/ Descriptions

BRCL4064ME BRCL4064ME
/ BRCL4064ME
USB BRCL4064ME PMOSFET

4.2V PROG
600mA USB BRCL4064ME
3uA BRCL4064ME

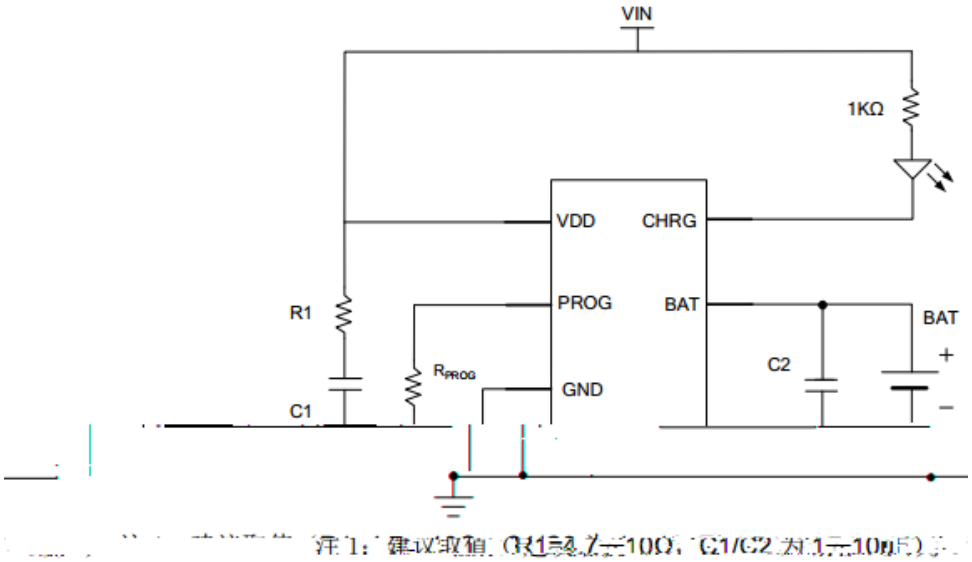
/ Features

4.2V ±42mV
25uA
BAT-VDD
0V
600mA
/ /

IEC62368
SOT23-5

/ Applications

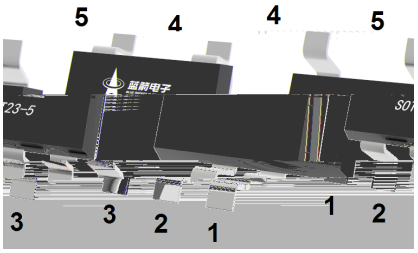
/ Application Circuit

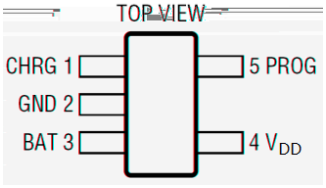


注1：建议取值 R1=2.7—10Ω，C1/C2 为1—10uF)

/ Pinning

PIN Num.	Symbol	Function
1	CHRG	
2	GND	
3	BAT	
4	VDD	
5	PROG	





/ Absolute Maximum Ratings(Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNITS
VDD input pin voltage	VDD	-0.3~12	V
CHRG input pin voltage	V_{CHRG}	-0.3~6.5	
BAT input pin voltage	V_{BAT}	-0.3~12	
PROG input pin voltage	V_{PROG}	-0.3~9	
Operating Ambient Temperature	T_A	-40~+85	°C
Maximum Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C
Package Thermal Resistance (Junction to Ambient)	R_{thJA}	190	°C/W
ESD（HBM）	ESD(HBM)	±4000	V

/ Electrical Characteristics(Ta=25℃)

VDD

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{DD} working voltage	V_{DD}			5.0	8.0	V
Input Supply Current	I_{VDD}-I_{BAT}	Charge Mode, R_{PROG}=10K		240	2000	μA
		Standby Mode (Charge Terminated)		50	90	
		Shutdown Mode: R_{PROG} Not Connected, V_{DD}<V_{BAT}, or V_{DD}<V_{UVL}.		25	50	
V_{DD} Under voltage Lockout Threshold	V_{UV}	V_{DD} from Low to High	3.7	3.8		V
V_{DD} Under voltage Lockout Hysteresis	V_{UV-HYS}	V_{DD} from High to Low		200		mV
V_{DD}-V_{BAT} Detection voltage	V_{ASD}	V_{DD} from Low to High	70	100	140	mV
		V_{DD} from High to Low	5	30	50	mV

