



5 é / Descriptions

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□ª / Features

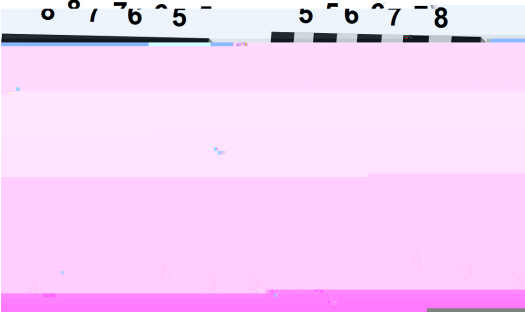
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Ð ÷ / Applications

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À¹ € Ð Ô • ¢

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 • ož ò ç P } µ D k Š 8 À 1 ož



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

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

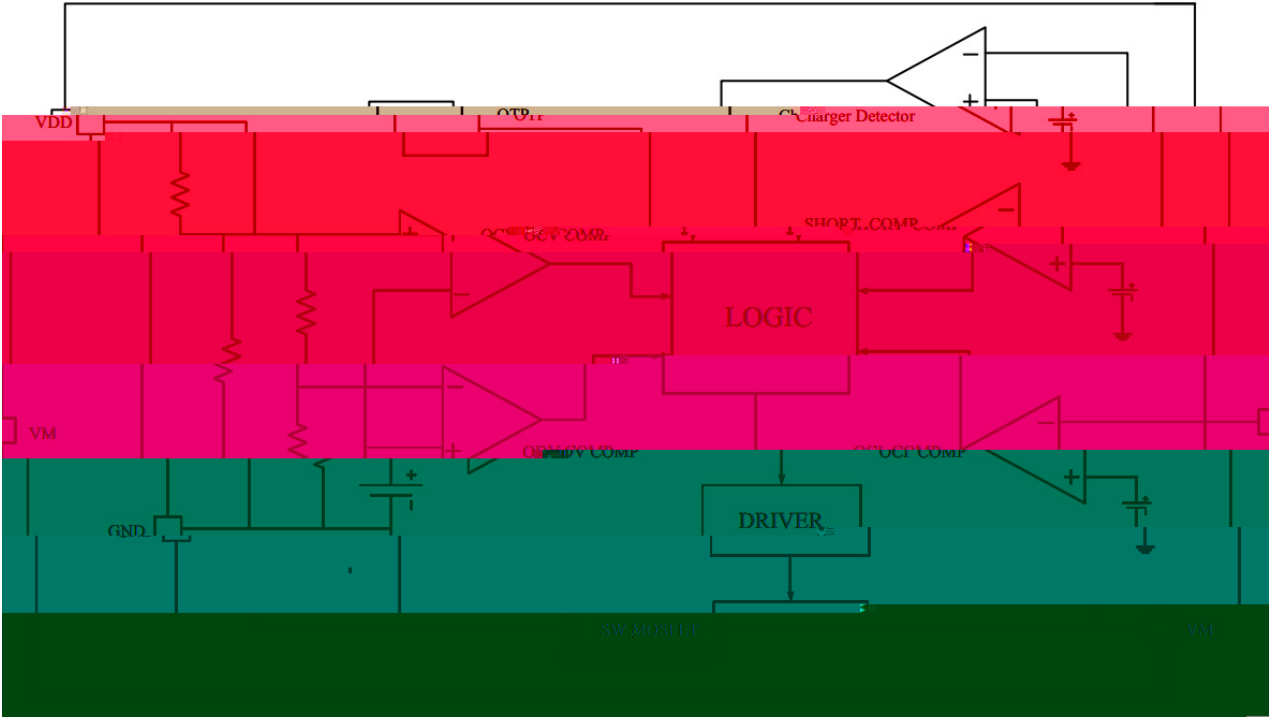
4 Electrical Characteristics(Unless otherwise specified,Ta=25℃ ;)

