

5 é / Descriptions

(8)2 (3) D}©%-eOYÿ eOü`ÒU- PÁ' ä±è††Đ• ož
(8)2 (3) ,4- ä359,+ :k ä±† 9 y èy•ž èož
(8)2 (3) ÄÄ³o4 95: /xk ...±¥~^³o`• 9q•'ò±³o4 U
- PÁ• ož(8)2 (3) ÄÄ -k yk vk?è~ñÄ Pñ¬}' kw W
•ž ô³o zož¥/ì NN ôÑđ—<k- 9%² ä¬}eO Yÿ êeO ü`ÒU- Pxž•
^__'îD}• «'ož

⌘ a / Features

< ÄB¤è^| SS ¯ ä 359,+ :z
< Ý4/x 95: z
< ÄB¤è 8)k—¬`~ Û ~^z
< “ ‘ z
< - v‘ z
< < v‘ y y v k y v kžú?è vz
< - ~ yz
< < P- k• ž•ÄB— kă¤† 9 yz
< z²Á vk3oW• vy [' -Ñ vy ['!
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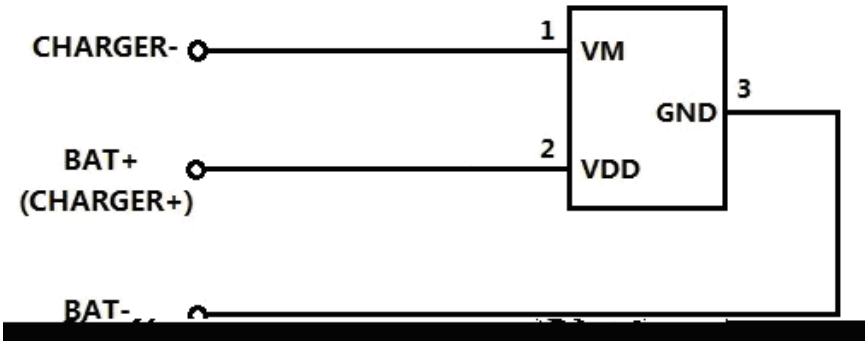
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$\mathbb{D} \div$ / Applications

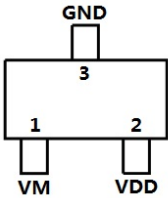
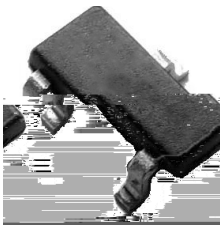
% /eO Y ÿ P Á zeO ü ` Ò P Áož