/ Electrical Characteristics(Ta=25℃)

PROG

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
PROG Pin Voltage	V_{PROG}	VDD=5V,R_{PROG}=4K	0.9	1.0	1.1	V
BAT Pin Current	I_{BAT}	VDD=5V;V_{BAT}=3.9V; R_{PROG}=2K	465	500	535	mA
		VDD=5V;V_{BAT}=3.9V; R_{PROG}=10K	93	100	107	mA
		VDD Not Connected,V_{BAT}=4.0V			2	uA
Trickle Charge Current	I_{TRIKL}	V_{BAT}＜V_{TRIKL}, R_{PROG}=2K	40	50	60	mA
C/10 Termination Current Threshold	I_{TERM}	R_{PROG}=10K	5	10	15	mA
		R_{PROG}=2K	35	50	65	mA
Trickle Charge Threshold	V_{TRIKL}	V_{BAT} from Low to High	2.8	2.9	3.0	V
Trickle Charge Hysteresis	ûV$_{TRIKL}$	V_{BAT} from High to Low		80		mV
PROG Pin Pull-Up Current	I_{PROG}			1		µA

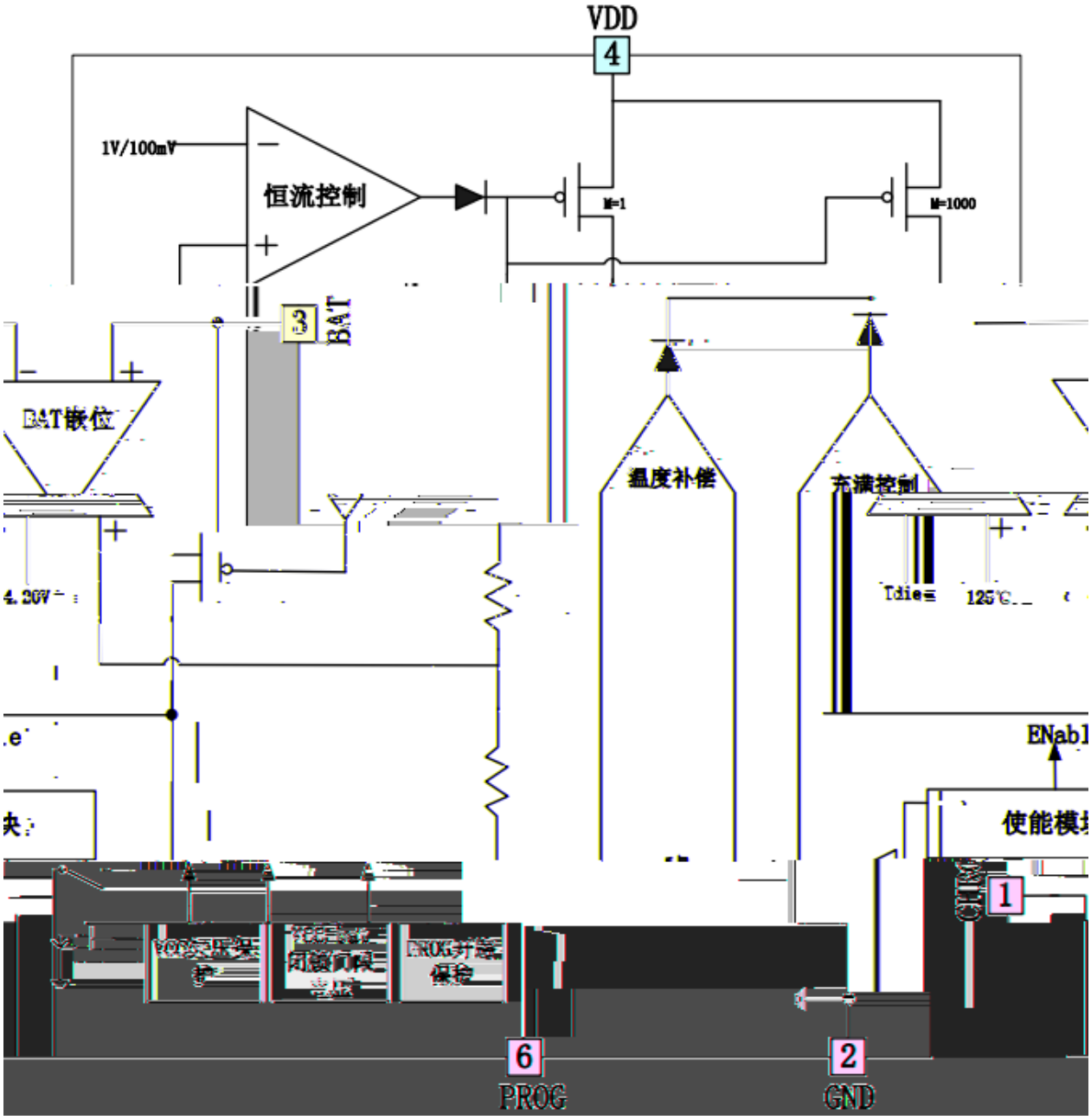
BAT

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Regulated Output (Float) Voltage	V_{FLOAT}	VDD=5V,R_{PROG}=2K	4.158	4.200	4.242	V
Recharge Battery Threshold	V_{RECHG}	V_{FLOAT}－V_{RECHG}		100		mV
Termination Comparator Filter Time	T_{Term}	I_{BAT} Falling Below I_{TERM}	0.63	1.4	3	ms
Recharge Comparator Filter Time	$T_{RECHARGE}$	V_{BAT} High to Low	0.8	1.8	4	ms

Built-in temperature compensation

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Built-in temperature compensation	OTC			125		℃

/ Principle block diagram



/ Function description

BRCL4064ME / BRCL4064ME
USB AC 600mA

/ Function description

VDD UVLO PROG 1%
BAT VTRKL
BRCL4064ME 1/10
BAT VTRKL
BAT VFLOAT BRCL4064ME
1/10

PROG

$$R_{PROG}=1000/I_{BAT}(\Omega)$$

0.3A
RPROG RPROG

R_{PROG}(KΩ)	I_{BAT} mA
10K	100
5.1K	200
3.3K	300
2.5K	400
2K	500
1.66K	600

(CHRG)

