



5 é / Descriptions

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□ª / Features

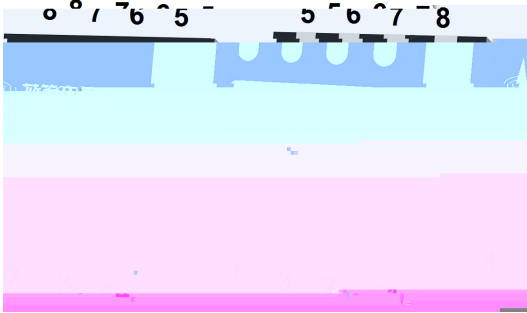
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Ð ÷ / Applications

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À¹ € Ð Ô • ¢

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<div><div>– ÚZ</div><div>6OT 4[SHKX6OT 4GSK</div></div>	<div><div>– df</div><div>VDD</div></div>	<div><div>– a¢</div><div>6OT *KYIXOVZOUT</div></div>
	<div><div>- 4 *</div><div>< 3</div></div>	<div><div>> €</div><div>/ ìª kN P / ¿ â</div></div>

3. Absolute Maximum Ratings(Ta=25℃ ;)

@ f/Parameter	... Z/Symbol	f > /Value	% y/Unit
V _{DD} input pin voltage	V _{IN}	-0.3 to +8	V
V _{VM} input pin voltage	V _{VM}	-8 to +10	V
Maximum Junction Temperature	T _J	-40 to +145	
Storage Temperature	T _{stg}	-55 to +145	
ESD g HBM Mode h	ESD	f 4000	V

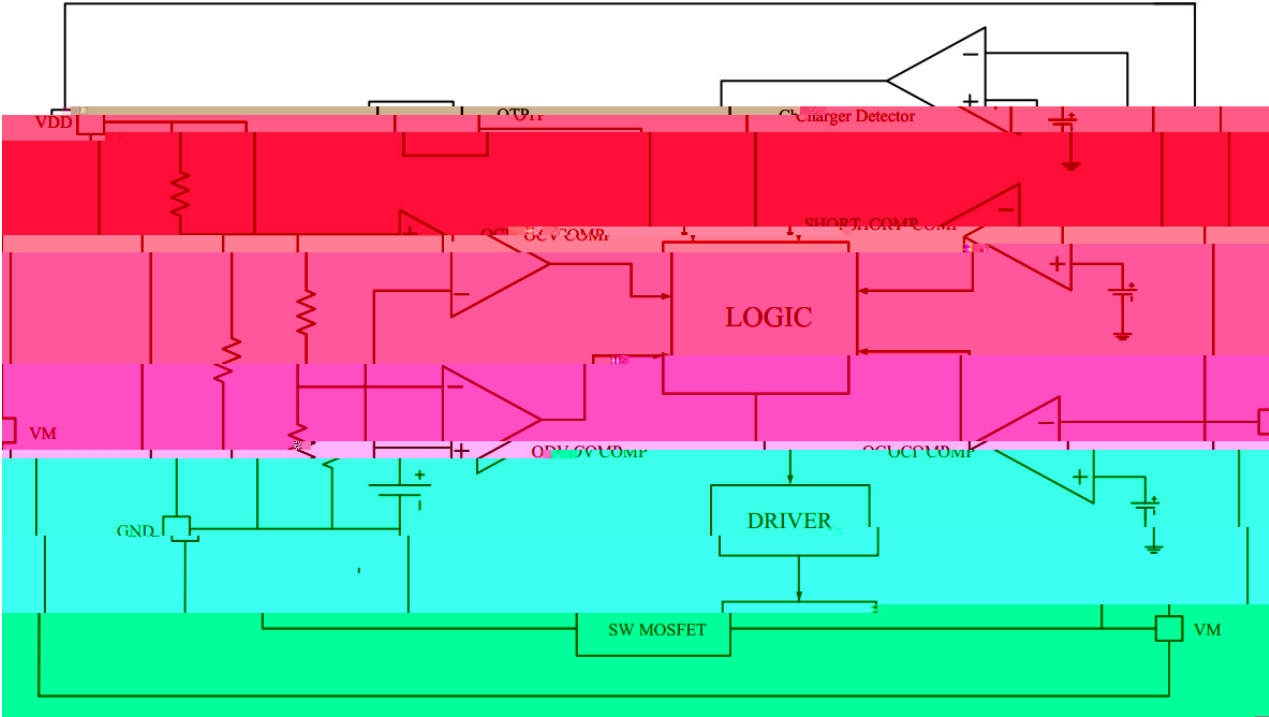
4. Electrical Characteristics(Unless otherwise specified,Ta=25℃ ;)