• Typical Application



h P y
/ Ì ô ± Ý / x ñ I Â Ý ô o ž
Î D } Ä Ä ... ² ‘ k x } Ý D } Ä Ý I ² o ž
Ö

• Pinning



– Ú Z	– d f	– a ¢
6 O T 4 [S H K X 6 O T 4 G S K		6 O T * K Y I X O V Z O U T

, M V / Marking

• - ~ a ¢ o ž

1. Absolute Maximum Ratings(Ta=25℃ ;)

Symbol	Unit	Value	Notes

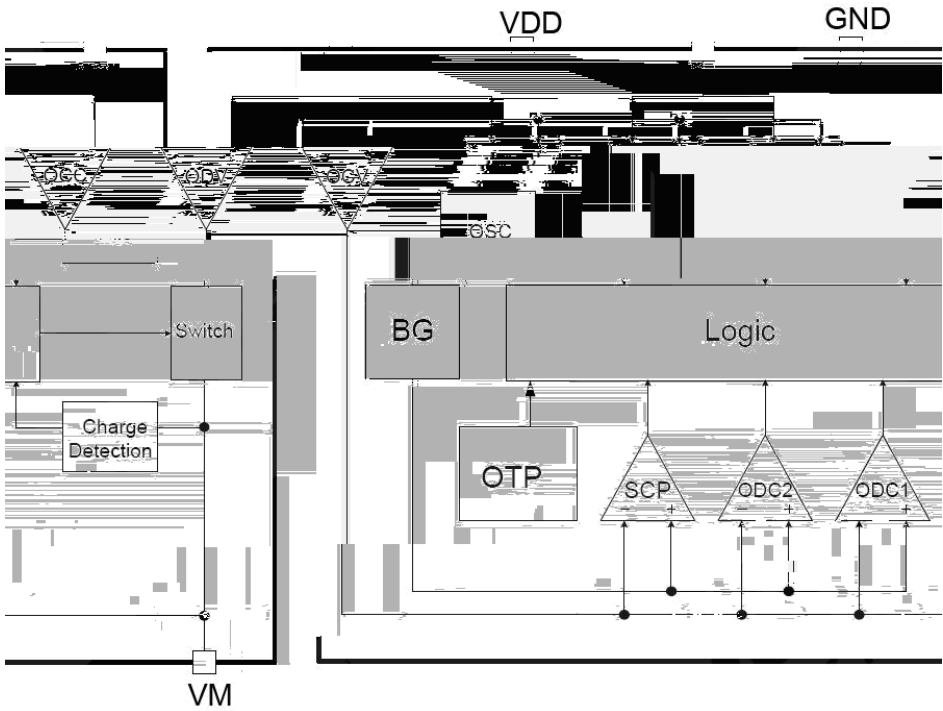
2. Electrical Characteristics(Ta=25℃ ;)

Symbol	Unit	Value	Notes
Detection voltage			
Detection current			
Static current			

Electrical Characteristics (Ta=25 ;)

Equivalent FET on Resistance						
		É				
Over temperature protection						
Delay time						

Functionl Block Diagram



× 5 é Functional Description

(8)2 (3)!O P 9y vkw* ••- ~ê¿ú k' %-U- eO P kœ
 - 9k y 9k - vk y vYC?è^ŒÑòC°ož©İÜ è•%ož359,+:]Äå k
 ^| ŠÁ°> S Sož

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n V € “ Normal Operating mode

òçZÄ yñ`~‘oŒÑkÿß'%²+ø•k- yy iC1 ôEož _ŒÑf 3oW
 •%”ož

Ú Ñ Ô 85Š Đ Overcharge Condition

“3oÚ^ - i k¢ P 9ä9 - y 9g<);h w4Œž• ñ - 9 y•
 ž•g:);hê¾xk(8)2 (3)1¼•,+:Y 2- ož _ŒÑf - 9ŒÑož
 Y _ŒÑ k - 9ŒÑ1tKyy
 g h¢ P 9z9 - t” 9g<)2h k(8)2 (3)ø•ÿß'k>ñ3oW•%”ož
 g h¢ N%² ¿ú gy k(8)2 (3)ø•ÿß'k>ñ3oW•%”ož†”Ñòò yN
 ¿úey vyö v ÿß' ÄB\$ÿ8â'k<3 9 ñ <g/8â' 3g9'h k
 (8)2 (3) yñ 9ek1 - 9f9>äEñ <);kN Ūk¢ P 9z9 - y
 9g<);hk(8)2 (3)yöÊŒÑ3oW•%”k x©òç P 9ä9 - y 9g<);h k
 /...¿ú©N5 k/ì- kÊŒÑ3oW•%”k·À}^ñ P 9z9 - y 9g<);h ož
 PŪk”N ¿úy žkòç<3 9^9êz9 v y 9k/ì kÊŒÑ3oW•%”ož
 hy¢ Pt- ñÝ - y 9g<);hw P 9ZÄ'ñ - y 9g<);hY k/
 ... %² UY- v Múk v y v C kW•k”³ P 9^— - yg<);hY ož
 x© Ž P©ÄÄŠ k¢ PN %² Múk P 9ky/^Jk ž v y v <k
 •ož

g h

g h

Ú Ĥ Ô 85Š Đ Overcharge Condition

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Ú Z Ô 85Š Đ Overdischarge Condition

