

BRCL4079ME-4.2

Rev.A Dec.-2025



DATA SHEET

BRCL4079ME-4.2

/
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

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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	A
		Standby Mode (Charge Terminated)		220	300	A
		Shutdown Mode (R _{PROG} Not Connected, V _{CC} < V _{BAT} , or V _{CC} < V _{UV})		220	300	A
		OVP state		120	250	A
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	A
		Shutdown Mode (R _{PROG} Not Connected)		±1	±2	A
		Sleep Mode, V _{CC} = 0V		-1	-2	A
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
VCC Undervoltage Lockout Threshold	V _{UV}	From V _{CC} Low to High	3.5	3.7	3.9	V
VCC Undervoltage Lockout Hysteresis	V _{UVHYS}	From V _{CC} High to Low	100	200	300	mV
VCC-VBAT 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 Tc.....467 T-.0019 Tc0.2125 Tc0 Tw(Vo)5<00ade

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/ 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
 $I_{BAT}=(V_{PROG}\times 950)/R_{PROG}$

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/ Function description



1/10
 PROG 100mV tTERM
 BRCL4079ME-4.2 55 A
 C/10
 98K GI F > (&')
 (' ' d M (%d j k< < D
 (&' 9I : C+ ' . OD <\$+% 98K
 98K
 9I : C+ ' . OD <\$+% 98K +%, M
 M < ? 1 >
 GI F >



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蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET



9I : C+' . OD <\$+%` : ? I > 9I : C+' . OD <\$+%`
: ? I > : ? I > : ? I >

98K	(' =	C<;	C<; (\$+
		LED	
UVLO			
BAT	10 F	LED	T=1-4s



145,C
BRCL4079ME-4.2
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UVLO
UVLO 200mV VCC MOSFET VCC
30mV UVLO UVLO
VCC 100mV UVLO



BAT BRCL4079ME-4.2 1.8ms t_{RECHARGE}
4.05V 80% 90%



		PROG		PROG
			20k	
		PROG		100kHz
PROG	CPROG		RPROG	

/ Package Dimensions



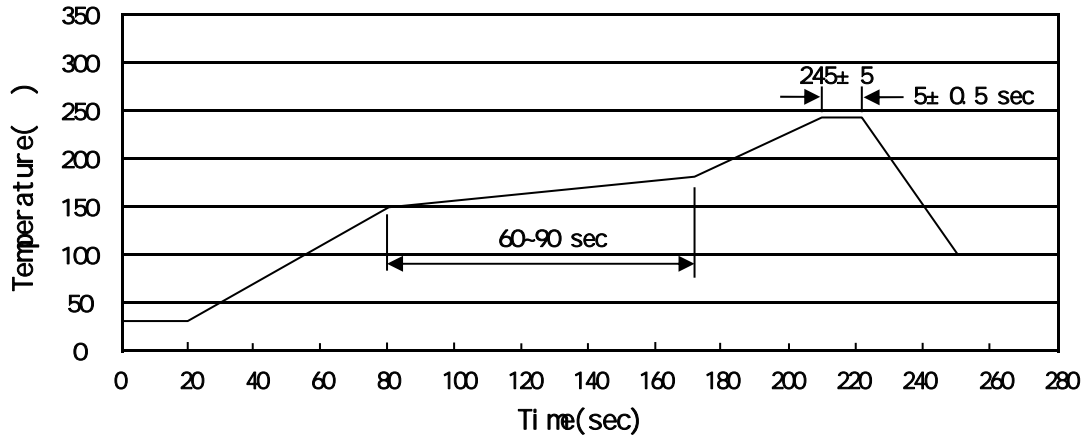
/ Marking Instructions



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() / 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 ³)		
	3,000	10	30,000	4	120,000	7 x8	210x205x205	445x435x230
SOT23-5/6	3,000	10	30,000	4	120,000	7 x8	210x205x205	445x435x230

/ Notices

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