

BRCL4070ZR-4.21.2A/BRCL4070ZR-4.2

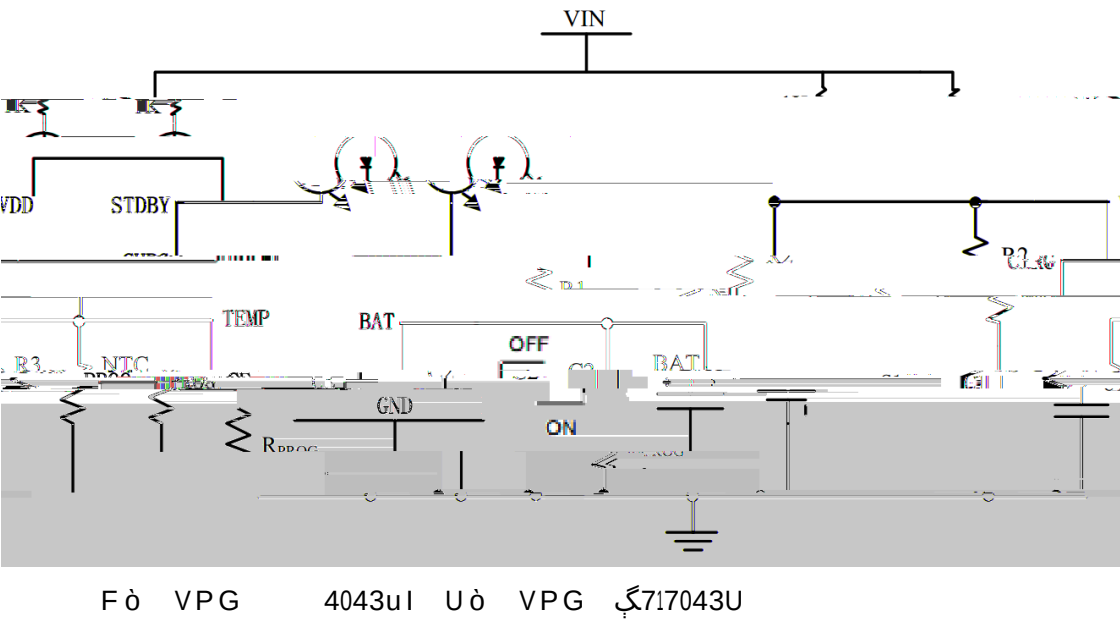
P-MOSFET4.2V4.2V1/10

BRCL4070ZR-4.2

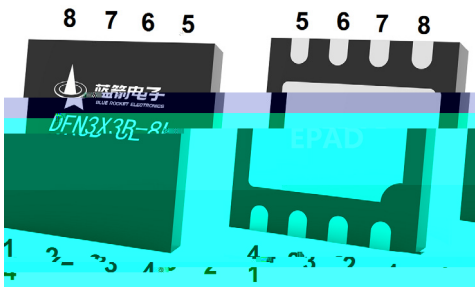
6.8V OVP
36V
0V
1.2A
/ / s

2.8V
DFN3×3B-8L
RoHS

XVE



/ Pinning



PIN Num.	Symbol	Function
1	TEMP	j
2	SUR J	ξ
3	GND	α
4	VDD	8Y
5	BAT	
6	STDBY	6
7	CHRG	
8	CE	α ω Η λ α β
EPAD	GND	α

/ Absolute Maximum Ratings(Ta=25)

PARAMETER	SYMBOL	RATINGS	UNITS
VDD/CHRG/STDBY Pin Voltage	V _{VDD/CHRG/STDBY}	-0.3~30	V
VCE Pin Voltage	V _{CE}	-0.3~36	
BAT Pin Voltage	V _{BAT}	-5~15	
PROG Pin Voltage	V _{PROG}	-0.3~6	
TEMP Pin Voltage	V _{TEMP}	-0.3~25	
Operating Ambient Temperature Range	T _{OP}	-40~+85	°C
Storage Temperature	T _{stg}	-55~+150	°C
Lead Temperature (Soldering, 10s)	T _{solder}	260	°C
ESD	HBM	2000	V
	MM	200	V



PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Power Supply						
Input Supply Voltage	V _{DD}		4.5	5.0	6.0	V
V _{DD} Under Voltage Lockout Threshold	V _{DD_UV}	V _{DD} from Low to High		3.8		V
V _{DD} Under voltage Lockout Hysteresis	V _{DD_UV_HYS}	V _{DD} from High to Low		200		mV
Input Over-Voltage Protection Voltage	V _{DD_OVP}		6.3	6.8	7.3	V
Input Over-Voltage Protection Voltage Hysteresis	V _{DD_OVP_HYS}			500		mV
Input Power Supply Current	I _{CC}	Charging mode (R _{PROG} =1K)		240	360	μA
		Standby mode, charging terminated		70	120	μA
		Shutdown mode (R _{PROG} not connected, V _{CC} <V _{BAT})		50	100	μA
Charging Current Setting						
R _{PROG} voltage at Constant Current Mode	V _{PROG}	V _{DD} =5V;R _{PROG} =1K	0.85	1	1.15	V