@ f Parameter	... Z Symbol	y i Ú ^ Test Condition	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Power supply						
Supply Voltage	V _{DD}		0		6	V
Charger input voltage	V _M		-6		6	V
Detection voltage						
Overcharge Detection Voltage	V _{OCV}		4.25	4.3	4.35	V
Overcharge Release Voltage	V _{OCR}		4.04	4.10	4.16	V
Overdischarge Detection Voltage	V _{ODV}		2.30	2.40	2.50	V
Overdischarge Release Voltage	V _{ODR}		2.90	3.00	3.10	V
Detection current						
Overdischarge Current Detection	I _{OCI}		9	11.5	14	A
Load Short-Circuiting Detection	I _{SHORT}		15	25	35	A
Overcharge Current Detection	I _{CHA}		7	10	13	A
Static current						
Current Consumption in Normal Operation	I _{OPe}	V _M =0V		3.5	7	A
Current Consumption in Dormancy	I _{PDN}	V _{DD} =1.8V		0.6	1.5	A
Pull-up and Pull-down Current from VM						
Internal pull-up current	I _{PU}			14		A
Internal pull-down current	I _{PD}	V _M =1V		14		A
Equivalent FET on Resistance						
Equivalent FET on Resistance	R _{DS}	I _{VM} =1A	12.5	16	18	m

Electrical Characteristics(Ta=25 ;)

@ f Parameter	... Z Symbol	y i Ú ^ Test Condition	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Over temperature protection						
Over-temperature protection	OTP			145		
Over-temperature protection release temperature	OTPR			120		
Detection delay						
Overcharge Voltage Detection Delay Time	T _{OCV}			100		ms
Overdischarge Voltage Detection Delay Time	T _{ODV}			100		ms
Overdischarge Current1 Detection Delay Time	T _{IOV1}			8		ms
Overdischarge Current2 Detection Delay Time	T _{IOV2}			2		ms
Load Short-Circuiting Detection Delay Time	T _{SHORT}			150		ms

Functionl Block Diagram



× 5 é	Functional Description
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↳ Ô — ó Z Charger Detection

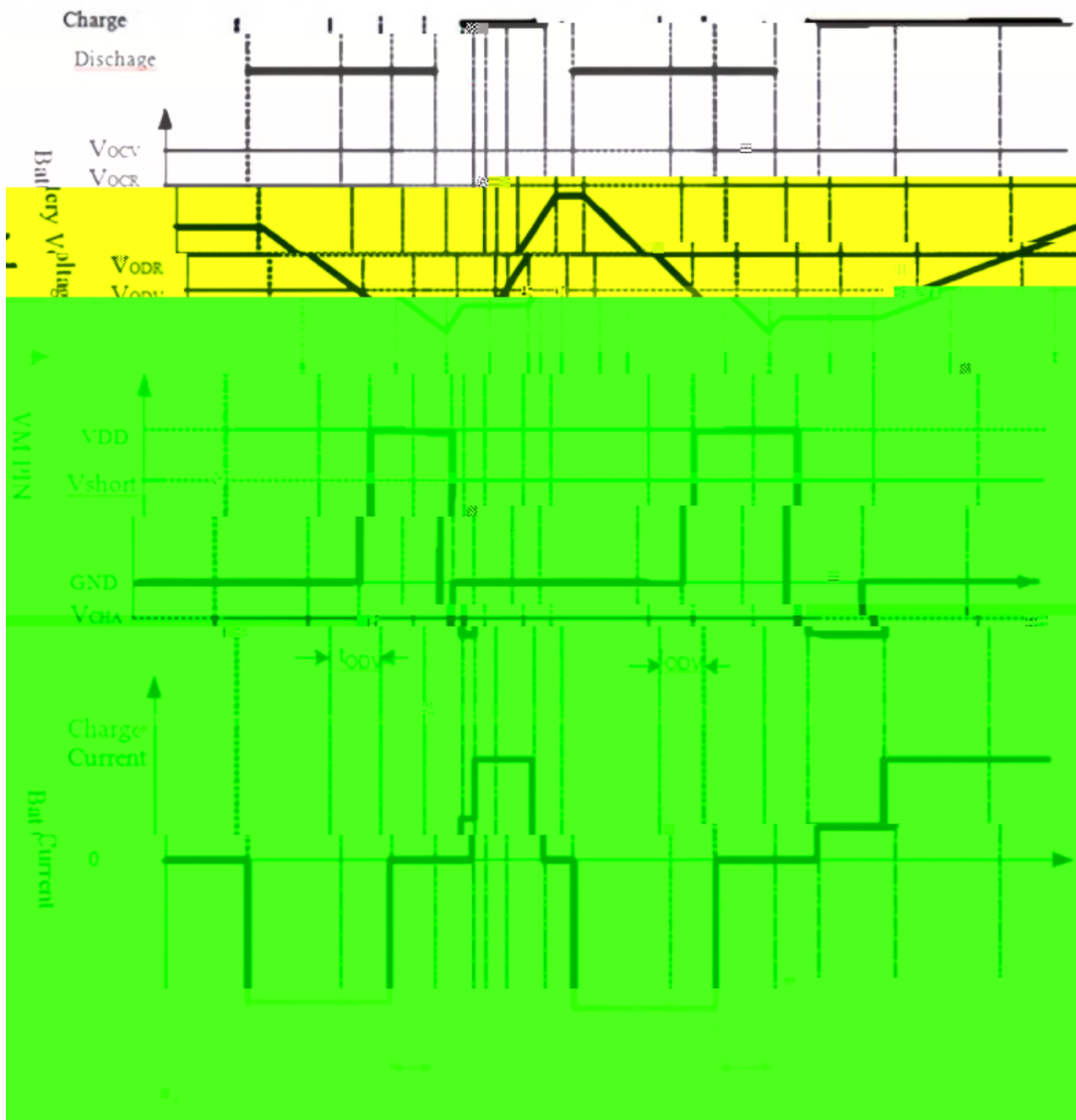
$\Phi \hat{O} 9 y \hat{U} \hat{A} P y - \sim, k 3 < 3' 9 4 9^{\wedge} 9 - \sim y 9 <$ $) . ' k \Phi P$
 $9 \acute{Y} 9^{\wedge} 9 y y 9 <$ $5^* < k(8) 2 \quad * @ 8 1 K y y \hat{U} \hat{A} o \check{z}$