"3oy i k¢ P 9'ñ y y 9g<*2hY w 4Òž• ñ y 9 y•ž
 ž•g:*2hê¾xk(8)2 (3) 1ä• Pyžú Nk 2y ož _ÕÑtf y 9
 ÕÑož¢Oòy ,+:t¼•k<3* ÄB<3 <*\$• 8<3* Št ñ ä ukcž/ì
 ô vk'ñg2 vg/6*4h k _ÕÑtf g2ÕÑož" yyg2ÕÑ k<3y<*\$•
 8<3* Š Nož¢%² - ~ N w <3 9z9- y 9g<).'hž g2ÙÁ†"ož
 žy ,+:QÀ©•• ož¢ P 9 äñ y y 9 <*2 ê¾äžg•Õhh k(8)2 (3)
 ø• ,+: µ3oW•% "ož
 Õhy" PÔ9 y ÕÑ N - ~kòç <3€ 9 z9- y 9g<).'h w P
 9 ñ y†" 9g<*8hê¾äk yÕÑ†"ož

k

Ú Z Ô W Š Đ Overcurrent Condition

3 o W • % " k ϕ y v ^ 9 ê ä 9 — > g < 3 9 ^ 9 ê ä 9 v y 9 h w 4 Ò ž
 • ñ y v y • ž • (8) 2 (3) ¼ • y , + : k 2 y ož _ Õ Ñ f y v Õ Ñ g
 , y v k y v y ž ú ? è v h ož y v Õ Ñ < 3 y - 4 * t 8 < 3 9 Š Ě ? N 4 ož ϕ %²
 ž ú N k < 3 9 ^ 9 < * * x > ž ú Š 9 ož
 9 < 3 y - 4 * \$ • N 8 < 3 9 Š k ϕ ž ú • • k < 3 9 t ñ^a y ož ϕ y ñ < 3 y z 9 v
 y 9 k / Ì > ñ 3 o Ù Á ož

k

• n Ñ Ô Ô W Ó Z Abnormal Charge Current Detection

3 o - ž k ò ç < 3 9 ' ñ - y 9 Y <) . ' k w 4 Ò ž • Ý - v y • ž ž •
 :) ; k (8) 2 (3) ¼ • - , + : 2 - ož _ Õ Ñ f ' o - v y ož
 • • - ~ k < 3 y - 4 * \$ • 9 ä 9 - ~ y 9 <) . ' ž k ' o - v % " † " ož 9 < P
 - i ¯ ' ä 9 3 o v - y k P 9 ® z P 3 " g < - ž k ' o - v y
 1 W • ož

Ž É • 5 Š Đ Load Short-circuiting Condition

ò ç < 3 9 ä 9 ? è ' 9 g < 9 . 5 8 : h k w 4 Ò ž • Ý ? è y • ž • g Z 9 . 5 8 : h k
 (8) 2 (3) 1 ž ú • • 2 y ož ϕ < 3 9 z 9 ? è ' 9 g < 9 . 5 8 : h ž k † ò ž ú t g
 " k ž ú ? è Õ Ñ 1 † " ož

