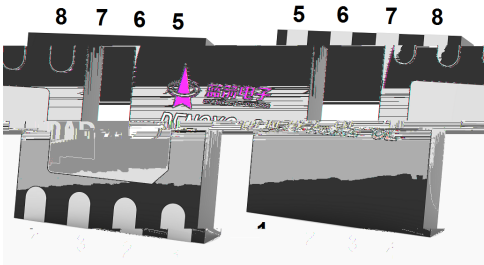
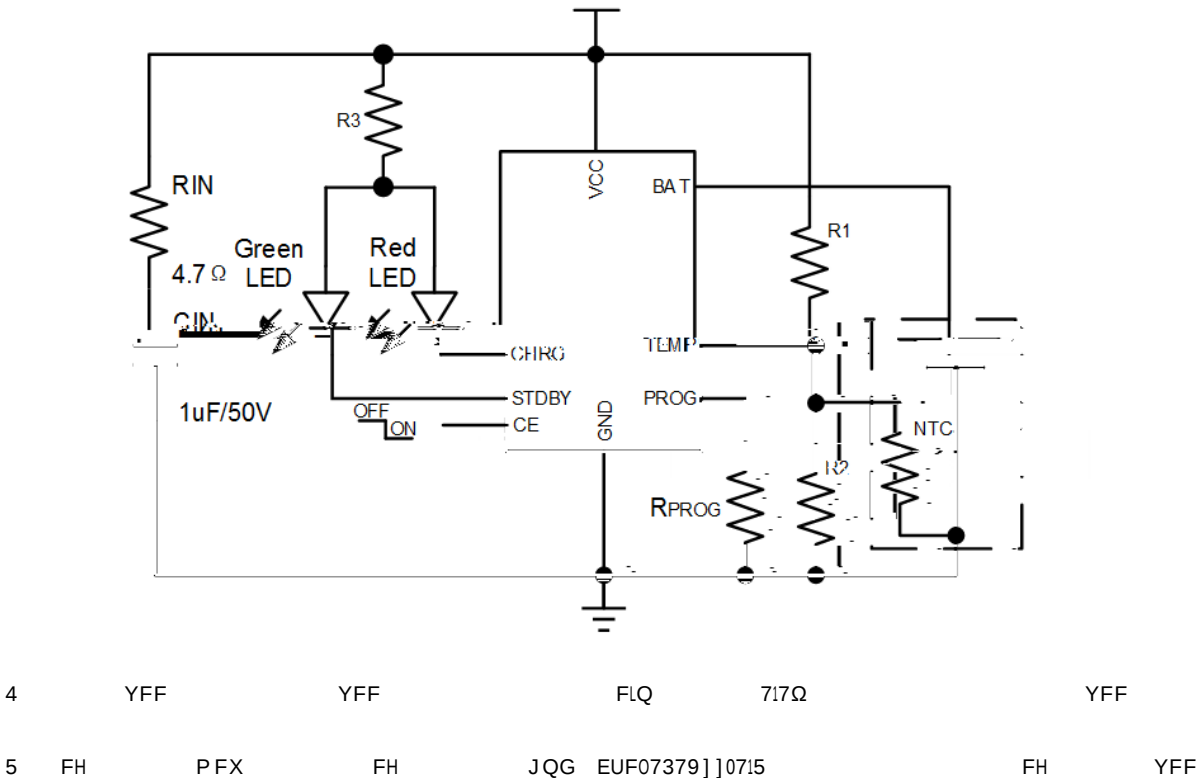


BRCL4079ZZ-4.2		
BRCL4079ZZ-4.2	/	
BRCL4079ZZ-4.2		USB
BRCL4079ZZ-4.2	PMOSFET	



PIN Num.	Symbol	Function
1	TEMP	
2	SUR J	JQG
3	GND	
4	VCC	
5	BAT	
6	STDBY	
7	CHRG	
8	CE	
HSDG	JQG	