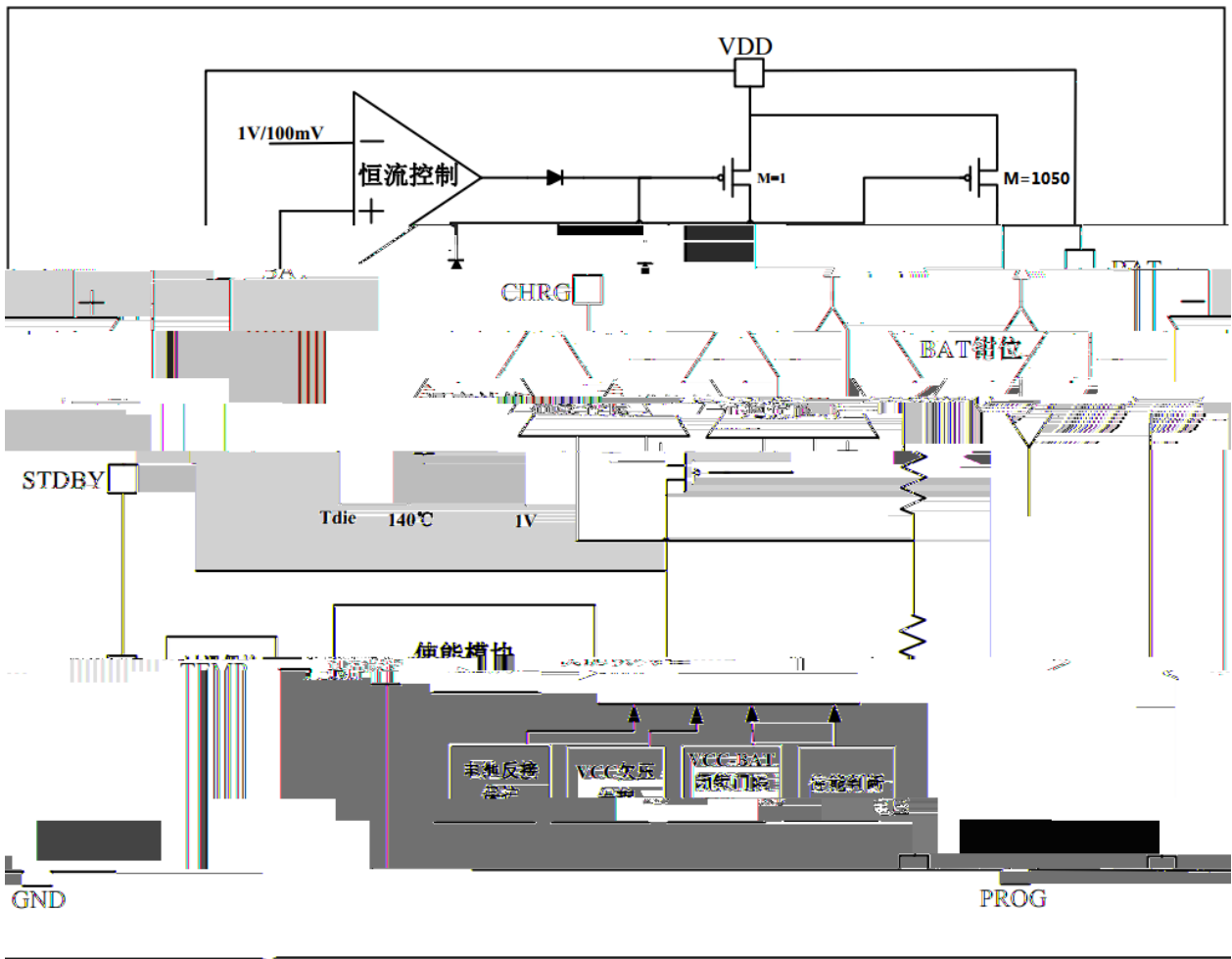
BAT Pin Current

I

/ Electrical Characteristics(Ta=25)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Indicator Pin Status CHRG/STDBY						
CHRG Pin Output Current	I _{CHRG}	V _{DD} =5V;V _{CHRG} =1V	1	2.5	5	mA
STDBY Pin Output Current	I _{STDBY}	V _{DD} =5V;V _{STDBY} =1V	1	2.5	5	mA
Internal Temperature Compensation						
Internal Temperature Compensation	T _{OTC}			140		
Overtemperature Detection Threshold	T _{OTPH}	WHPS QWF 𐀀	43%* VDD	45%* VDD		V
Low Temperature Detection Threshold	T _{OTPL}	WHPS QWF 𐀀		80%* VDD	82%* VDD	V

/ Principle block diagram



BRCL4070ZR-4.2 ħ /
BRCL4070ZR-4.2 Ĵ USB AC1.2A ,
6.8V

UVLO PROG 1%
BAT 2.8V,
1/5
BAT Ĵ 2.8V
BAT BRCL4070ZR-4.2 ħ
1/10

I CH =1950/RPROG ICH
RPROG RPROG 200mA
RPROG =1950/0.2 = 5.25KΩ
RPROG 1%

⌘ ⌘ ⌘ RPROG	RPROG
RPROG(K) I	CH(mA)
1	1950
1.2	875
5	205
10	100

BAT i Ĵ τ 2ms TRECHARGE
4.05V 80
⌘ Ĵ i ε ⌘ Ĵ Ò

/ Function description

6 140 l i BRCL4070ZR-4.2 i y
 I \$ D : E y

Q

VDD

VDD₆

UVLO

ψ

VDD₆

≈200mV

Qj

BRCL4070ZR-4.2

i Q

VDD VDD *

Q

*

BRCL4070ZR-4.2

CHRG	H	STDBY	⌘	CHRG	STDBY	⌘
j		l	j			

	CHRG/	STDBY/
*		
Σ +WHPS		
YGG	Δ	

/ Package Dimensions

DFN3X3B-8L Unit:mm



/ Marking Instructions



EU	И			
7373	N			
XX		İ		
----	N	⌘	N	ψ

N	
BRCL4070ZR-4.2	BR/4070-42/****

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- 1

150 180

60 90sec;
- 2

245±5

5±0.5sec;
- 3

2 10

/sec.
- Note:

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

2.Peak Temp.:245±5 , Duration:5±0.5sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm ³)
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