< Ô 1 ↳ Ô × 0V Battery Charging Function

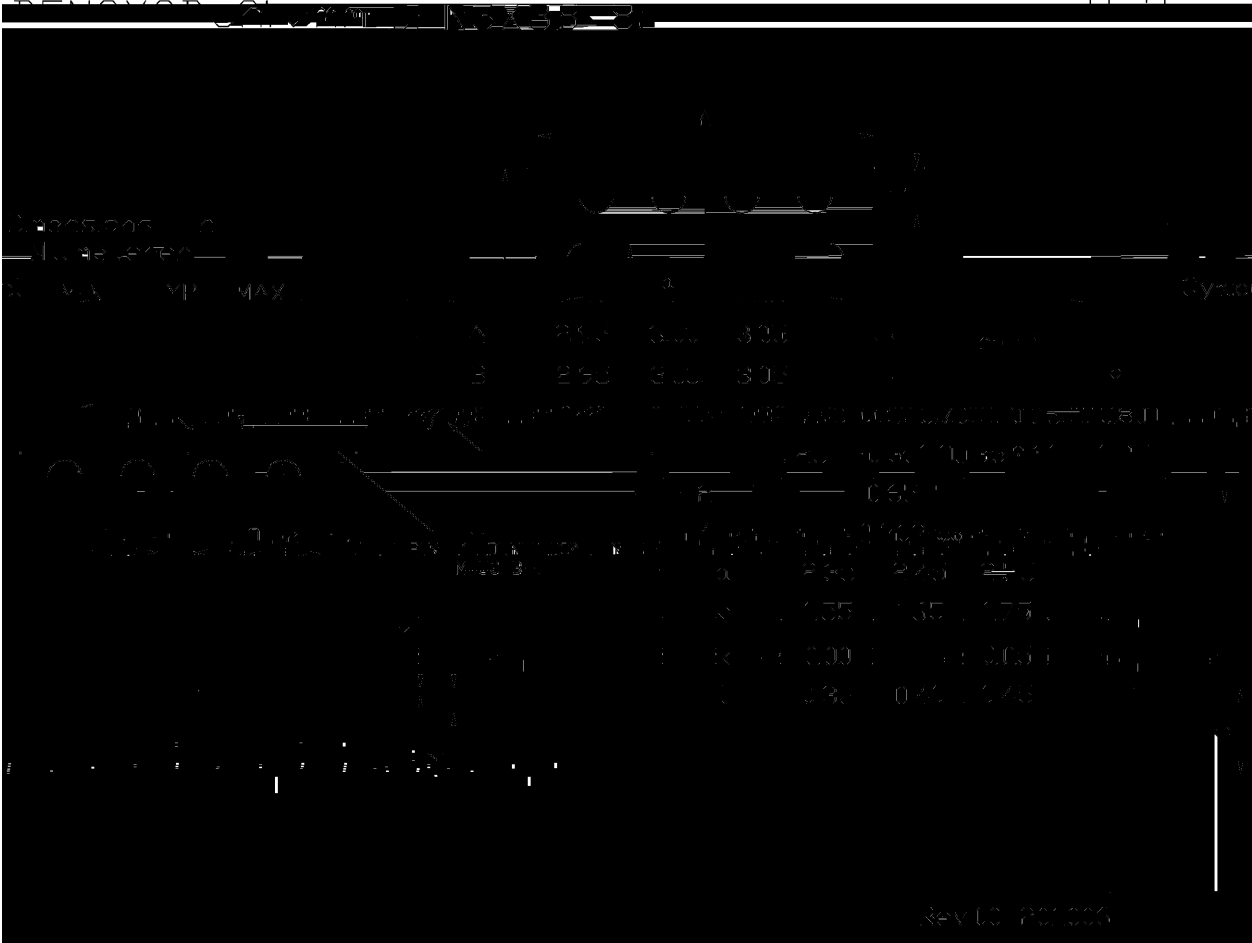
$U Y < - k P 9 z 9 < k - / \hat{I} \mu g 2 \hat{U} \hat{A} k 4 \check{z} 3 5 9 \bullet \bullet k / \hat{I}^* \} 8 \hat{a}' - o \check{z}$
 $P 9 z 9 < k - v \acute{Y} 9 S' k Y^2 P y / \hat{I} C^{\circ} o \check{z}$

