

BRCL4079ME-4.2

5V

USB

MOSFET

4.2V

1/10

BRCL4079ME-4.2

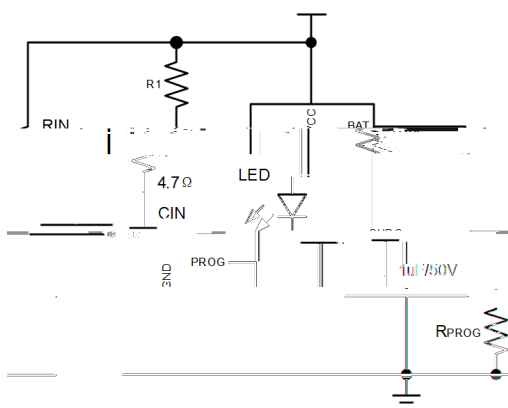
BRCL4079ME-4.2

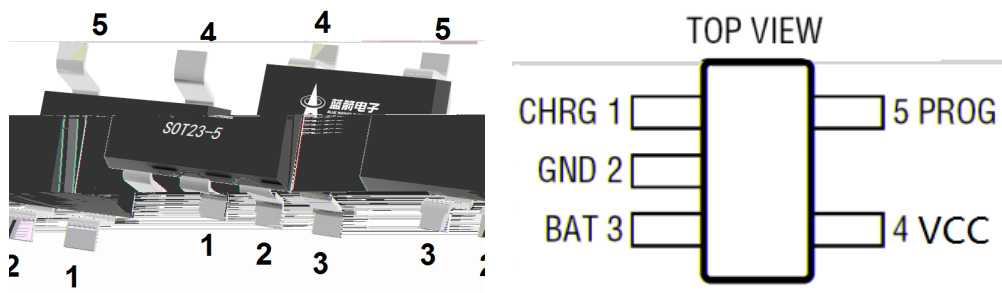
SOT23-5

-40±C

+85±C

◆ 36V 6.1V
◆ 600mA
◆ MOSFET
◆ /
◆ USB
◆
◆ 4.2V 1%
◆ 2.5V
◆ C/10
◆ 550A
◆
◆ SOT23-5
◆
◆ SGD P S6
◆
◆
◆



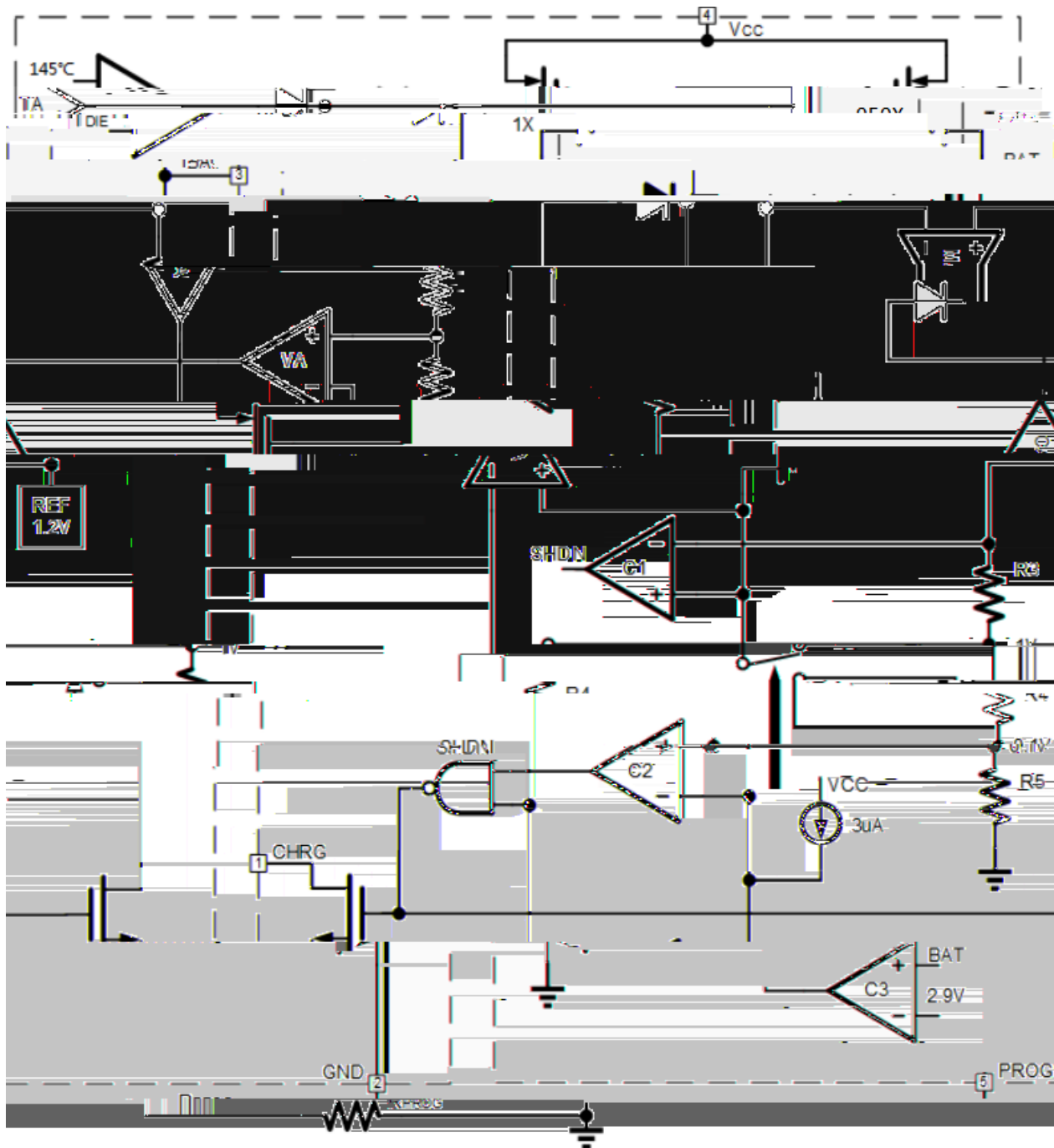


PIN Num.	Symbol	Function
1	CHRG	
2	GND	
3	BAT	
4	VCC	
5	SUR J	

/ Electrical Characteristics(V_{IN}=5V, V_{BAT}=3.6V, T_a=25 , unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Input Voltage Range	V _{CC}		4.5	5	36	V
Quiescent Supply Current	I _Q	Charge Mode R _{PROG} =2.0k		240	360	μA
		Standby Mode (Charge Terminated)		220	300	μA
		Shutdown Mode (R _{PROG} Not Connected, V _{CC} < V _{BAT} , or V _{CC} < V _{UV})		220	300	μA
		OVP state		120	250	μA
Regulated Output (Float)Voltage	V _{FLOAT}	0%≤T _A ≤85%, R _{PROG} = 2.0k	4.158	4.200	4.242	V
BAT Pin Current	I _{BAT}	R _{PROG} = 2.0k, Current Mode	427.5	475	522.5	mA
		Standby Mode, V _{BAT} = 4.2V	0	-2.5	-6	μA
		Shutdown Mode (R _{PROG} Not Connected)		±1	±2	μA
		Sleep Mode, V _{CC} = 0V		-1	-2	μA
Trickle Charge Current	I _{TRIKL}	V _{BAT} < V _{TRIKL} , R _{PROG} = 2.0K	35	47.5	60	mA