BRCL4079ZZ-4.2

Rev.B May.-2025



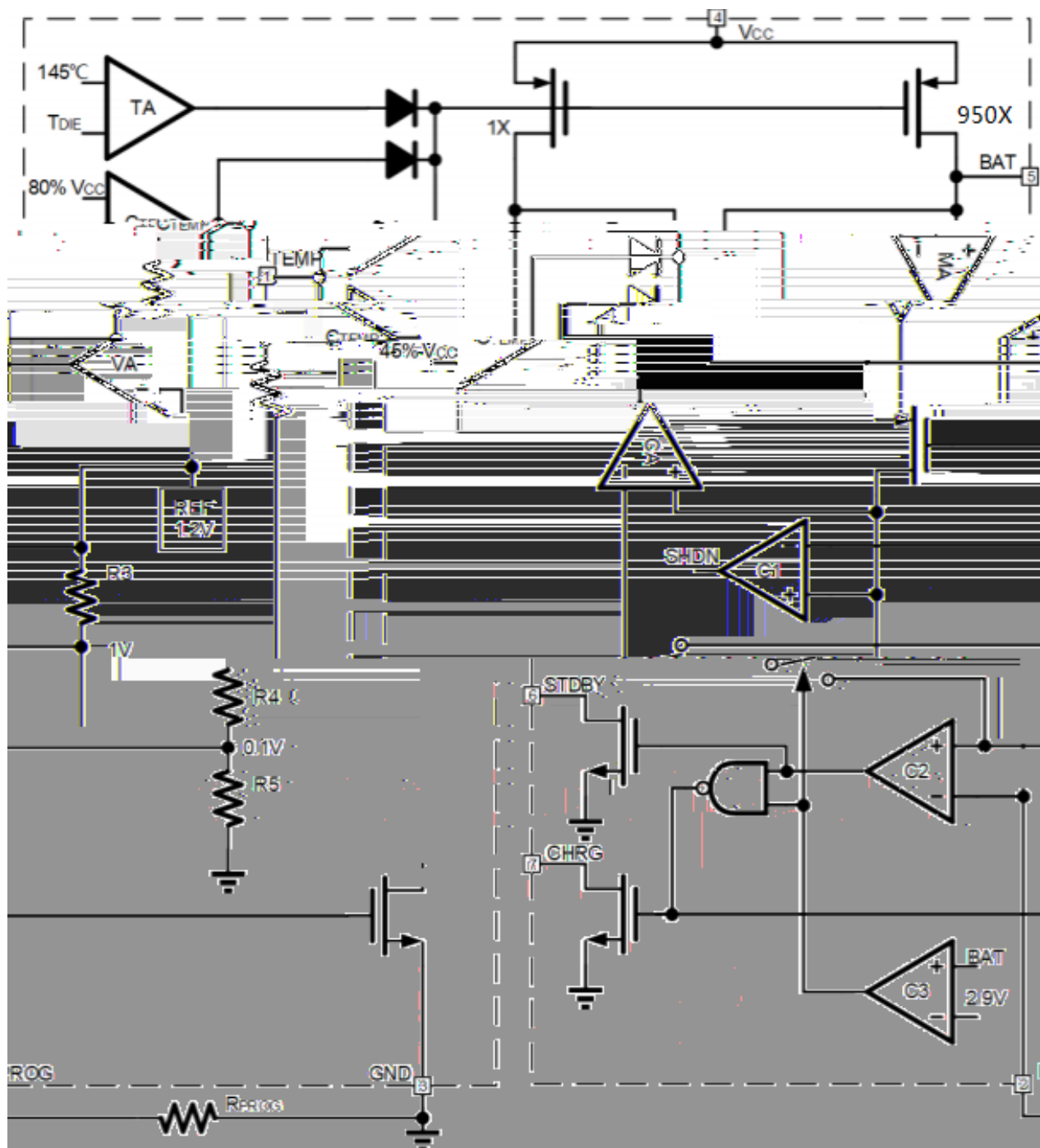
DATA SHEET

PARAMETER	SYMBOL	RATINGS	UNITS
VCC Pin Voltage	V_{VCC}	-0.3~36.0	V
BAT Pin Voltage	V_{BAT}	-4.2~18.0	
CHRG/STDBY Pin Voltage	$V_{CHRG/STDBY}$	-0.3~13.0	
PROG Pin Voltage	V_{PROG}	-0.3~5.5	
Other Pin Voltage	$V_{TEMP/GND/CE}$	-0.3~5.5	
Operating Ambient Temperature Range	T_{OP}	-40~+85	°C
Storage Temperature	T_{stg}	-65~+150	°C
Lead Temperature (Soldering, 10s)	T_{solder}	260	°C
ESD	HBM	2000	V
	CDM	1000	V

/ Electrical Characteristics($V_{CC}=5V, V_{BAT}=3.6V, T_a=25^{\circ}C$)

