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Notes：

(1) The chip power consumption shall not exceed the maximum power consumed by the package.

(2) This product has anti-

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Parameter	Symbol	Value	Unit
V_{DD} input pin voltage	V_{IN}	-0.3 to +6	V'
V_M input pin voltage	V_{VM}	-6 to +10	V
Power Dissipation	P_D	400	mW
Maximum Junction Temperature	T_J	125	℃
Lead Temperature	T_L	300	℃
Operating Junction Temperature	T_{opr}	-40 to +85	℃
Storage Temperature	T		

&K<0/;=.98':&*'59' .1018;94.'						
Equivalent FET on Resistance	R_{DS}	V_{dd}=3.6V，I_{VM}=1A	15	25	40	mΩ
L/.3'8.F7.3;8<3.'7358.48059'						
er Temperature Protection	OTP				1	℃
perature Recovery	OTPR			15	13	℃
					10.4	
		V_{DD}=3.6V?				

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The BRCL3230BME detects this voltage and releases the overcharge condition. Consequently, in the case that the battery voltage is equal to or lower than the overcharge detection voltage (VCU), the BRCL3230BME returns to the normal condition immediately, but in the case the battery voltage is higher than the overcharge detection voltage (VCU),the chip does not return to the normal condition until the battery voltage drops below the overcharge detection voltage (VCU) even if the load is connected. In addition, if the VM pin voltage is equal to or lower than the overcurrent 1 detection voltage when a load is connected and discharging starts, the chip does not return to the normal condition.

Note: If the battery is charged to a voltage higher than the overcharge detection voltage (VCU) and the battery voltage does not drops below the overcharge detection voltage (VCU) even when a heavy load, which causes an overcurrent, is connected, the overcurrent 1 and overcurrent 2 do not work until the battery voltage drops below the overcharge detection voltage (VCU). Since an actual battery has, however, an internal impedance of several dozens of mΩ, and the battery voltage drops immediately after y l; w c ℵ ee s 1 E ercurrent 1 A Ŧ n

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Ć Ä Ý Þ Ť ť Ŧ º ŧ Ó b b Ô Ö Î í ¦ Î è : & Ł Õ Ă r b ¼ Ö Î í ¦ Î Ò b Ô ½ ¾ b ¼ Ū Û Ü ū Ŭ Á Đ ŭ ŗ Ò Ó b Ô ½ ¾ À ă Á Đ Ap] qB2B3A r s ů ņ Ó b ¸ s ¹ º Ű ű Ó b ® Ç ñ ŋ Ō IJ ä Ò Ó b Ô ŋ Ō Õ ¯ ° Ò Ó b Ô 4 º Ò Ó b Ô 2 ¿ Ā ā Õ c b Ô Ū ® Ò Ó b Ô ŋ Ō Ŧ Ă r ¿ N ĭ ĵ ų p Ă r · b œ þ Õ Ė ± ® ŧ ë Ÿ Ā ā ŷ Ė ź º Ă r b ¼ Ö Î Ă ĵ ĵ Ŗ Ƨ Ā ā b œ ź & b ¼ ®

ğ Î Ă r ¿ N ĭ ĵ ł Đ ŷ Ė p Ă r · b œ º ŧ Ā ā ņ Ň º Ă r b ¼ ų Ķ ŗ Ĝ b ˑ ® ŧ ½ ¾ ŗ Ă r b ˑ à Î Ò Ô 4 ½ ¾ b ¼ º á â Ŷ ŗ Ć Ä Θ ą ®

When the discharging current becomes equal to or higher than a specified value (the VM pin voltage is equal to or higher than the overcurrent detection voltage) during discharging under normal condition and the state continues for the overcurrent detection delay time or longer, the BRCL3230BME turns off the discharging control FET to stop discharging. This condition is called overcurrent condition. (The overcurrent includes overcurrent, or load shortcircuiting.) The VM and GND pins are shorted internally by the RVMS resistor under the overcurrent condition. When a load is connected, the VM pin voltage equals the VDD voltage due to the load.

Because of the connection between the VM and the GND by the RVMS resistor º when the load is removed, the VM pin goes back to the GND potential since the VM pin is shorted the GND pin with the RVMS resistor. Detecting that the VM pin potential is lower than the overcurrent detection voltage (VIOV1), the IC returns to the normal condition.