Trickle Charge Threshold Voltage	V _{TRIKL}	R _{PROG} = 2.0k, V _{BAT} Rising	2.3	2.5	2.7	V
Trickle Charge Hysteresis Voltage	V _{TRHYS}	R _{PROG} = 2.0k	120	160	200	mV
V _{CC} Undervoltage Lockout Threshold	V _{UV}	From V _{CC} Low to High	3.5	3.7	3.9	V
V _{CC} Undervoltage Lockout Hysteresis	V _{UVHYS}	From V _{CC} High to Low	100	200	300	mV
V _{CC} -V _{BAT} Lockout Threshold Voltage	V _{ASD}	V _{CC} from Low to High	100	125	150	mV
		V _{CC} from High to Low	30	65	100	mV
C/10 Termination Current Threshold	I _{TERM}	R _{PROG} = 2.0k	35	47.5	60	mA
PROG Pin Voltage	V _{PROG}	R _{PROG} = 2.0k, Current Mode	0.9	1.0	1.1	V
CHRG Pin Output Low Voltage	V _{CHRG}	I _{CHRG} = 5mA		0.3	0.6	V
Recharge Battery Threshold Voltage	ΔV _{RECHRG}	V _{FLOAT} - V _{RECHRG}	100	150	200	mV
Junction Temperature in Constant Temperature Mode	T _{LIM}			145		°C
Soft-Start Time	t _{SS}	I _{BAT} = 0 to I _{BAT} = 950V/R _{PROG}		20		μs
Recharge Comparator Filter Time	t _{RECHARGE}	V _{BAT} High to Low	0.8	1.8	4.0	ms
Termination Comparator Filter Time	t _{TERM}	I _{BAT} Falling Below I _{CHG} /10	0.8	1.8	4.0	ms
PROG Pin Pull-Up Current	I _{PROG}			1.0		μA