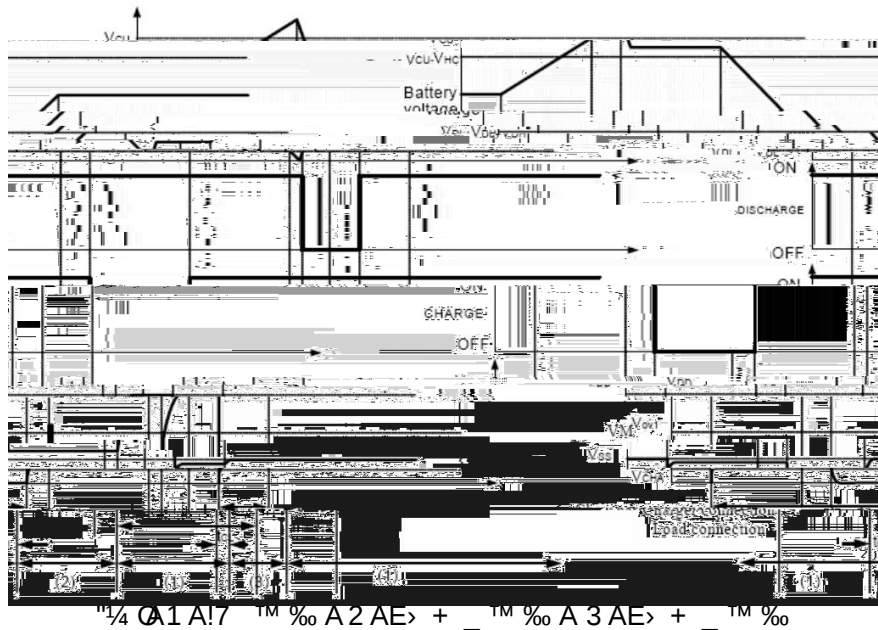
< Ô 1 Ñ Ô × 0V Battery Charging Function

4 9+]Æ y ñ < P g Ç - ožΦ - ~V ž kk* Ä B 8 â' Û Ě P g -
 kΦ P 9 ä 9 y y 9 g < * 2 h ž k' /) μ 3 o W • Û Á ož
 h y î ? ¶ y e P k ^a • t Ç) - k © e O P Ô Å Ð ož Ñ ¢ | P ^ • Æ k
 G • ñ Æ 1 P © k À Õ ^a • g < P - k © W 2 g < P - ož
^a • g < P - A - v y i ⁻ ' ¾ ä ož œ 4 ... ^a • g < P -
 /) k " P 9 û z ž ~ k ò - ož P 9 z 9 y y 9 g < * 2 h Y ž k
 g - v Û Á y ož
 Φ P † % ²) N ' è ž k è U k μ 3 o % " k 4 ž — c y ož ò ç D ÿ _ ě » k
 ... < 3 ' 9 ^ 9 - 4 * 9 g 1 < 3 - 4 * ? è ê N - ~ h k < U Y μ 3 o % " ož

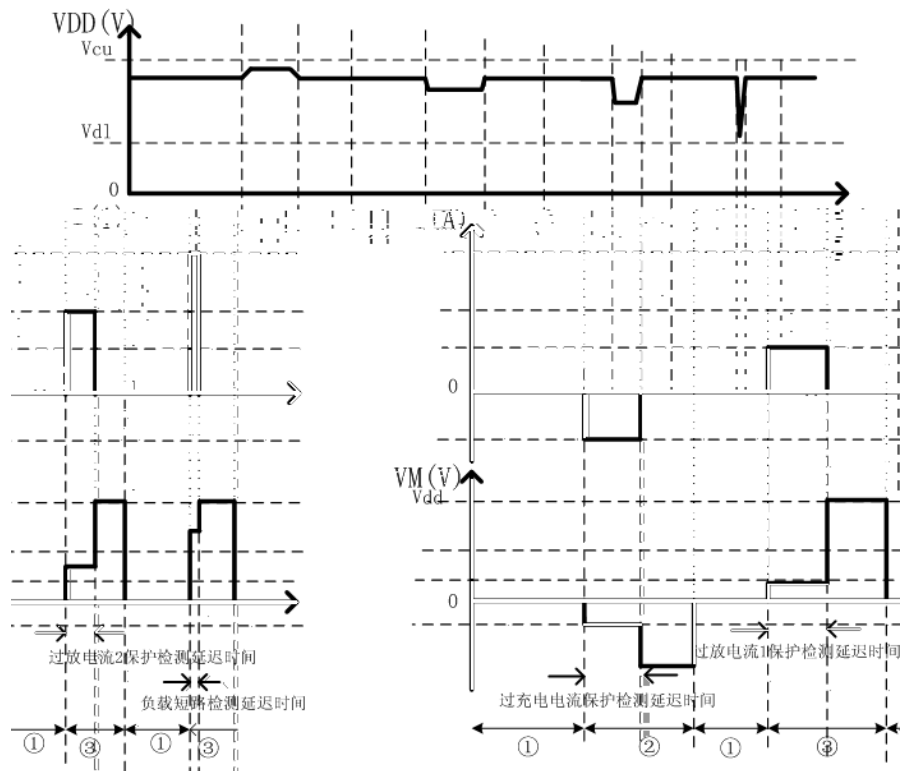
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Timing Chart

