

/ Descriptions

BRCL4070ZR-4.2	1.2A	/	BRCL4070ZR-4.2
P-MOSFET			
4.2V		4.2V	1/10

BRCL4070ZR-4.2

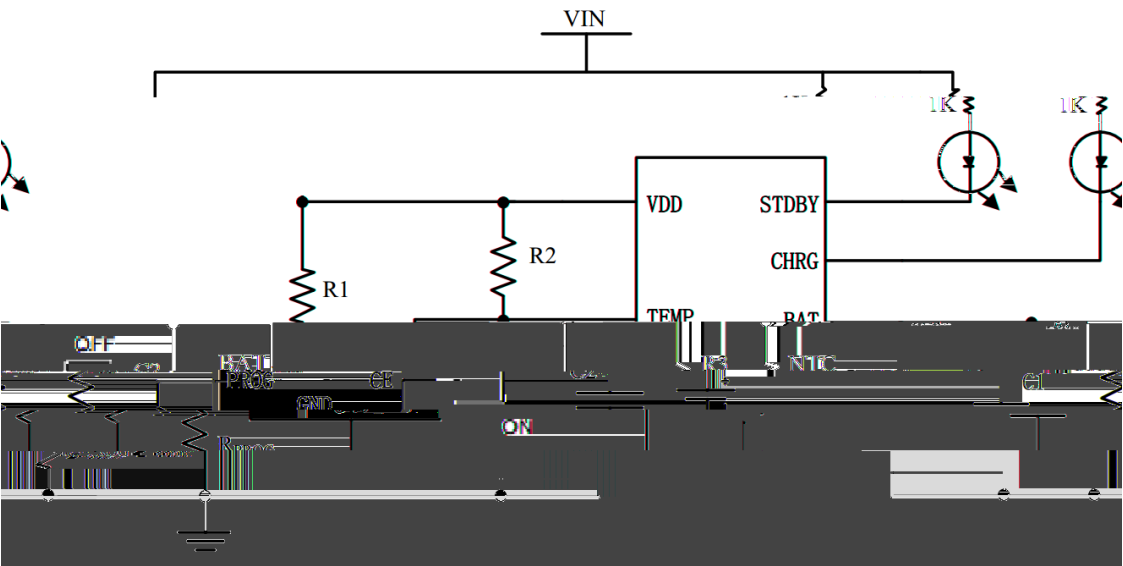
/ Features

- < 6.8V OVP
- < 36V
- < 0V
- < 1.2A
- < / /
- < 2.8V
- < DFN3×3B-8L
- < RoHS

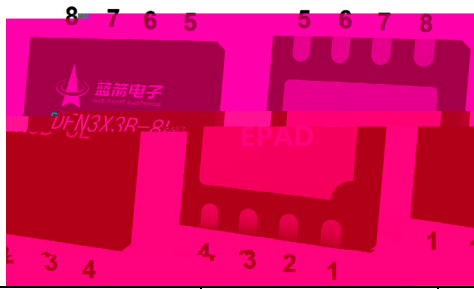
/ Applications

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/ Application Circuit



/ Pinning



PIN Num.	Symbol	Function
1	TEMP	
2		
3	GND	
4	VDD	
5	BAT	
6	STDBY	
7	CHRG	
8	CE	
EPAD	GND	

/ 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	A
		Standby mode, charging terminated		70	120	A
		Shutdown mode (R _{PROG} not connected, V _{CC} <V _{BAT})		50	100	A
Charging Current Setting						
R _{PROG} voltage at Constant Current Mode	V _{PROG}	V _{DD} =5V;R _{PROG} =1K	0.85	1	1.15	V

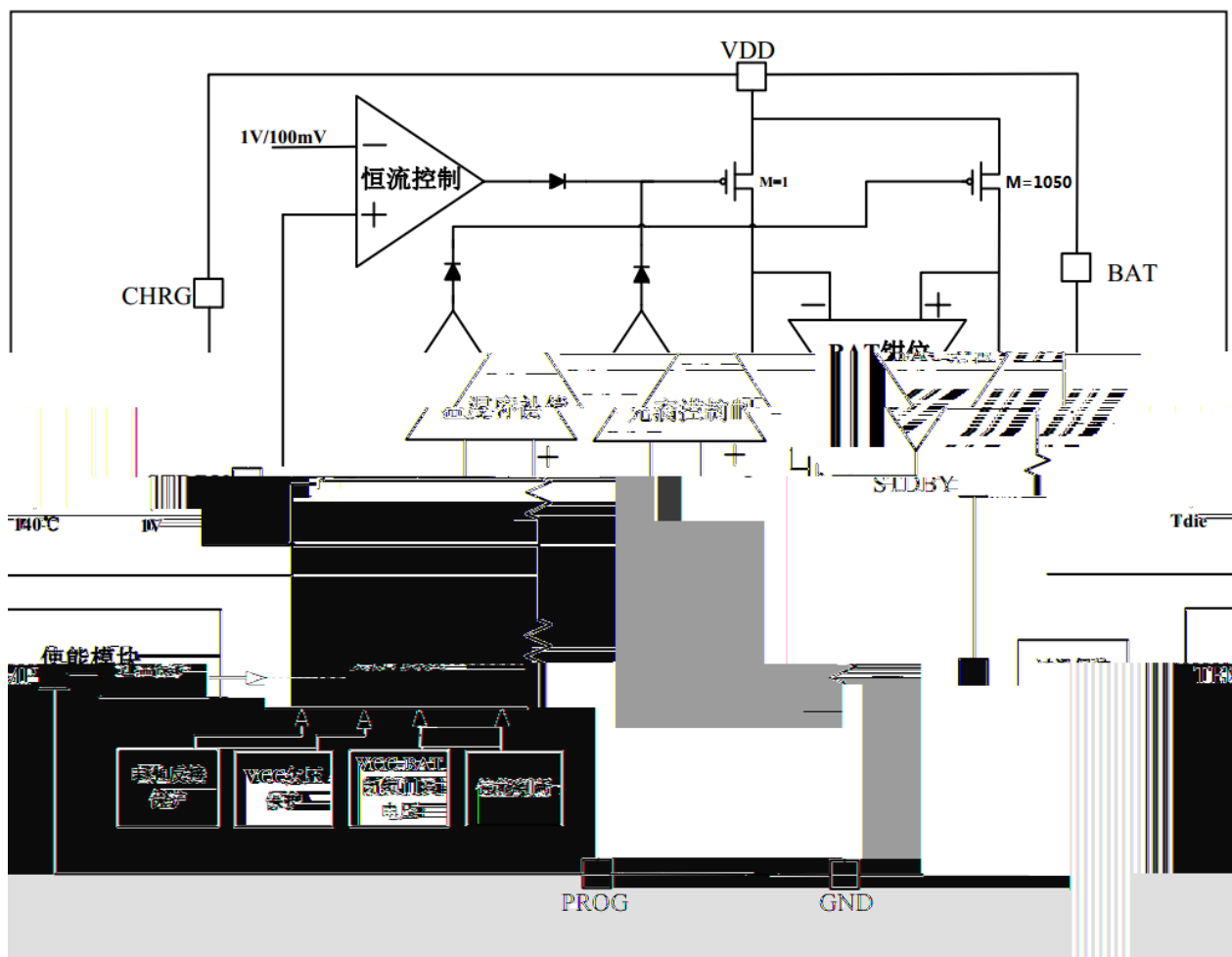
BAT Pin Current

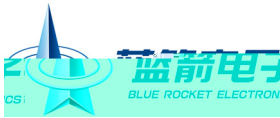
 I_V

/ 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}		43%* VDD	45%* VDD		V
Low Temperature Detection Threshold	T _{OTPL}			80%* VDD	82%* VDD	V

/ Principle block diagram





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BRCL4070ZR-4.2				/									
BRCL4070ZR-4.2			USB	AC	1.2A		,						
36V		6.8V											
<													
VDD		UVLO		PROG		1%							
					BAT	2.8V,							
				1/5									
			BAT	2.8V									
BAT					BRCL4070ZR-4.2								
				1/10									
<													
				I _{CH}									

