, the following steps should be taken:
- (8) If the appearance of the LED is affected, the following steps should be taken.
  - (9) The appearance of the LED is affected; LED is affected by ESD (Electrostatic Discharge) and EOS (Electro-Optical Shock).
  - (10) The appearance of the LED is affected, the following steps should be taken.