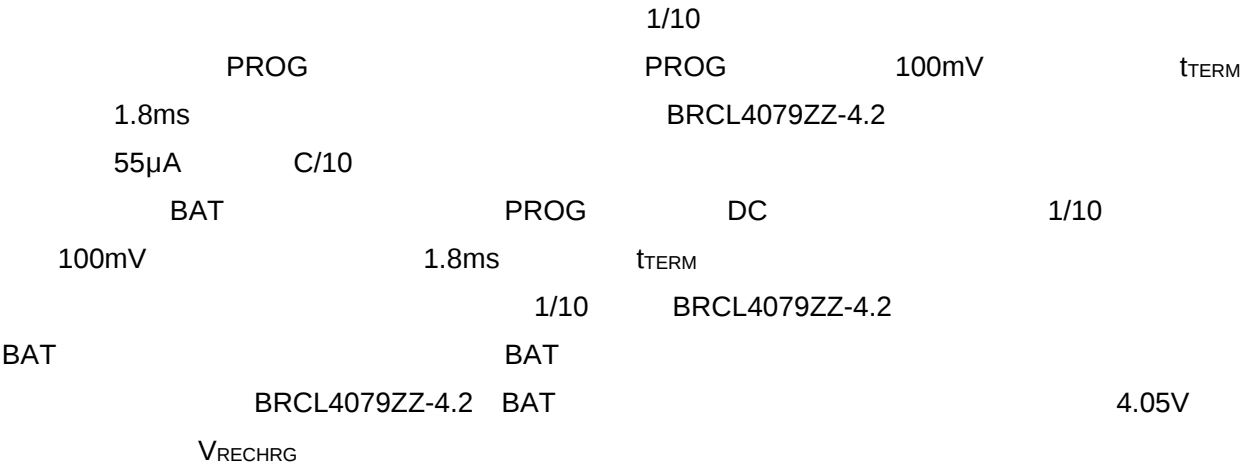
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{CC} Under voltage Lockout Hysteresis	$V_{CC_UV_HYS}$	V_{CC} from High to Low	100	200	300	mV
$V_{CC}-V_{BAT}$ Lockout Threshold	V_{ASD}	V_{CC} from Low to High	100	125	150	mV
		V_{CC} from High to Low	30	65	100	mV
C/10 Charging Termination Current	I_{TERM}	$R_{PROG}=1.0k$	62	95	128	mA
R_{PROG} voltage at Constant Current Mode	V_{PROG}	$R_{PROG}=1.0k$, Current mode	0.9	1.0	1.1	V
CHRG outputs low voltage	V_{CHRG}	$I_{CHRG}=5mA$		0.3	0.6	V
STDBY outputs low voltage	V_{STDBY}	$I_{STDBYG}=5mA$		0.3	0.6	V
Rechargeable Battery Voltage	ΔV_{RECHRG}	$V_{FLOAT}-V_{RECHARGH}$	100	150	200	mV
Junction temperature in limited temperature mode	T_{LIM}			145		$^{\circ}C$
Static Drain-Source On-Resistance	$R_{DS(on)}$			500		$m\Omega$
Soft start time	t_{ss}	$I_{BAT} = 0$ to $I_{BAT} = 950V/R_{PROG}$		20		μs
Recharge Comparator Filtering Time	$t_{RECHARG}$	V_{BAT} from High to Low	0.8	1.8	4.0	ms
Terminate comparator filtering Time	t_{TERM}	I_{BAT} drop to $I_{CHG}/10$	0.8	1.8	4.0	ms
PROG pin pull-up current	I_{PROG}			1.0		μA
TEMP high-side protection voltage	V_{TEMP-H}			80	82	$\%V_{CC}$
TEMP low-side protection voltage	V_{TEMP-L}		43	45		$\%V_{CC}$

/ Principle block diagram



/ Function description

BRCL4079ZZ-4.2					/
	1.0A		PCB	± 1%	
BRCL4079ZZ-4.2	P	MOSFET	BRCL4079ZZ-4.2		USB
VCC	UVLO	PROG			1%
			BAT	V _{TRIKL}	
		BRCL4079ZZ-4.2	1/10		
BAT	V _{TRIKL}			BAT	
	V _{FOLOAT}	BRCL4079ZZ-4.2			
	1/10				
		PROG	PROG		
950					
		$R_{PROG}=950/I_{CHG}$	$I_{CHG}=950/R_{PROG}$		
BAT		PROG			
		$I_{BAT}=(V_{PROG} \times 950)/R_{PROG}$			
0.5A					
			R _{PROG}		