/ Principle block diagram



/ Function description

◆	BRCL4079ME-4.2	/	PCB
	600mA	± 1% BRCL4079ME-4.2	P
	MOSFET		
	BRCL4079ME-4.2	USB	
◆	VCC	UVLO	1% PROG
		BAT	2.5V
BRCL4079ME-4.2	1/10		
BAT	2.5V		BAT
	4.2V	BRCL4079ME-4.2	
	1/10		
◆	PROG	PROG	950
		$R_{PROG}=950/I_{CHG}$	$I_{CHG}=950/R_{PROG}$
	PROG	BAT	
		$I_{BAT}=(V_{PROG}\times 950)/R_{PROG}$	

/ Function description

◆
EUF073 : < P H0715
FKUJ FKUJ FKUJ FKUJ

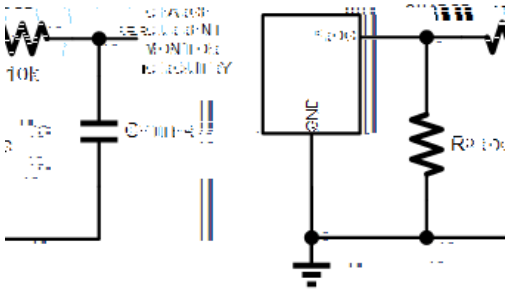
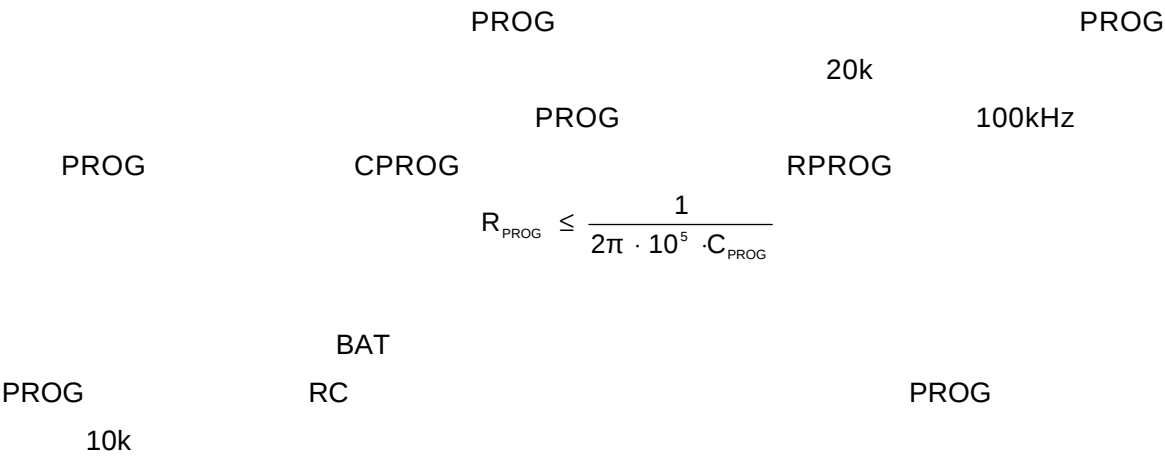
EDW	430I	OHG	OHG	407
		LED		
UVLO				
BAT	100F	LED	T=1-4s	