Overcharge And Overdischarge Detection



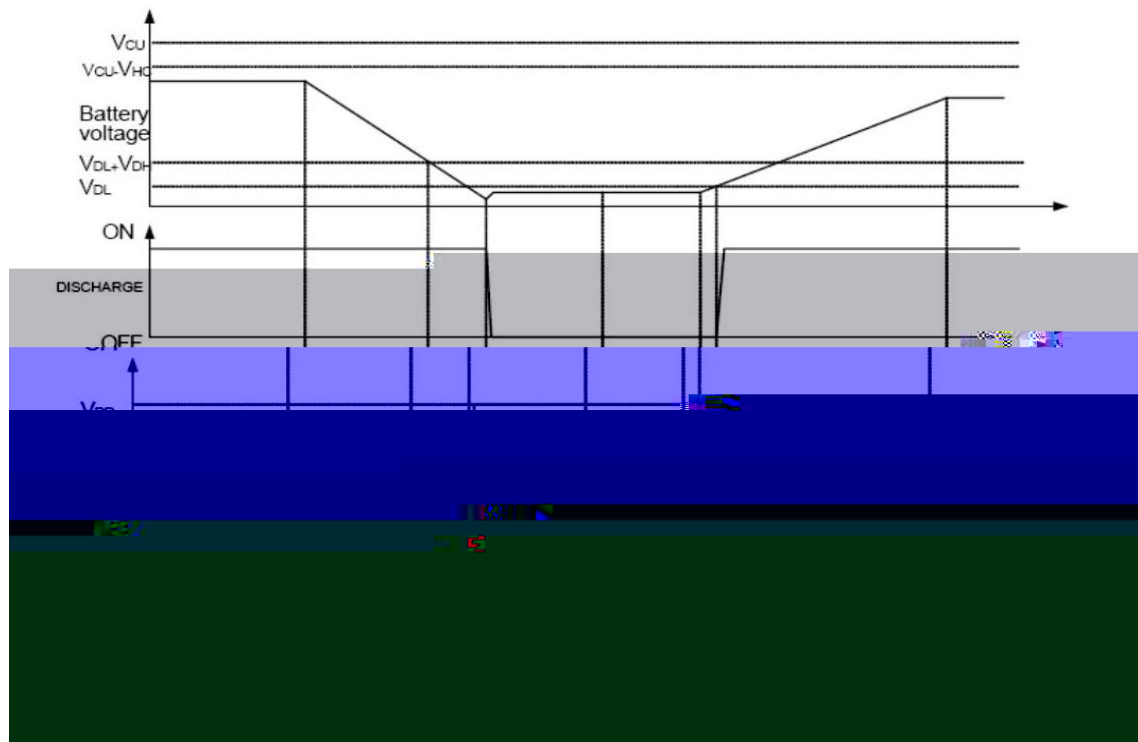
Overdischarge Current Detection