/ Function description

BRCL4079ZZ-4.2			CHRG STDBY BRCL4079ZZ-4.2		
CHRG		CHRG		STDBY	
CHRG STDBY					
TEMP		BAT		10μF	
LED	LED	1-4s			
			OHG FKUJ		OHG VWGE\
EDW 43uI +WHPS= JQG,			OHG OHG 407s		

145

BRCL4079ZZ-4.2BRCL4079ZZ-4.2

			BRCL4079ZZ-4.2		
TEMP		TEMP		NTC	
BRCL4079ZZ-4.2			VLOW VHIGH		
BRCL4079ZZ-4.2			VLOW	45%×Vcc	VHIGH
80%×Vcc					
TEMP		VTEMP<VLOW		VTEMP>VHIGH	
TEMP	VTEMP		VLOW	VHIGH	TEMP



/ Function description

R1 R2

R1 R2

TL~TH

TL TH)

NTC

RTL

TL

RTH

TH

RTL RTH

TL

TEMP

$$V_{TEMPL} = \frac{R2 || RTL}{R1 + R2 || RTL} V_{IN}$$

TH

TEMP

$$V_{TEMPH} = \frac{R2 || RTH}{R1 + R2 || RTH} V_{IN}$$

$$V_{TEMPL} = V_{HIGH} = k3 \times V_{CC} (k2 - 0.8) \\ < V_{CC} (k1 = 0.45) \quad V_{TEMPH} = V_{LOW} = k1 >$$

$$R1 = \frac{RTL \times RTH (k2 - k1)}{(RTL - RTH) k2 \times k1}$$

$$R1 = \frac{RTL \times RTH (k2 - k1)}{(RTL - RTH) k2 \times k1}$$

PTC

$$R1 = \frac{RTL \times RTH (k2 - k1)}{(RTH - RTL) k2 \times k1}$$

$$R2 = \frac{RTL \times RTH (k2 - k1)}{RTH (k1 - k2 \times k1) - RTL (k2 - k2 \times k1)}$$