• } ¢ Timing Chart

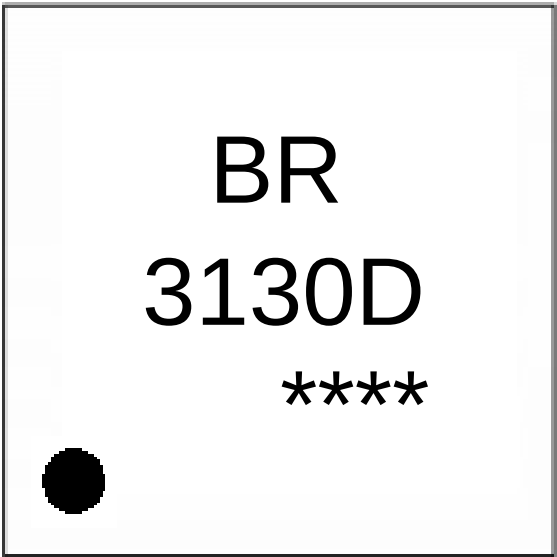
Ú Z ` Ñ Ô ` n V € Overdischarge ` Charging ` Normal Operation.



Ø □ =) ¢ / Package Dimensions

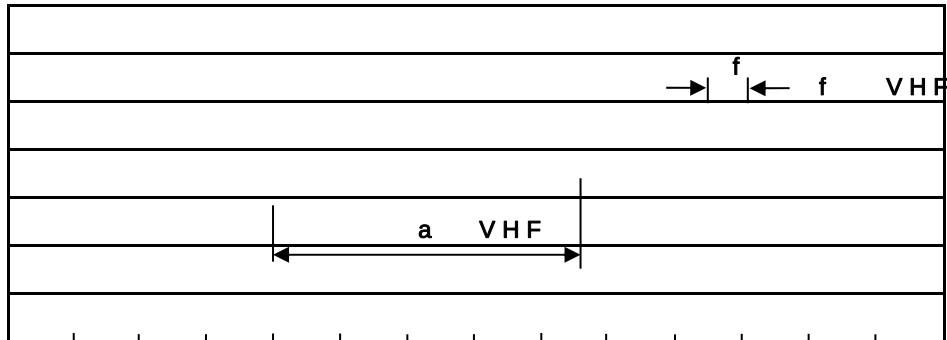


, M y f / Marking Instructions



^a ¢ y
(8 y , [W A
 * y ° Z W A
 y ÿ D Z W A k š ÿ D Z J

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



^a Ć y

10• Ä ½ “ † 150 ½180 - k ž • 60 ½90sec;

20• Q > “ † 245 r5 - k ž • 4 Ò 5 r0.5sec;

30•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

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

2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÄD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 260 r5 -

ž • y 10 r1 sec.

Temp.:260±5

Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û H					Dimension ;>û p . (unit /Æmm³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
DFN3×3B-8L	5,000	2	10,000	6	60,000	13 s ×12	360×360×50	380×335×366

„Đ y f / Notices

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