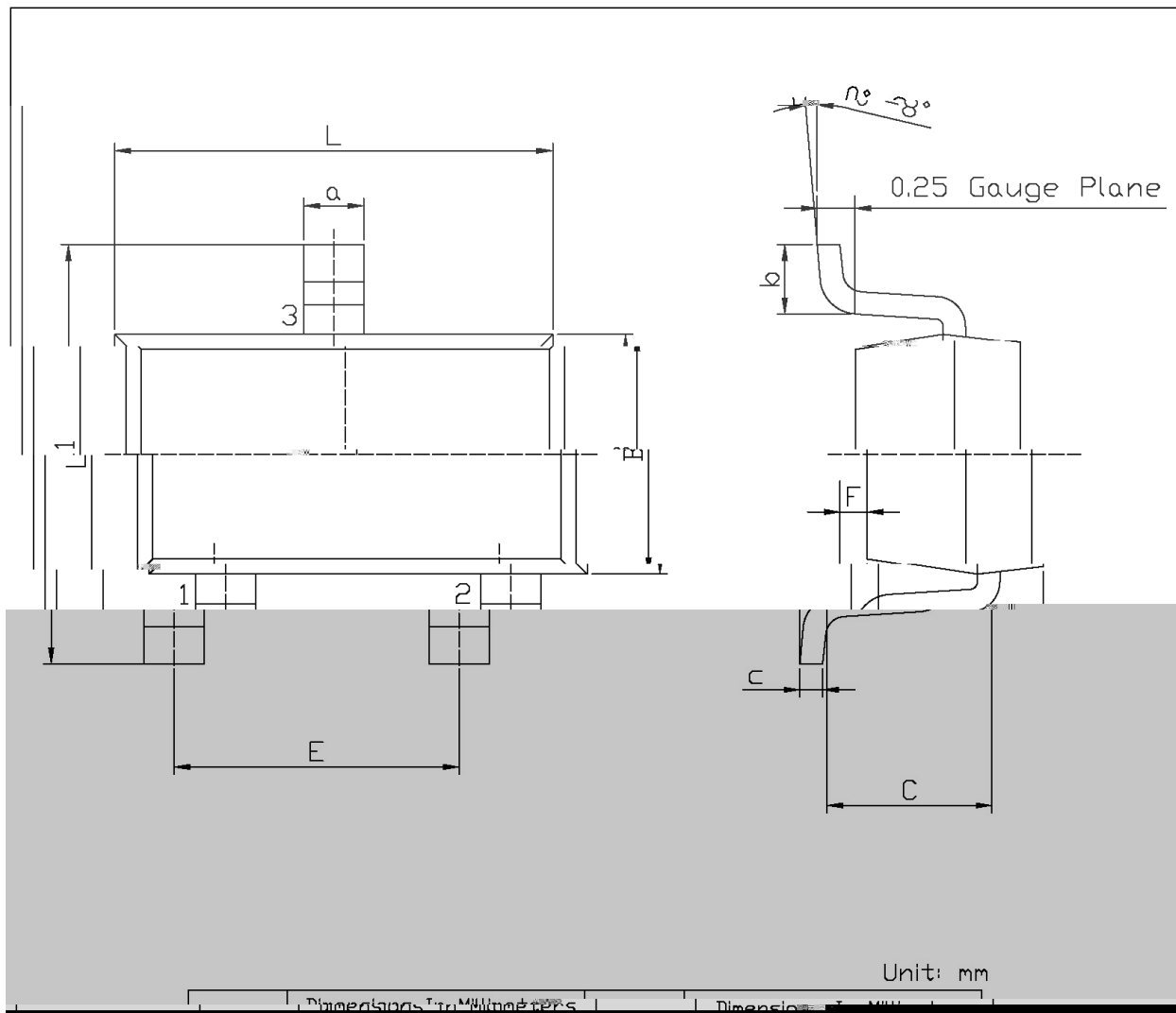
1. CHARGE 2. DISCHARGE 3. CHARGE 4. DISCHARGE