Vcc

R1 R2 RTH RTL

RTH RTL

R2

R1

R1

UVLO

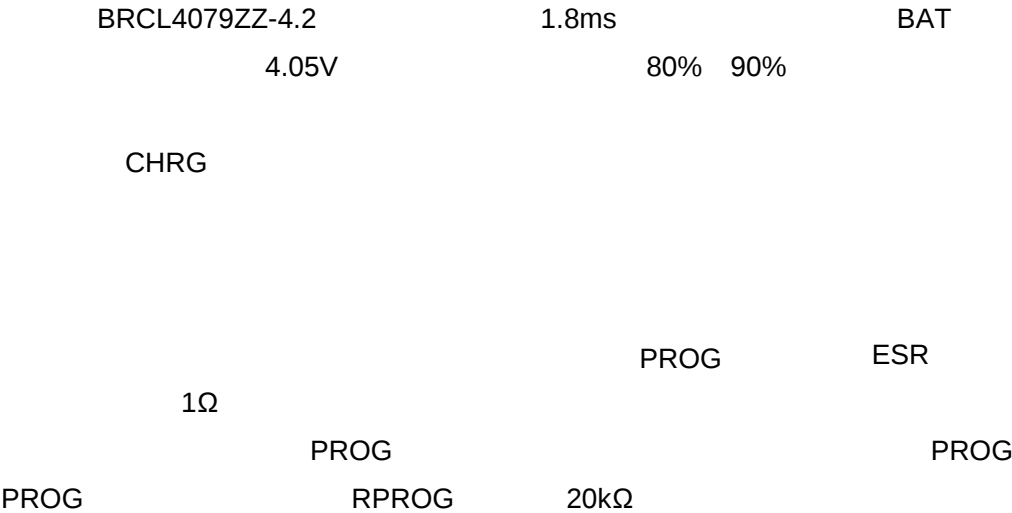
VCC

UVLO

UVLO

VCC

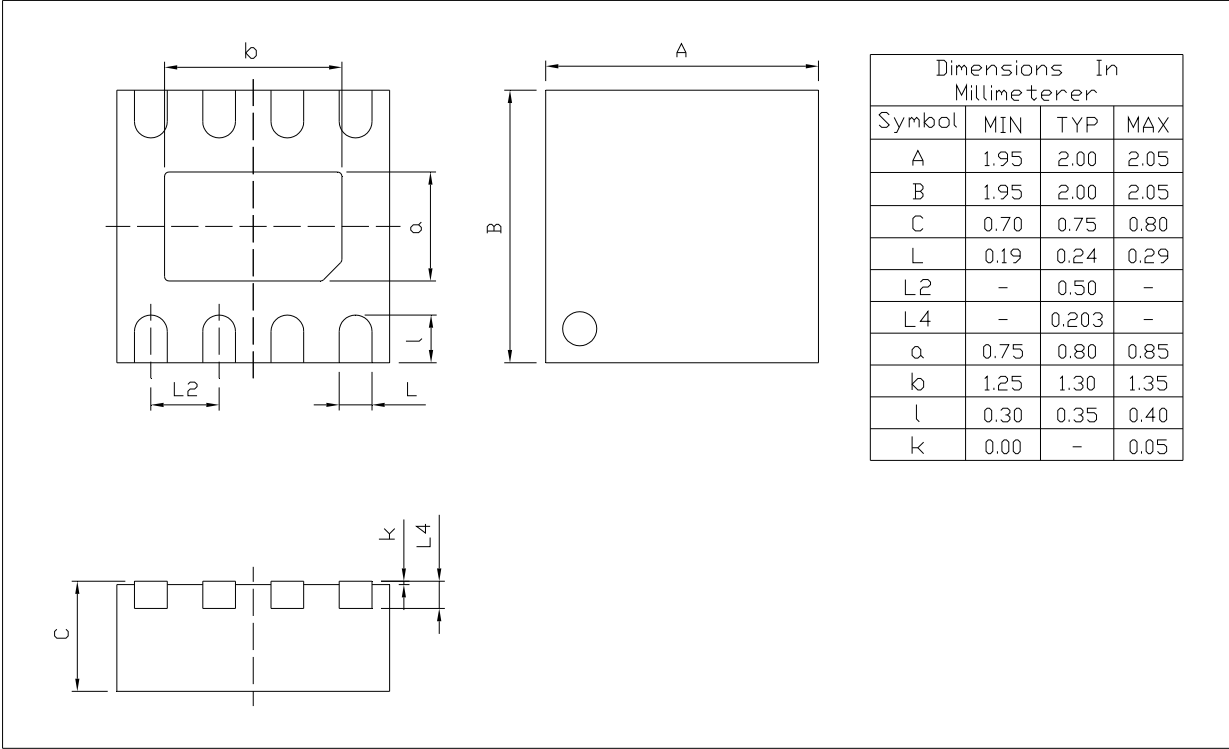
100mV



/ Package Dimensions

DFN2×2-8L-0.75

Unit:mm



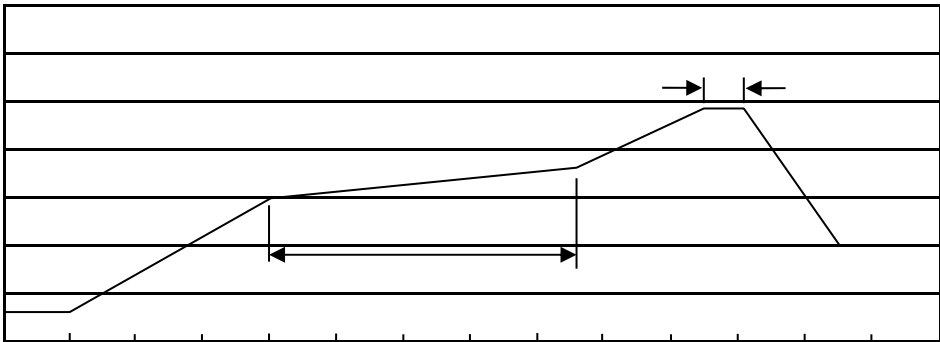
Rev.00 202012

/ Marking Instructions



7379	
75	715Y

() /



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245^{±5}

5^{±0.5}sec;

2.Peak Temp.:245^{±5} , Duration:5^{±0.5}sec.
- 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)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
DFN2×2-8L	4,000	10	40,000	4	160,000	7 ×8	210×205×205	445×435×230

/ Notices

All information provided in this document is subject to legal disclaimers.