

τ
$$Z$$

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 τ

5V

!

USB

MOSFET

 $\dot{y}$

a

 $\dot{y}$

6

1/10

4.2V

BRCL4079MF-4.2

 τ |

SOT23-6

 τ $\dot{V}$

-40°C₆ +85°C

36V

6.1V

600mA

MOSFET

/

USB

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4.2V

 $\dot{y} \approx 1\%$

2.5V

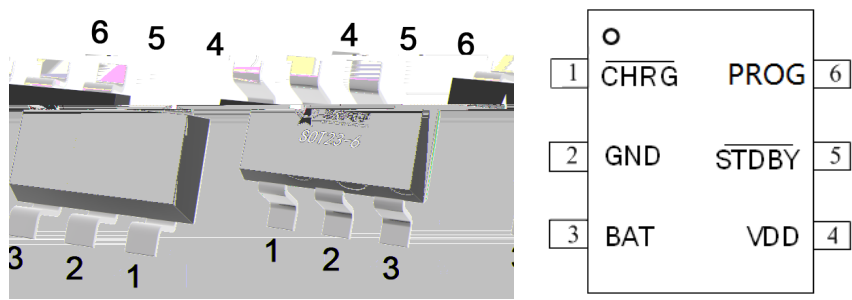
C/10

и 55μA

SOT23-6

SGD P S6

 $z \dot{a}$
$$\underline{z}$$
 τ



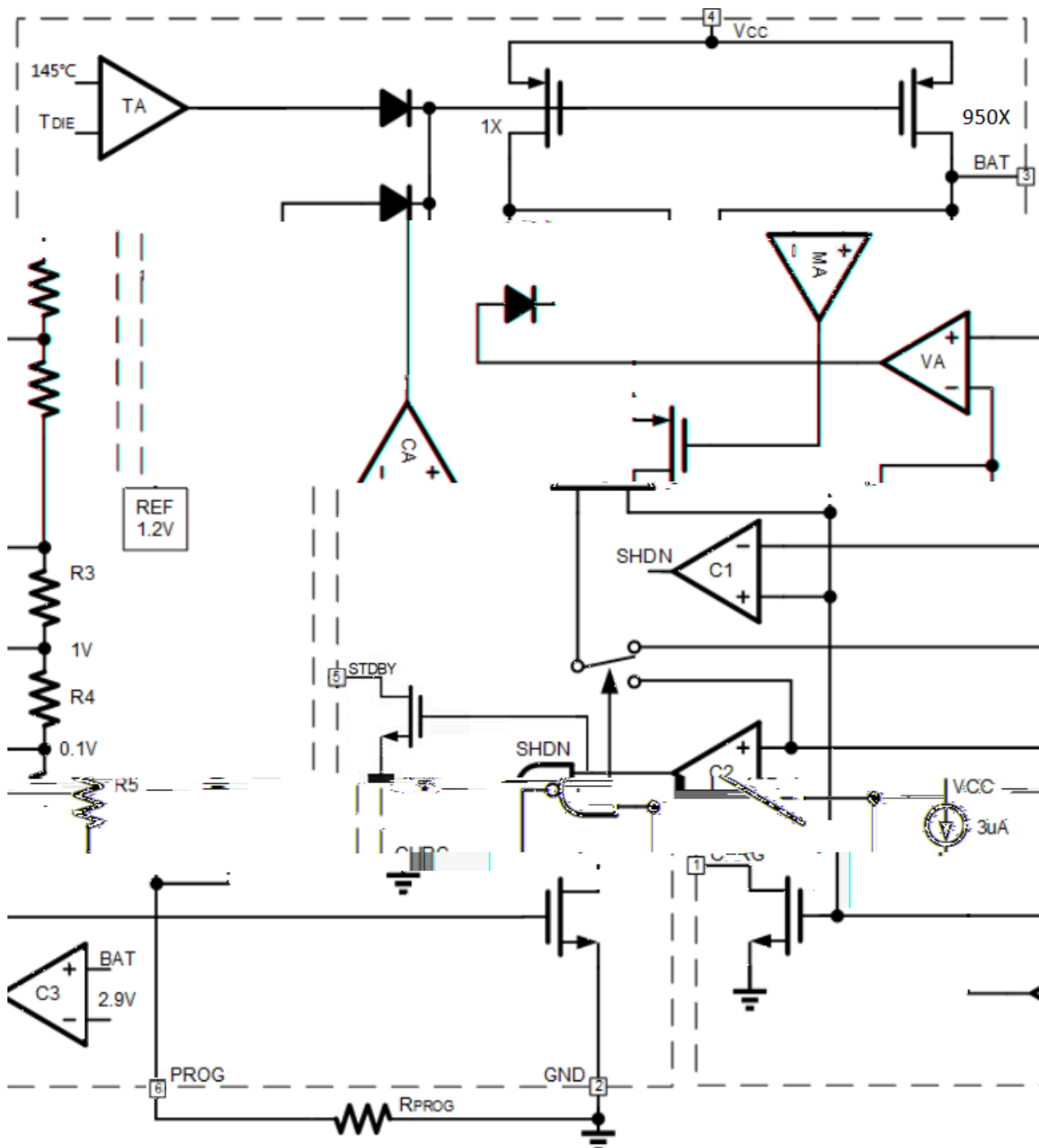
PIN Num.	Symbol	Function
1	CHRG	
2	GND	Q
3	BAT	
4	VCC	
5	STDBY	
6	SUR J	