• } ¢ Timing Chart

¬ Ô — ó Z Charger Detection



Ø □ =) ⌀ / Package Dimensions



Unit: mm

Dimensions in Millimeters

Dimensions in Millimeters

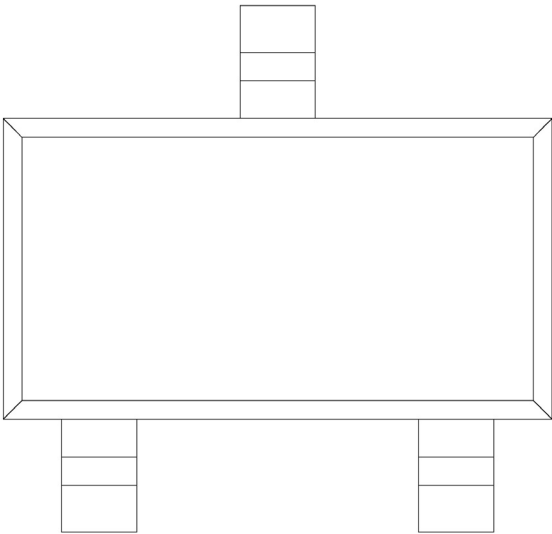
3.82

2.02

10.05

10.50

, M y f / Marking Instructions



^a ϕ y

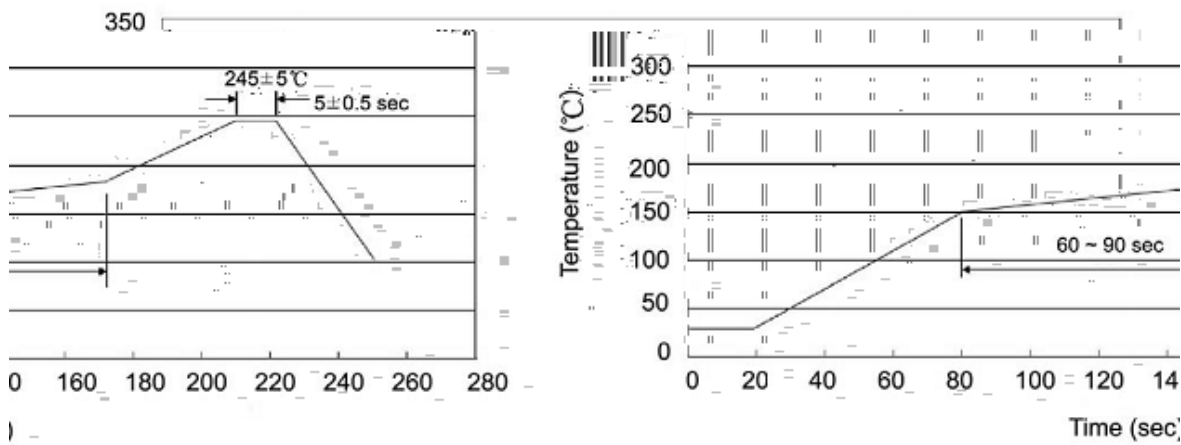
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D } ° Z

ÿ D Z W A k š ÿ D Z J o ž

šWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6



aϕy
o•Ä½“† ½ -kž• ½ -
o•Q>“† r -kž•4Ò r r - r
o•D NòìÒ0,† ½ -

ÂD /Cã p⁻»] / Resistance to Soldering Heat Test Conditions

“†y r - ž•y r r - r

G P á / Packaging SPEC.

2 & x

6GIQG MK /x¥"	;TOZY xfo				*OSKTYOUT x>* [TOZySS			
	TOZY 8KKR /TT	KKOZU^ /TT	KKKX(U^KY 5	ZKKZYU5[Z	KKR (U	8KKR	/TTKX	(U^" 5[ZKX (U^"
SOT-23-3	3,000	10	30,000	4	120,000	s×8	210×205×205	445×230×435

„Đyf / Notices