

/ Descriptions

BRCL4058M SERIES

1A

/

BRCL4058M SERIES

P-MOSFET

4.2V

4.2V

1/10

BRCL4058M SERIES

/ Features

6.8V OVP

VDD

30V

0V

1A

/ /

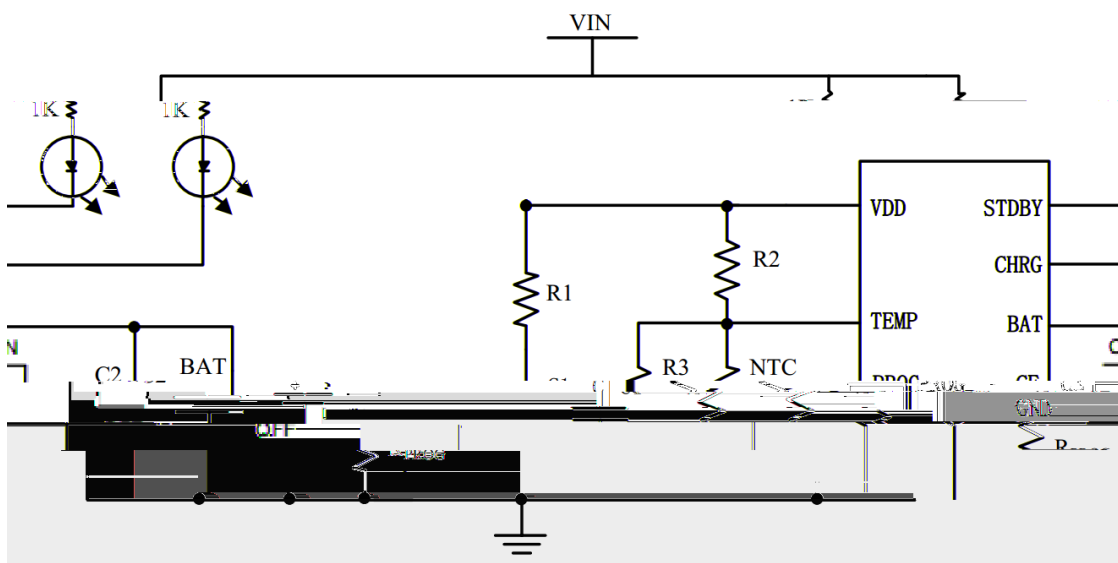
2.8V

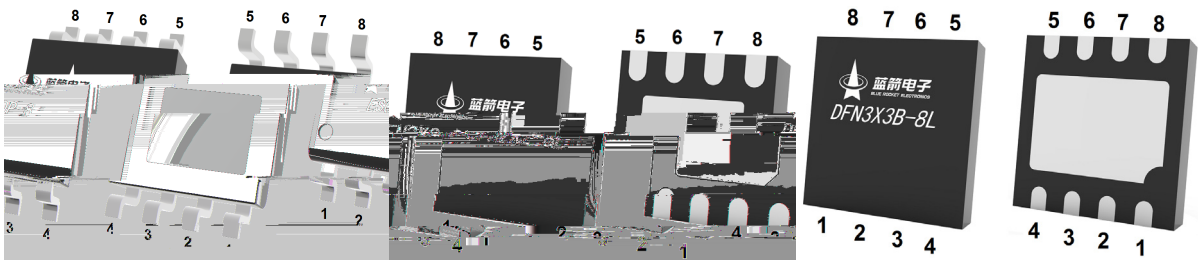
8 ESOP DFN

RoHS

/ Applications

/ Application Circuit





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