PARAMETER	SYMBOL	RATINGS	UNITS
Input Pin Voltage	V _{VCC}	-0.3~36	V
BAT Pin Voltage	V _{BAT}	-4.2~18	
Other Pin Voltage	V _{PROG}	-0.3~5.5	
CHRG/STDBY Pin Voltage	V _{CHRG/STDBY}	-0.3~13	
Storage Temperature	T _{stg}	-65~+150	
Junction Temperature	T _J	150	
Operating Ambient Temperature Range	T _{OP}	-40~+85	
Lead Temperature (Soldering, 10s)	T		

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

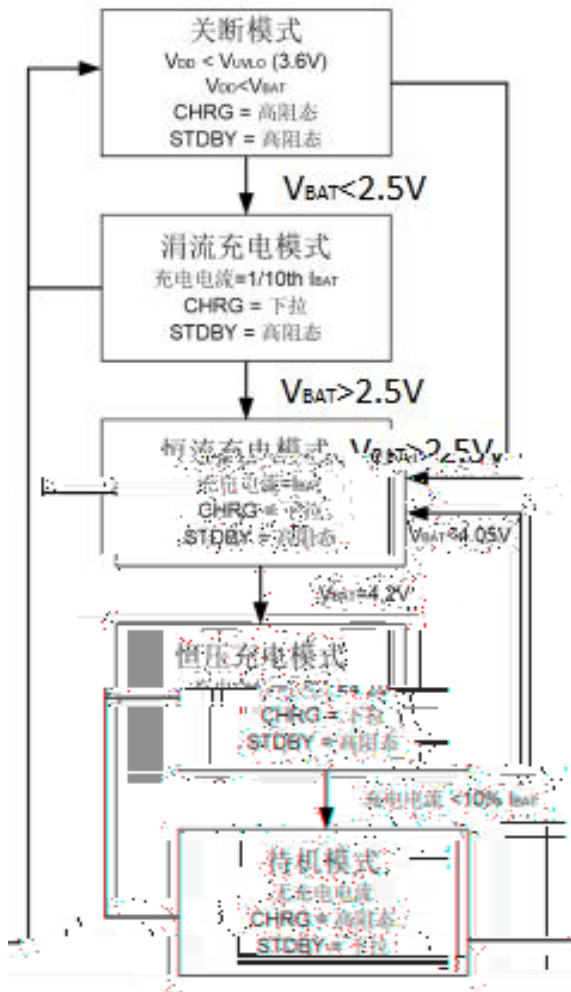
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Input Voltage Range	V_{CC}		4.5	5	36	V
Quiescent Supply Current	I_Q	Charge Mode $R_{PROG}=2.0k$		240	360	μA
		Standby Mode (Charge Terminated)		220	300	μA
		Shutdown Mode (R_{PROG} Not Connected, $V_{CC} < V_{BAT}$, or $V_{CC} < V_{UV}$)		220	300	μA
		OVP state		120	250	μA
Regulated Output (Float)Voltage	V_{FLOAT}	$0 \leq T_A \leq 85$, $R_{PROG} = 2.0k$	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
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
STDBY Pin Output Low Voltage	V_{STDBY}	$I_{STDBG} = 5mA$		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		
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

1/10
PROG 100mV tTERM
BRCL4079MF-4.2 55μA
C/10
EDW SUR J 4243
433mY 41; mv ε WWHUP ζ j 7
η 4243 7 EUF073: <P I0715 EDW
EUF073: <P I0715 EDW 7138Y
ε YUHFKUJ ζ 7
SUR J 7 ε





EUF073:<P I07I5

FKUJ VWGEY

EUF073:<P I07I5

FKUJ ĩ τ FKUJ

VWGEY ĩ

EDW	43μI ħ	OHGљ OHG	407v
	LED	LED	
	CHRG	STDBY	
UVLO			
BAT 10μF ħ	OHGљ OHG 407v		

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ε 145℃ ζ i

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BRCL4079MF-4.2 P

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j BRCL4079MF-4.2

ĩ ε ε ζ ħ

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UVLO

VCC i i ħ

UVLO τ 200mV I MOSFET VCC

ĩ 30mV UVLO ħ UVLO

j ħ VCC i i 100mV

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BRCL4079MF-4.2 τ 1.8ms ε tRECHARGE ζ