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Ć Ä ¢ b Á º Ŕ ŕ Ă r b ¼ b ŗ ¢ b ¾ b ¼ Ŋ Ŧ Č] ŋ 1 č º Û Ü ū Ŭ Á Đ Ò Ò ¢ b Ô ¾ À Á Á Đ Č ¹] ũ č º Ap] qů ņ ¢ b ¸ s ¹ Ű ű ¢ b ® Ç ñ ŋ Ō IJ ä Ř Ä ¢ b b Ô À ¾ ®

ņ Ň ¢ b Ë º Ă r ¿ N ĭ ĵ ł Đ b ¼ ¦ Î ¢ b Ë ½ ¾ b ¼ Č] ŋ 1 č Á Ř Ä ¢ b b Ô Ť ť ª ŵ ® ğ Î 3 Ă b £ ¢ b ´ Ú ƨ ² Σ ¦ Î L Ć Ä b Ô ¢ b ½ ¾ º b £ b ¼ ļ à & b £ Ć P ³ Ź 3 Ă ¢ b Á º Ř Ä ¢ b b Ô ½ ¾ Š L Ý Þ ®

If the VM pin voltage drops below the charger detection voltage (VCHA) during charging under the normal condition and it continues for the overcharge detection delay time (TCU) or longer, the BRCL3230BME turns the charging control FET off and stops charging. This action is called abnormal charge current detection.

Abnormal charge current detection is leased when the voltage difference between VM pin and GND pin becomes higher than the charger detection voltage (VCHA) by separating the charger. Since the 0 V battery charging function has higher priority than the abnormal charge current detection function, abnormal charge current may not be detected by the product with the 0 V battery charging function while the battery voltage is low.

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Ŕ ŕ Ă r b ¼ ¦ Î Õ c ¤ ¥ b ¼ Ũ Ă · ŋ ¶ p ¹ Ū º Û Ü ū Ŭ Á Đ ø Ò Õ c ½ ¾ À ă Á Đ Ũ Ĺ · ŋ ¶ p ¹ Ū º Ap] qŠ l Ā ā ņ Ň Ű ű Ó b ® ŧ Ă r b ¼ à Î Õ c ¤ ¥ b ¼ Ũ Ă · ŋ ¶ p ¹ Ū Á º ţ Ŕ Ā ā ų Ŧ ŵ º Ā ā Õ c ŋ Ō Š ª ŵ ®

If voltage of VM pin is higher short circuiting protection voltage (SHORT) and it continues for the tSHORT or longer, the BRCL3230BME will stop discharging and battery is disconnected from load. This status is released when voltage of VM pin is higher than short protection voltage (VSHORT), such as when disconneg the load.

0V / $R' ;88.3@' J;3?09?':<948059

ƭ ´ Ú a Î Ţ ő Ư š Ó b ŗ 3Ă & b £ ³ Ź ư ¢ b ® ŧ ¢ b Ë Ʊ ź Á º ň Ņ Ò + ó ƀ Ɓ ś Ƈ ƥ b £ ³ Ź ¢ b º ŧ b £ b ¼ ¦ Î Ò Ó b ½ ¾ b ¼ Ũ Ă ĵ q Ū Á º ¤ ¥ Ɲ] ³ Ƣ Ć Ä Ý Þ Θ ą ®
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Č 2 č ƿ ƶ Ʒ Ь 3Ă b £ ¢ b ´ Ú I ! ƿ ¢ b Ò Ô ½ ¾ ´ Ú I ƨ ² Σ Ů ¦ ® ȟ ƭ 0 È a ƿ ƶ Ʒ Ь 3Ă b £ ¢ b I ´ Ú & Ɲ] º P b £ b ¼ DŽ à & Á Dž ň dž . ¢ b ® b £ b ¼ à Î Ò Ó b ½ ¾ b ¼ Ũ Ă ĵ q Ū Ŋ Ŧ Á º L Ú ³ Ź ¢ b Ò Ô Θ ą & ½ ¾ ®
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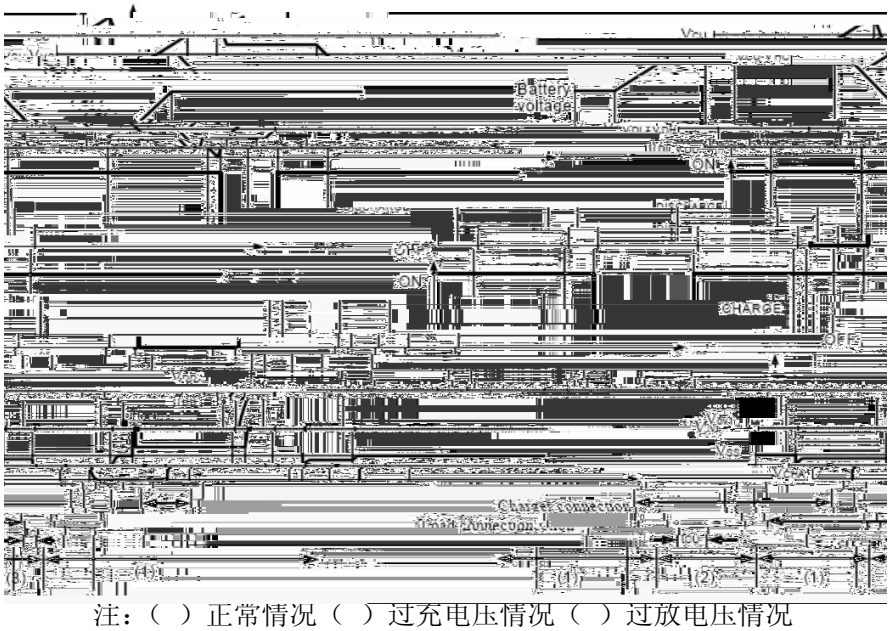