BRCL4058M Series

Rev.B Feb.-2025



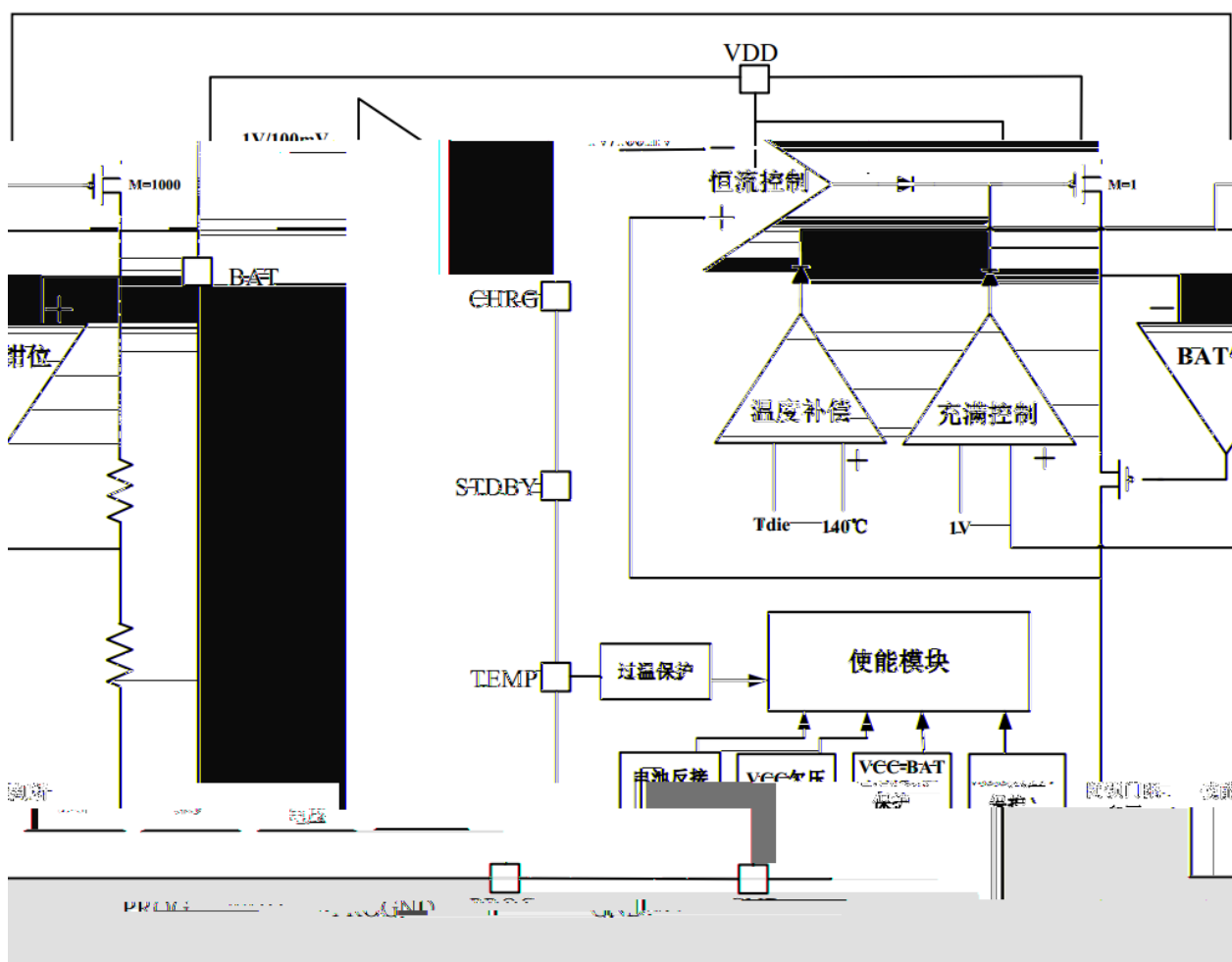
DATA SHEET

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	V_{DD_UV}	V_{DD} from Low to High		3.8		V

/ Electrical Characteristics(Ta=25)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Indicator Pin Status CHRГ/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



/ Function description

BRCL4058M SERIES / BRCL4058M
SERIES USB AC 1A , 30V
6.8V

VDD UVLO PROG 1%
BAT 2.8V,
1/10
BAT 2.8V
BAT
BRCL4058M SERIES
1/10

$I_{CH} = 1000 / R_{PROG}$ I_{CH} R_{PROG}
 R_{PROG} 200mA
 $R_{PROG} = 1000 / 0.2 = 5K$
 R_{PROG} 1%
 R_{PROG}

$R_{PROG}(K\Omega)$	$I_{CH}(mA)$
1	1000
1.2	830
1.5	666
5	200

BRCL4058M SERIES 2ms $T_{RECHARGE}$
BAT 4.05V 80
90

/ Function description

140BRCL4058M SERIES

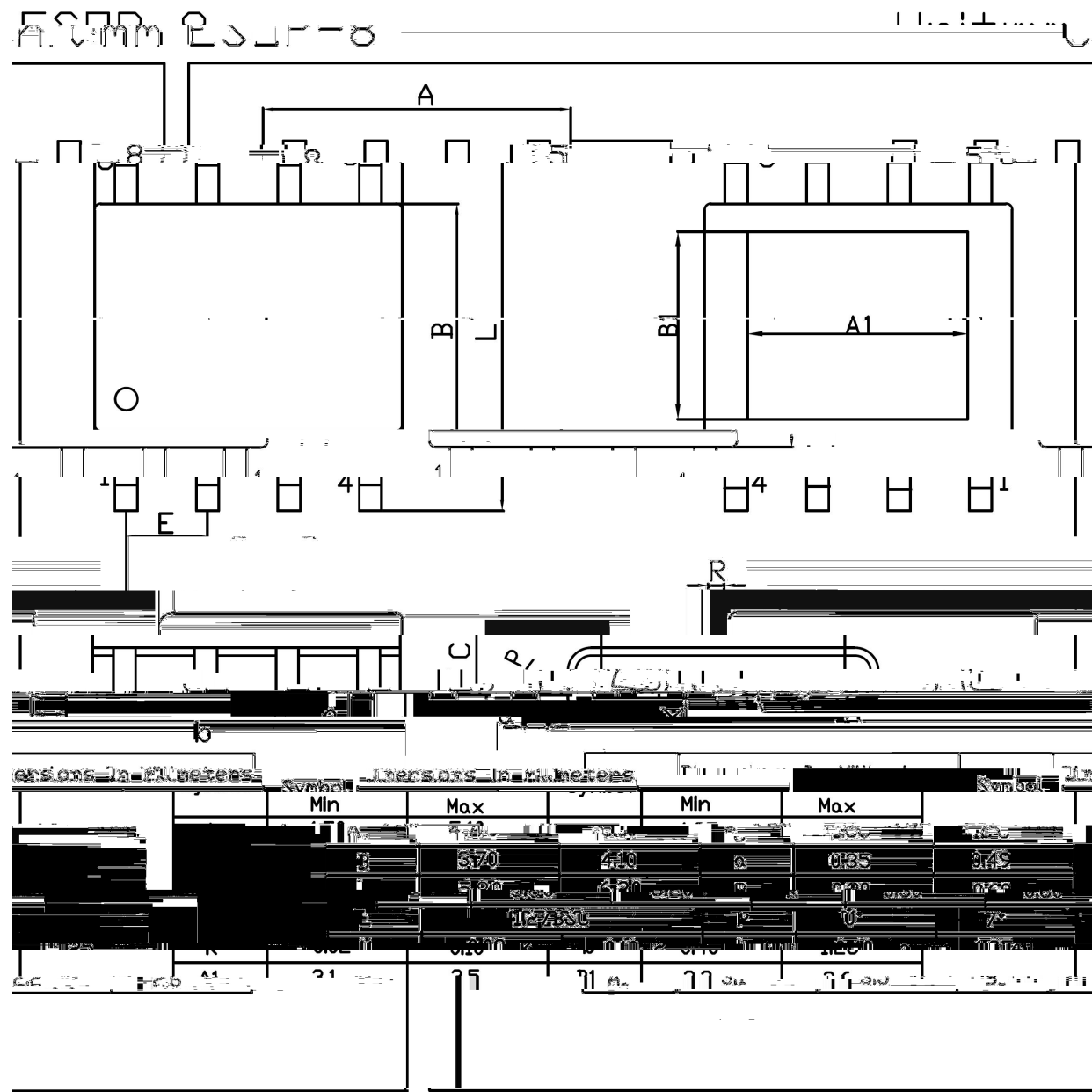
UVLOVDDVDD
VDD200mV

BRCL4058M SERIESVDD
VDD

BRCL4058M SERIESCHRG STDBY
CHRGSTDBYCHRG STDBY

	CHRG/	STDBY/

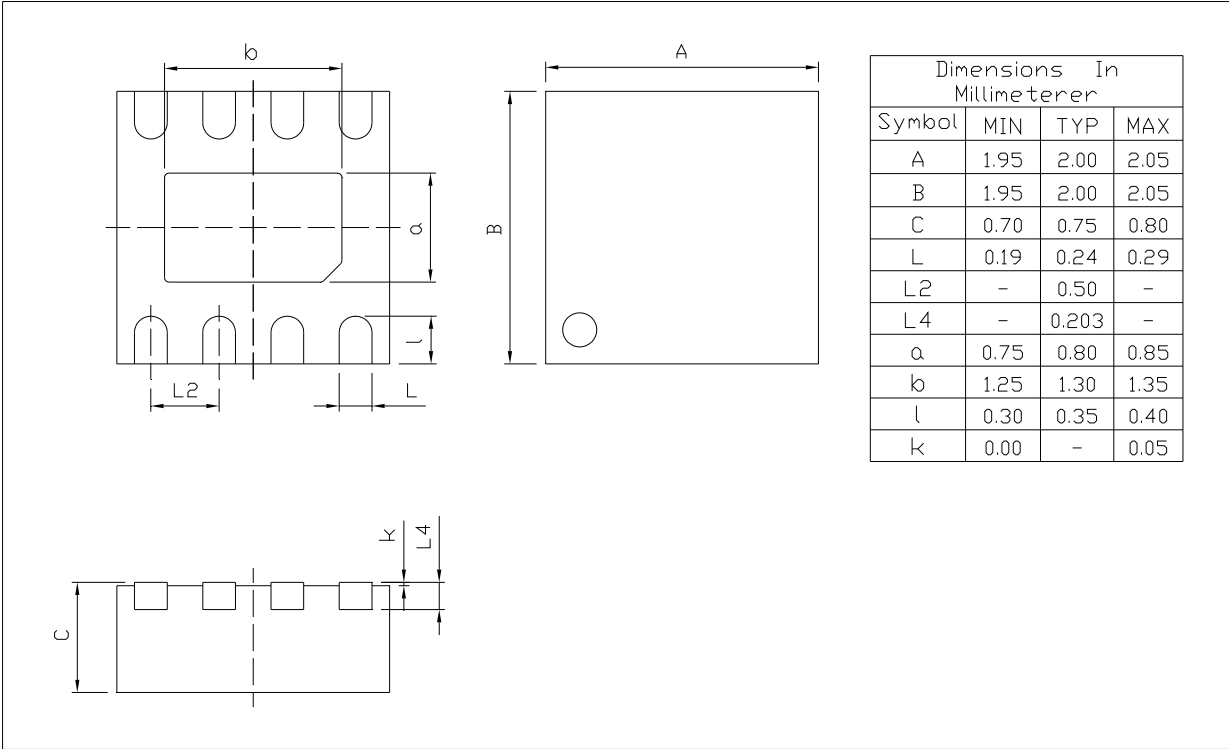
/ Package Dimensions



/ Package Dimensions

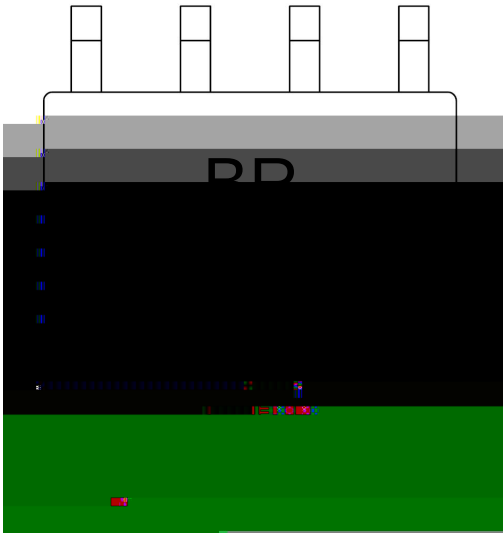
DFN2×2-8L-0.75