BAT i ĩ 4.05V ĩ ε M Z 80% 90% ζ

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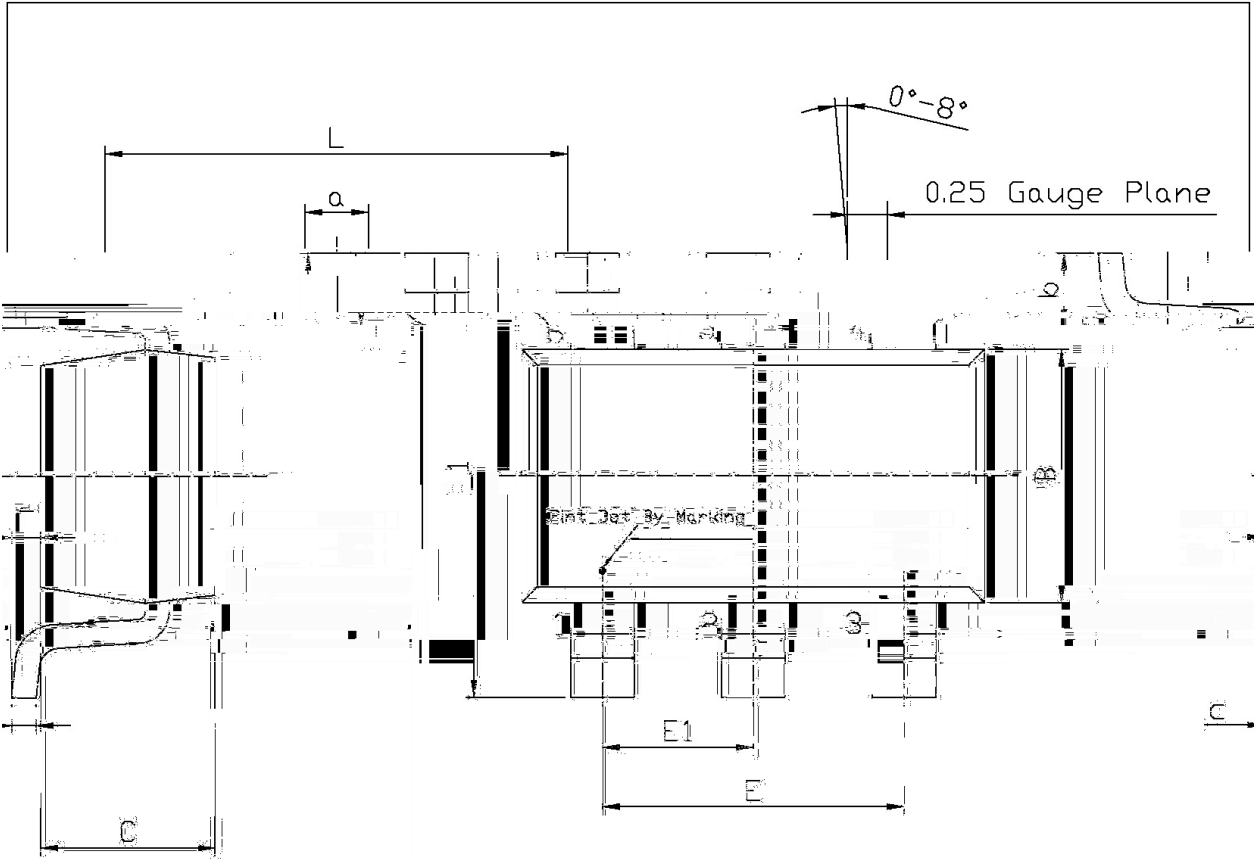
CHRG

/ Function description

$$R_{\text{PROG}} \leq \frac{1}{2\pi \cdot 10^5 \cdot C_{\text{PROG}}}$$

$$R_{\text{PROG}} \leq \frac{1}{2\pi \cdot 10^5 \cdot C_{\text{PROG}}}$$

/ Package Dimensions



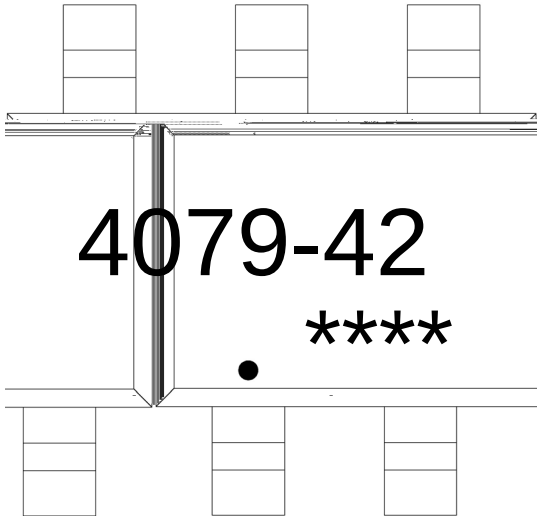
Unit: mm

Dimensions In Millimeters	
	Max
	1.05
	0.50
	0.20
	0.55
	0.15

Symbol	Dimensions In Millimeters		Symbol	Dimension
	Min	Max		Min
L	2.82	3.32	E1	0.85
B	1.50	1.70	a	0.35
C	0.90	1.30	c	0.10
L1	2.60	3.00	b	0.35
E	1.80	2.00	F	0

SOT23-6

/ Marking Instructions



X
73: <075 X
***** X

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	X		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

° X 260 ° 5 X 10 ° 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL