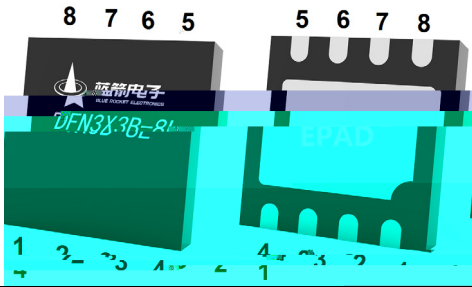


BRCL4070ZR-4.2

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/ 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

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DATA SHEET

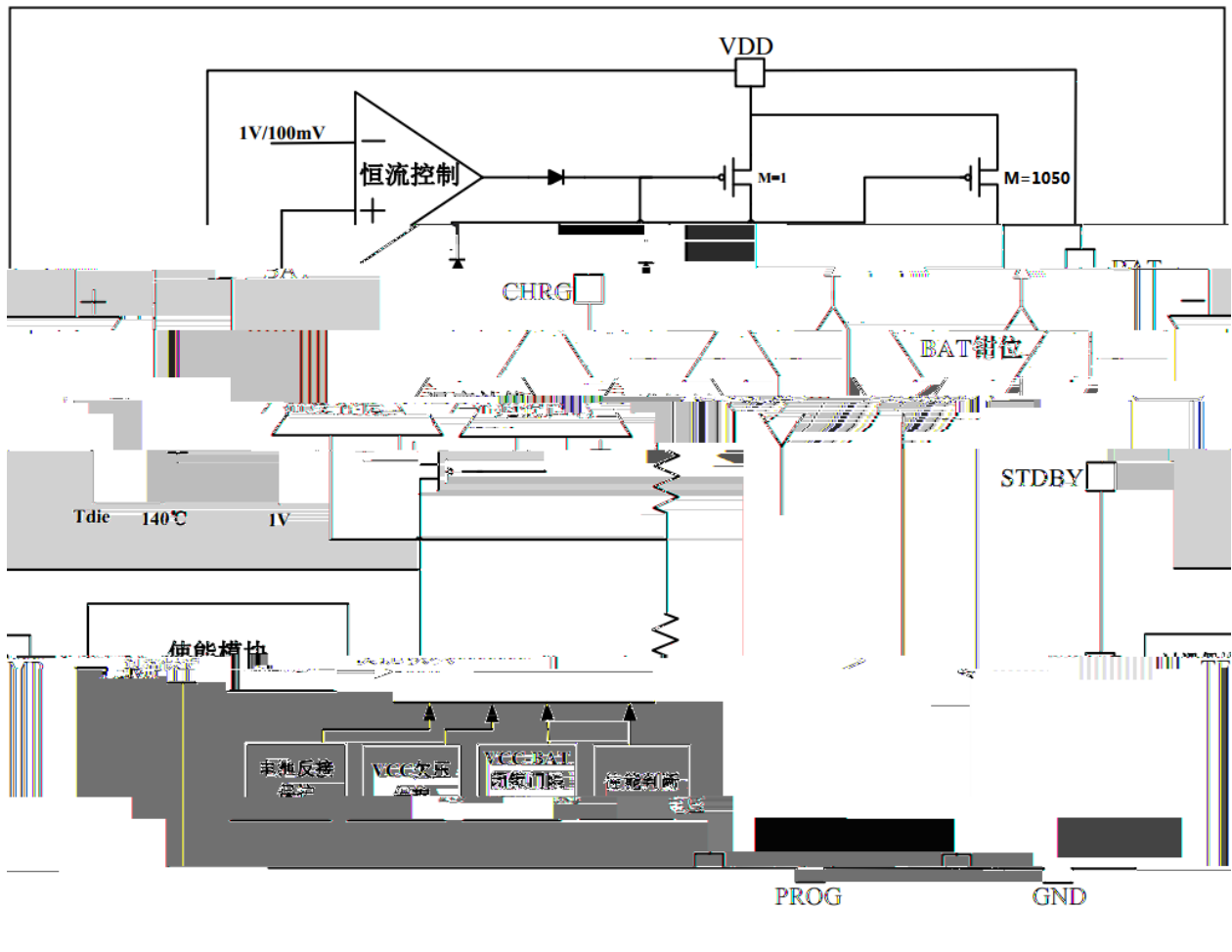
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Power Supply						
Input Supply Voltage	V _{DD}		4.5	5.0	6.0	V
V _{DD} Under Voltage Lockout Threshold	V _{DD_UV}	V _{DD} from Low to High		3.8		V
V _{DD} Under voltage Lockout Hysteresis	V _{DD_UV_HYS}	V _{DD} from High to Low		200		mV
Input Over-Voltage 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}		43%* V _{DD}	45%* V _{DD}		V
Low Temperature Detection Threshold	T _{OTPL}			80%* V _{DD}	82%* V _{DD}	V

/ Principle block diagram



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蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