BRCL4064ME CHRG CHRG
VDD CHRG

	CHRG
PROG BAT VDD	
VDD	

/ Function description

10%

PROG PROG 100mV

TDELAY BRCL4064ME BRCL4064ME BAT

4.1V

USB PROG

BRCL4064ME BRCL4064ME

BRCL4064ME LED

0.8mA BRCL4064ME

BRCL4064ME BRCL4064ME BAT BRCL4064ME

BAT

BAT BRCL4064ME

5V 6V

VDD-BAT 9V

125 BRCL4064ME

BRCL4064ME

VDD

UVLO UVLO VDD

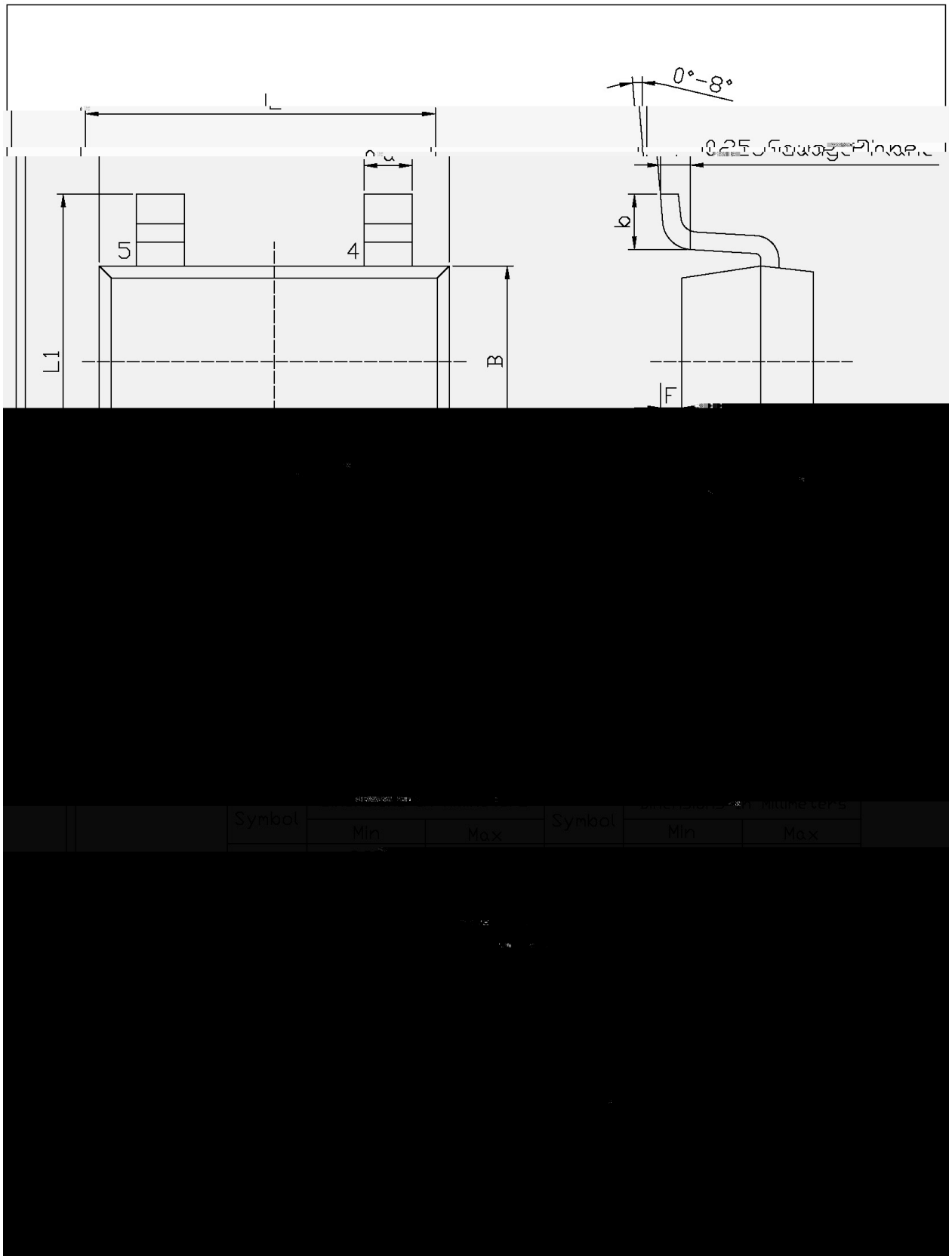
200mV

BRCL4064ME 1.8ms

TECHARGE BAT 4.1V

80 90

/ Package Dimensions



/ Marking Instructions

4064

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Note:

4064: Product Type

****: Lot No. Code, code change with Lot No

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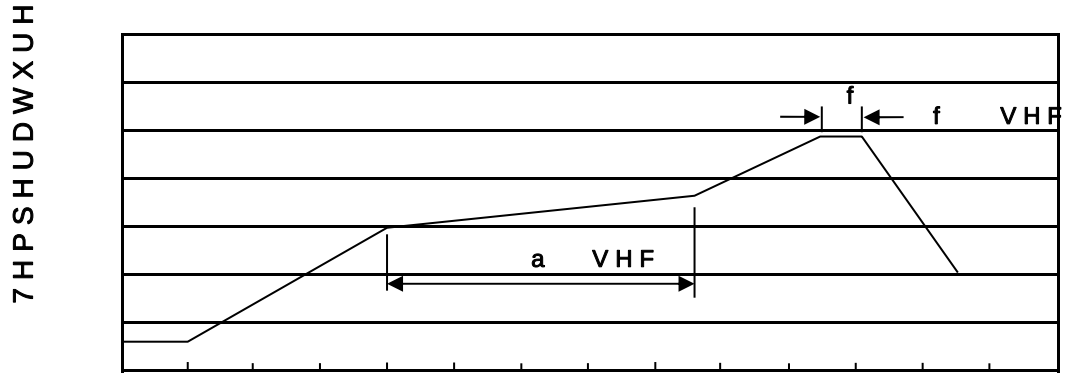

7LPH VHF

			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 7>û ˜ E	Units ;>û ¦H					Dimension ;>û p . (unit ÆEmm³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT23-5/6	3,000	10	30,000	4	120,000	7 ×8	210×205×205	445×230×435

/ Notices