Unit:mm



Rev.00 202012

ESOP-8 / ESOP-8 Marking Instructions



BRCL4058MSE-4.2	BR/4058M-42/****

DFN2 2-8L / DFN2 2-8L Marking Instructions



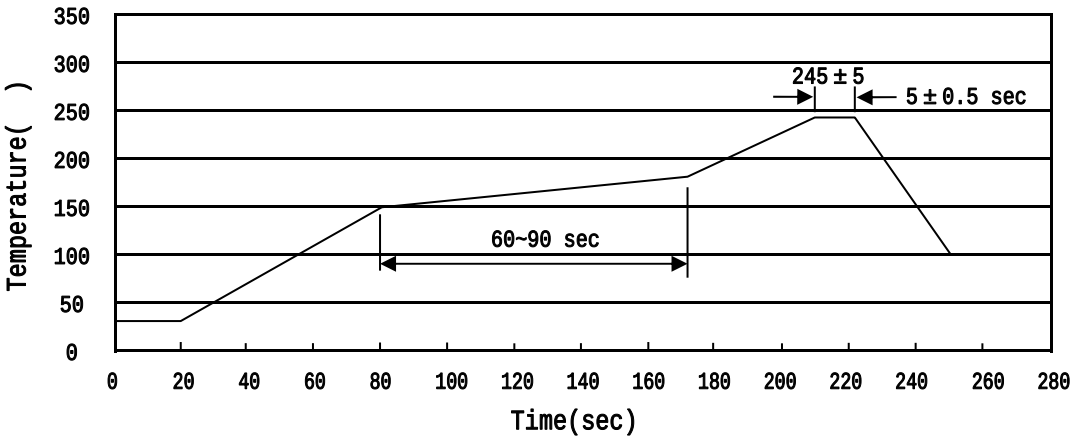
BRCL4058MZZ-4.2	4058M-42/****

DFN3 3B-8L / DFN3 3B-8L Marking Instructions



BRCL4058MZR-4.2	BR/4058M-42/****

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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 ³)		
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366

Package Type	Units					Dimension (unit mm ³)		
DFN2×2-8L	4,000	10	40,000	4	160,000	7 ×8	210×205×205	445×435×230

Package Type	Units					Dimension (unit mm ³)		
DFN3×3B-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366

/ Notices