@ 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

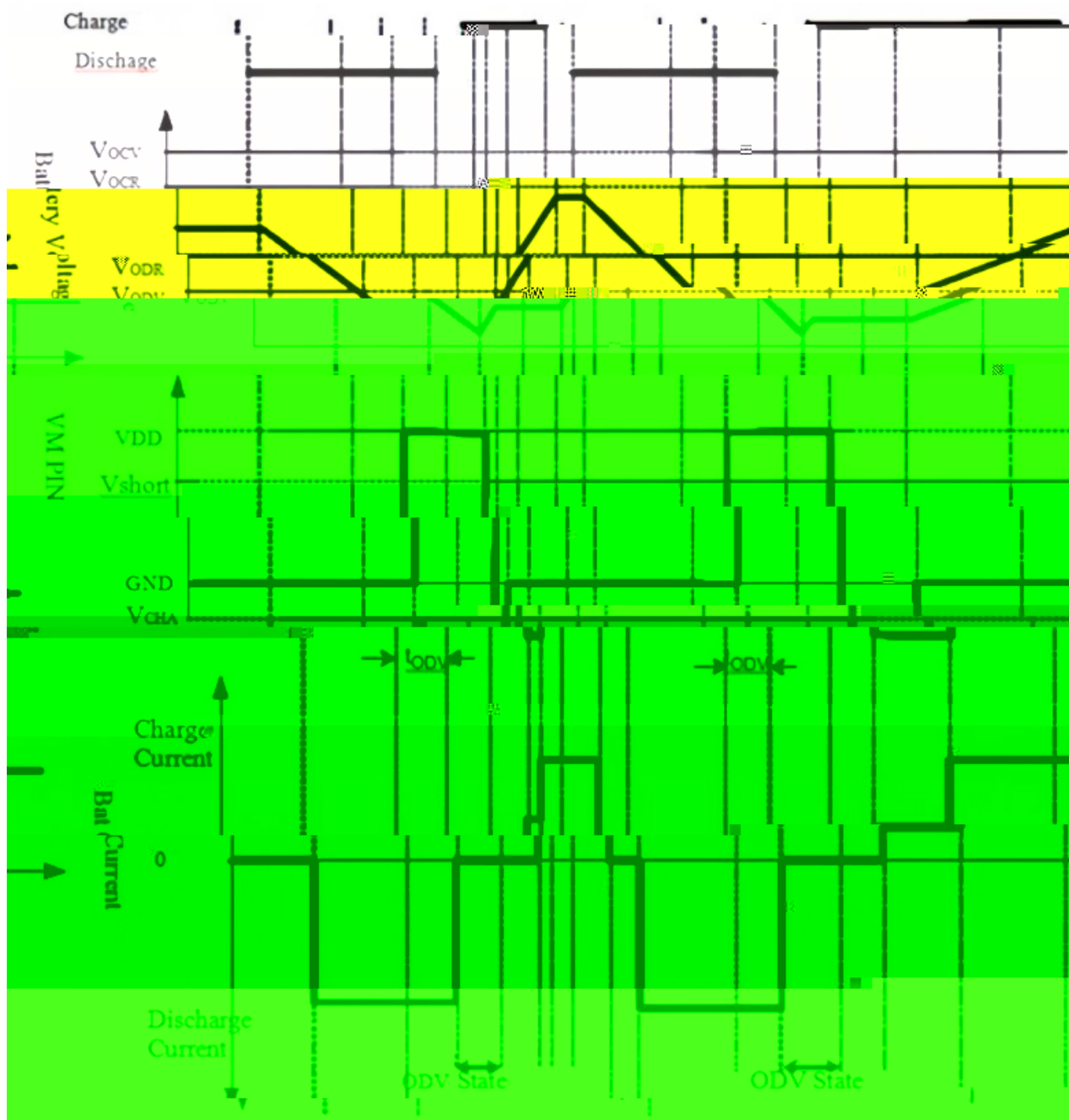
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< Ô 1 ➔ Ô × 0V Battery Charging Function