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

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

$I_{CH} = 1950/R_{PROG}$ I_{CH}
 R_{PROG} R_{PROG} 200mA
 $R_{PROG} = 1950/0.2 = 5.25K$
 R_{PROG} 1%

$R_{PROG}(K)$ I	$I_{CH}(mA)$
1	1950
1.2	875
5	205
10	100

BAT 4.05V 2ms $T_{RECHARGE}$ 80

/ Function description

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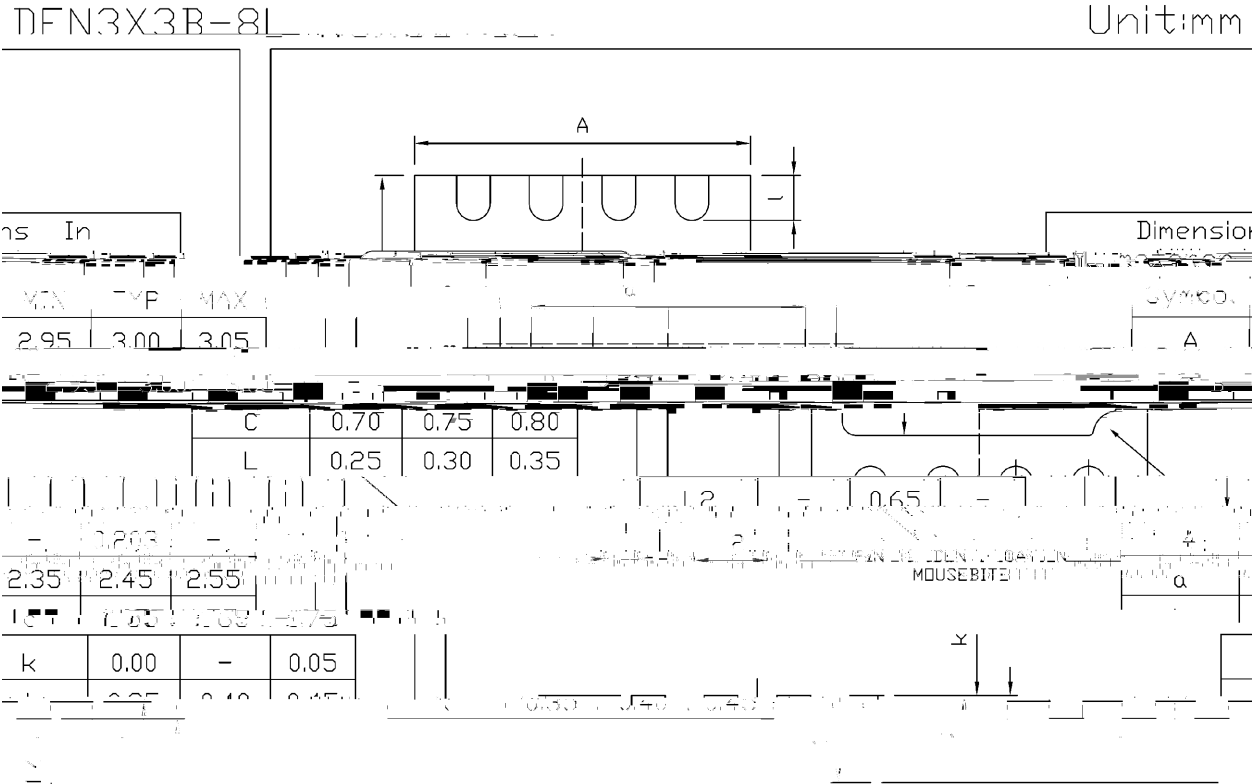
UVLO VDD VDD
VDD 200mV

BRCL4070ZR-4.2 VDD
VDD

BRCL4070ZR-4.2 CHRG STDBY
CHRG STDBY CHRG STDBY

	CHRG/	STDBY/

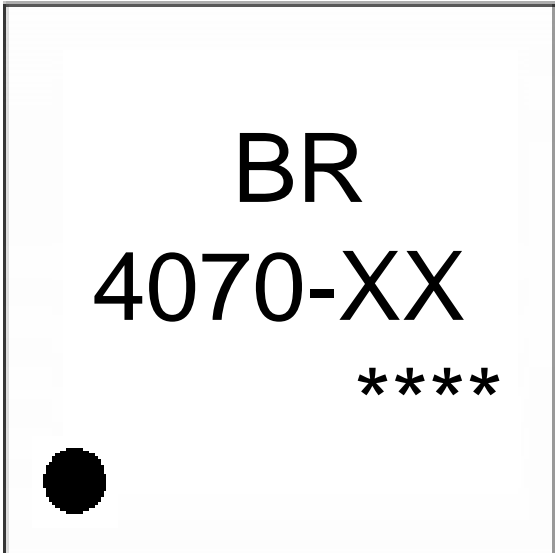
/ Package Dimensions



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
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/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm ³)
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