/ Function description

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140BRCL4070ZR-4.2

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UVLOVDDVDD
VDD200mV

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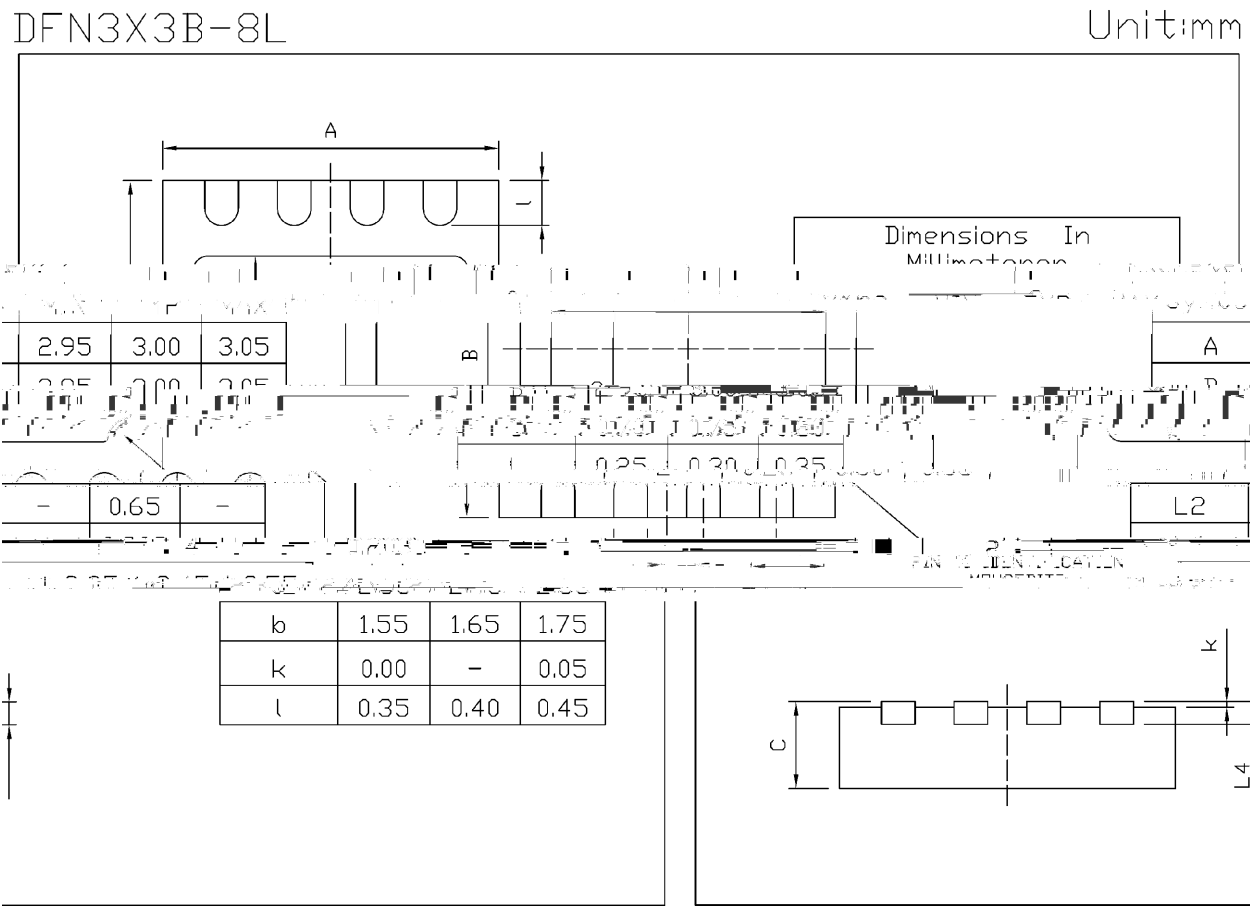
BRCL4070ZR-4.2VDD
VDD

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BRCL4070ZR-4.2CHRG STDBY
CHRG STDBYCHRG STDBY

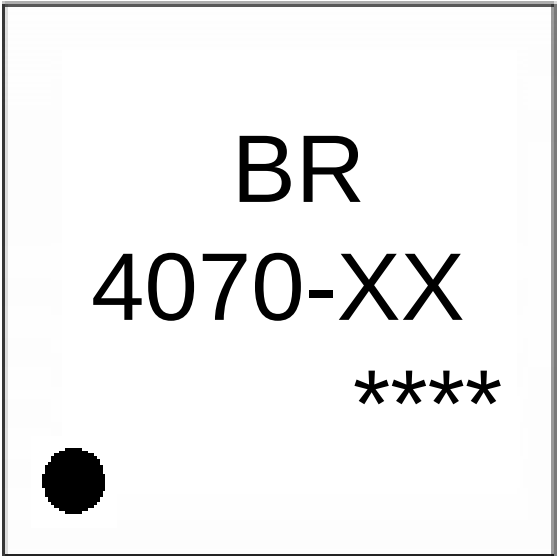
	CHRG/	STDBY/

/ Package Dimensions



Rev.00 202006

/ Marking Instructions



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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- | | | | |
|---|---------|-----------|---|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245 5 | 5 0.5sec; | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 | 2 10 | /sec. | 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)
70~E			