◆
145±C
BRCL4079ME-4.2
BRCL4079ME-4.2

◆
UVLO
UVLO 200mV VCC MOSFET VCC
30mV UVLO
VCC 100mV UVLO

◆
BRCL4079ME-4.2 1.8ms tRECHARGE
BAT 4.05V 80% 90%
CHRG

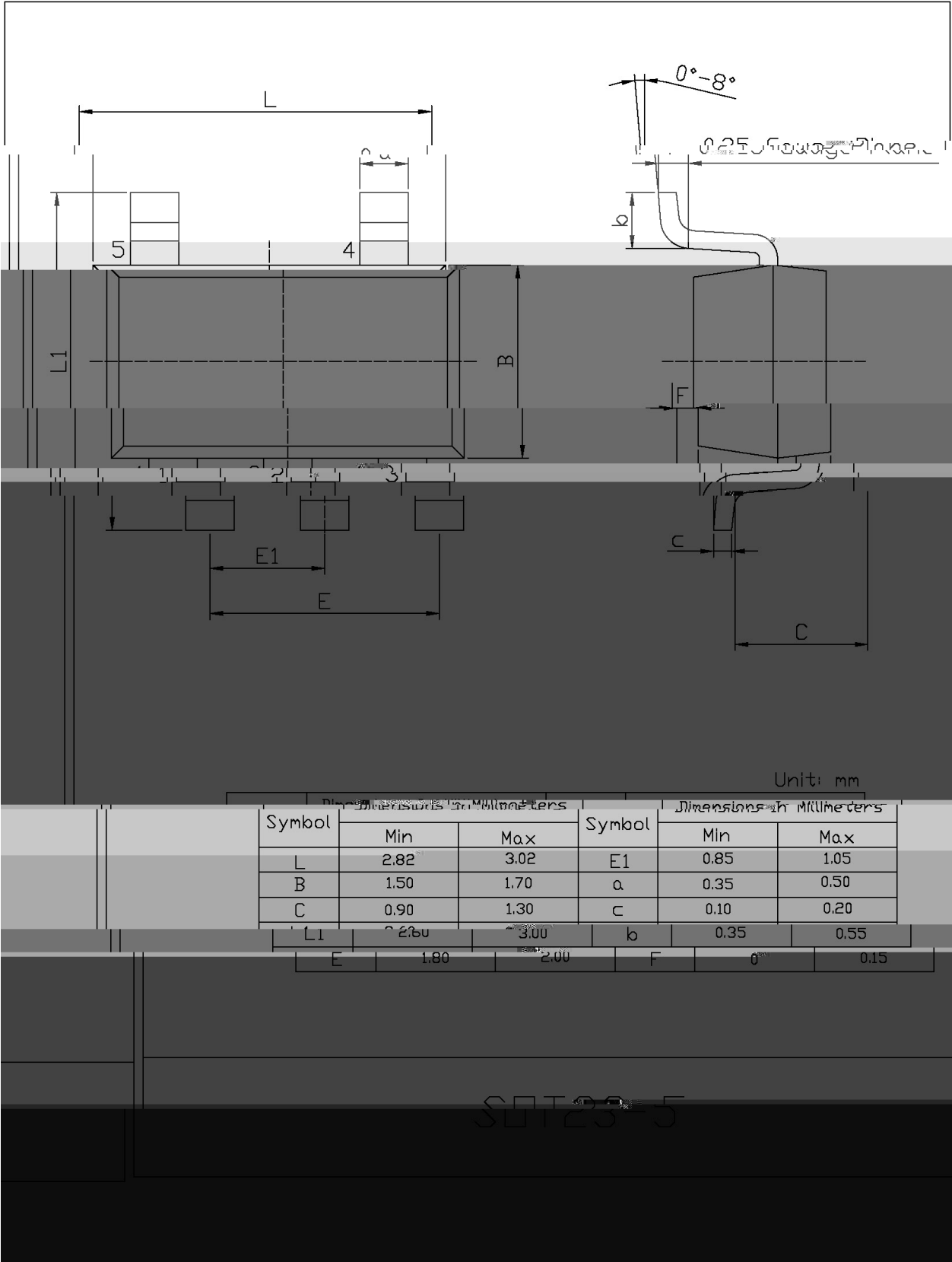
/ Function description



PCB P_D

$$T_J = P_D \times \theta_{JA} + T_A$$

/ Package Dimensions

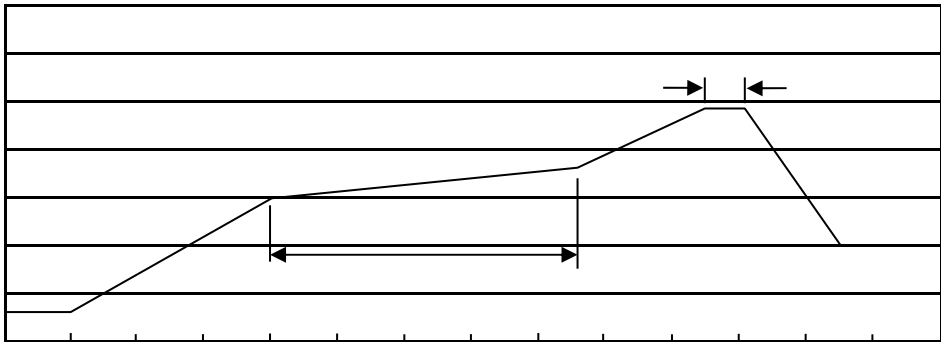


/ Marking Instructions



73: <075

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



- 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)		
SOT23-5/6	3,000	10	30,000	4	120,000	7 ×8	210×205×205	445×435×230

/ Notices

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