注：（ ）正常情况（ ）过充电压情况（ ）过放电压情况

/Overcharge L/.32014J;3?.' <33.98'(.8.48059



注：（ ）正常情况 （ ）过充电流状态（ ）过放电流状态

/ *0F09?' J;38

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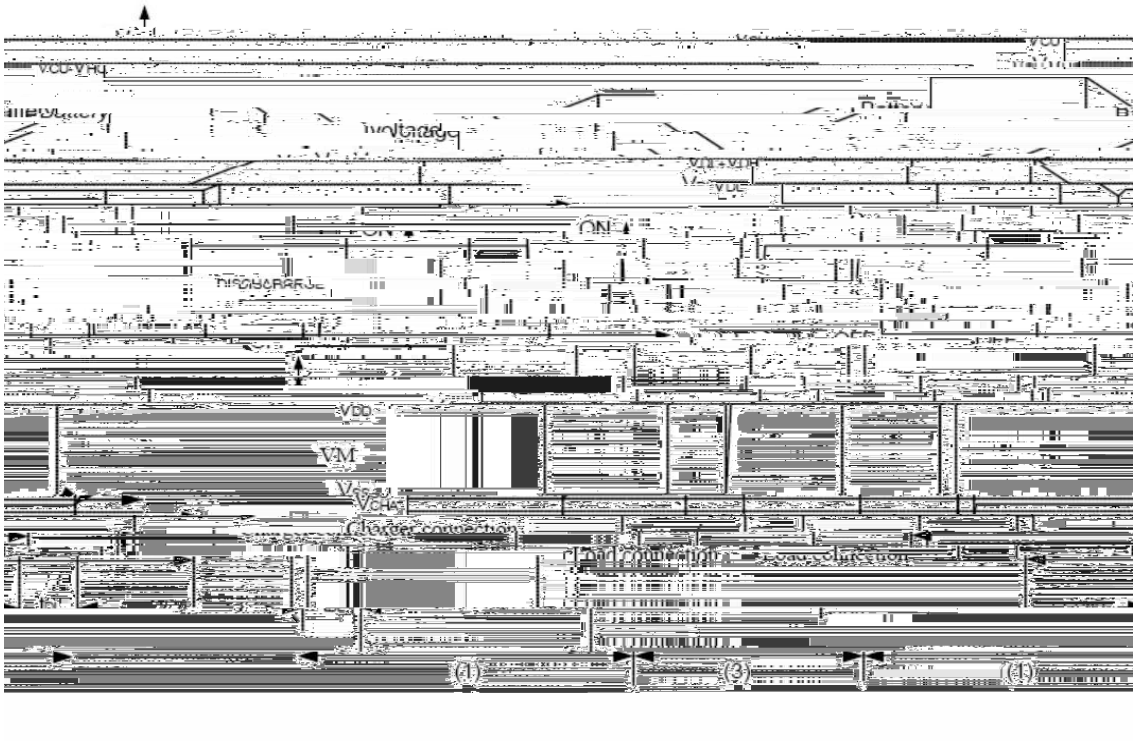