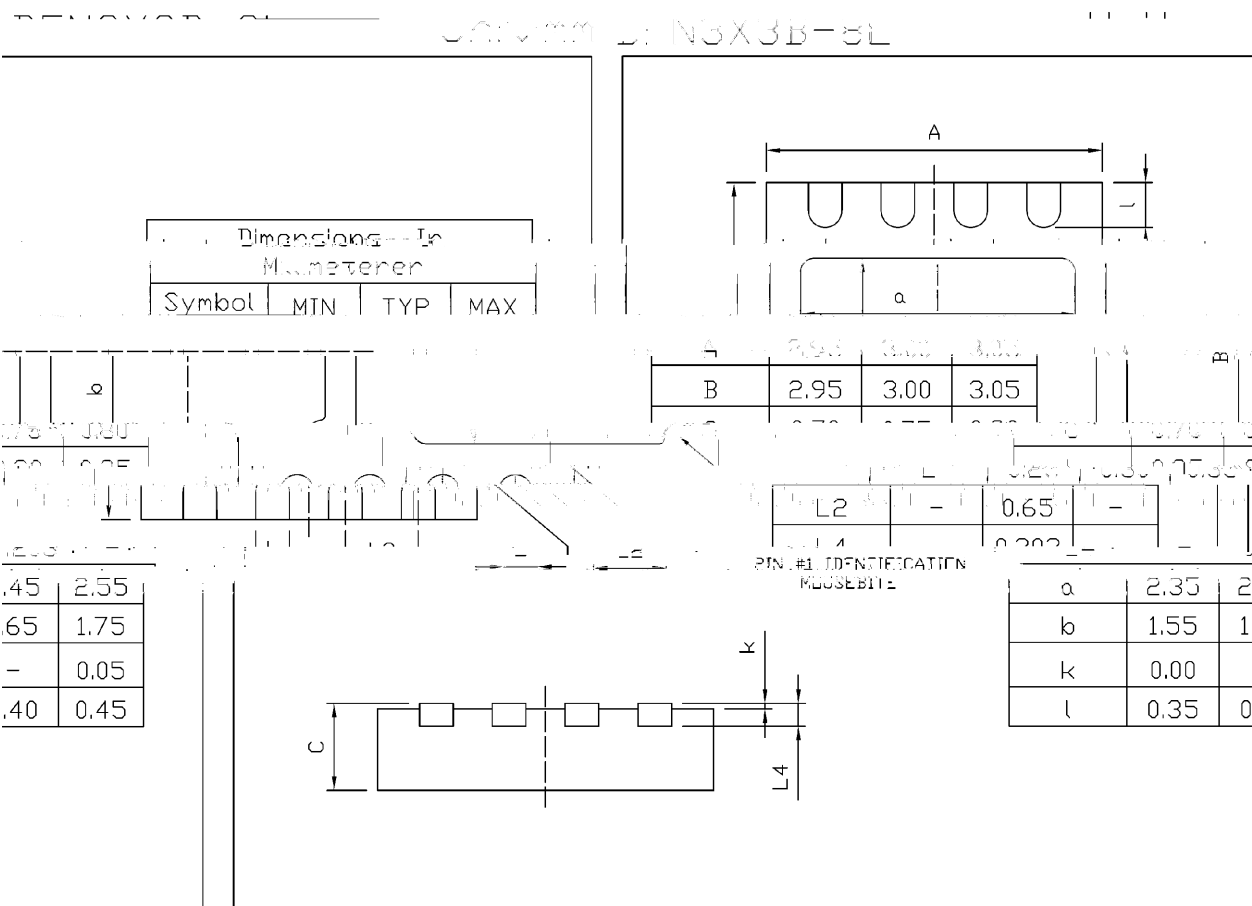
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• } ¢ Timing Chart

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

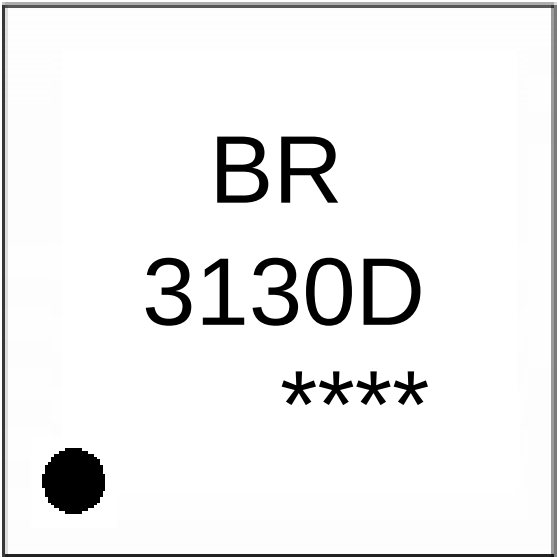


Ø =) ¢ / Package Dimensions



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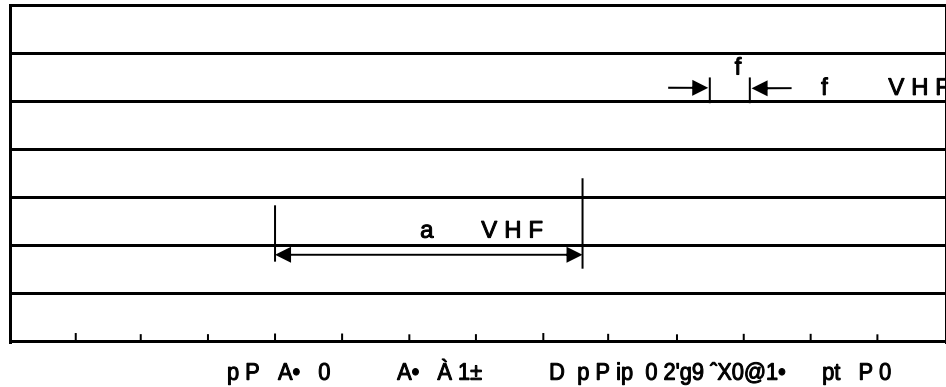
, M y f / Marking Instructions



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



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



a ç 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.

ÂD /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 Åmm³)		
	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

Î† U ^ ñ Ä 'Î® | c ¯ ² Á Ò ç ³ Øož

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