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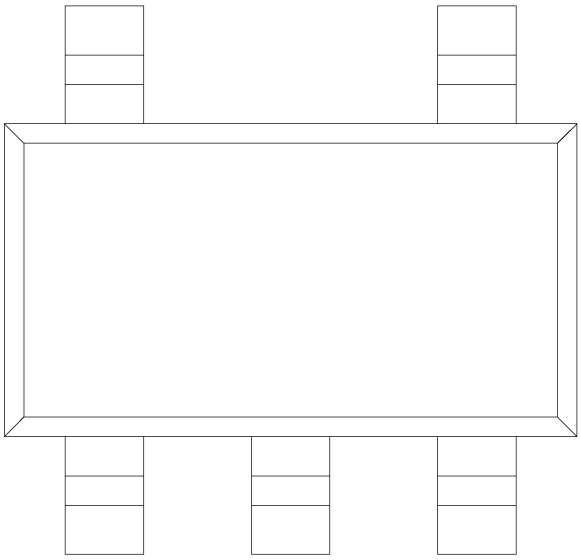

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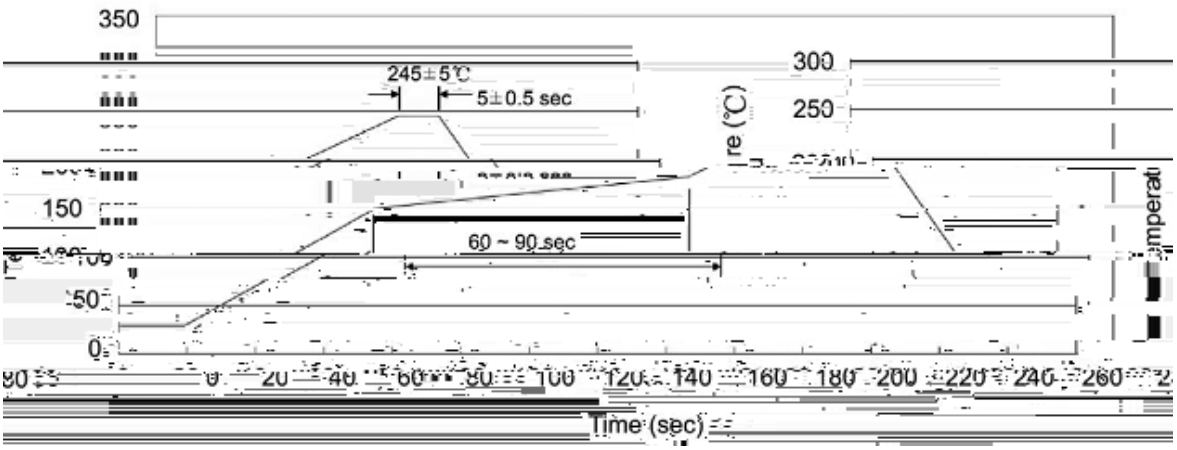
Note:

3230B: Product m3s

G I' '-' ' Temperature Profile for IR Reflow Soldering(Pb-Free)



ij Ĵ ÿ

1 I Ŏ ŏ ý © 150Ŭ180 ŭ º Á Đ 60Ŭ90sec;

2 I Ũ Ŀ ý © 245ũ5 ŭ º Á Đ ū Ŭ ä 5ũ0.5sec;

3 I ě Ė . Ş Ű ű Ũ © ä 2Ŭ10 ŭ /sec.

Note:

1.Preheating:150~180 ŭ , Time:60~90sec.

2.Peak Temp.:245ũ5 ŭ , Duration:5ũ0.5sec.

3. Cooling Speed: 2~10 ŭ /sec.

' '-' ' ' .1018;94.'85'+5=2.309?', .;8'*.18' 592080591'

ý © ÿ 260ũ5 ŭ Á Đ ÿ 10ũ1 sec. Temp.:260ũ5 ŭ Time:10ũ1 sec

' '-' ' A;4>;?09?'+A& Ů'

ŭ Ů ¯ k / REEL

Package Type	Units					Dimension (unit mm³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box