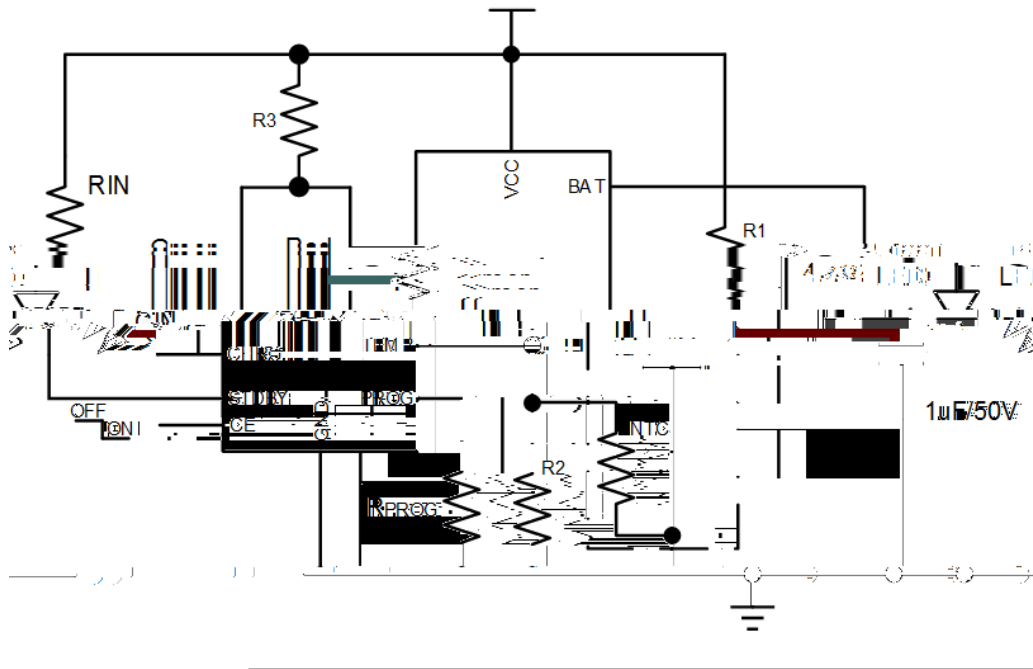


BRCL4079SE-4.2 ©%². ... k 9' ä 9o• ä æ è †o• ä Å\_A %-eOYÿ P- ãož  
BRCL4079SE-4.2 J É v / É 9 ¿ Å O ò k Q ñ û 5 Û B « ^ f ) k ... ±  
BRCL4079SE-4.2 è Ž `”• ò Ý # + z c ž k - U ` USB › y F ~ › W • ož  
BRCL4079SE-4.2 J 4 Ä B PMOSFET ë ã k ... -- è k ñ Y ñ } Û B y Š y œ Y

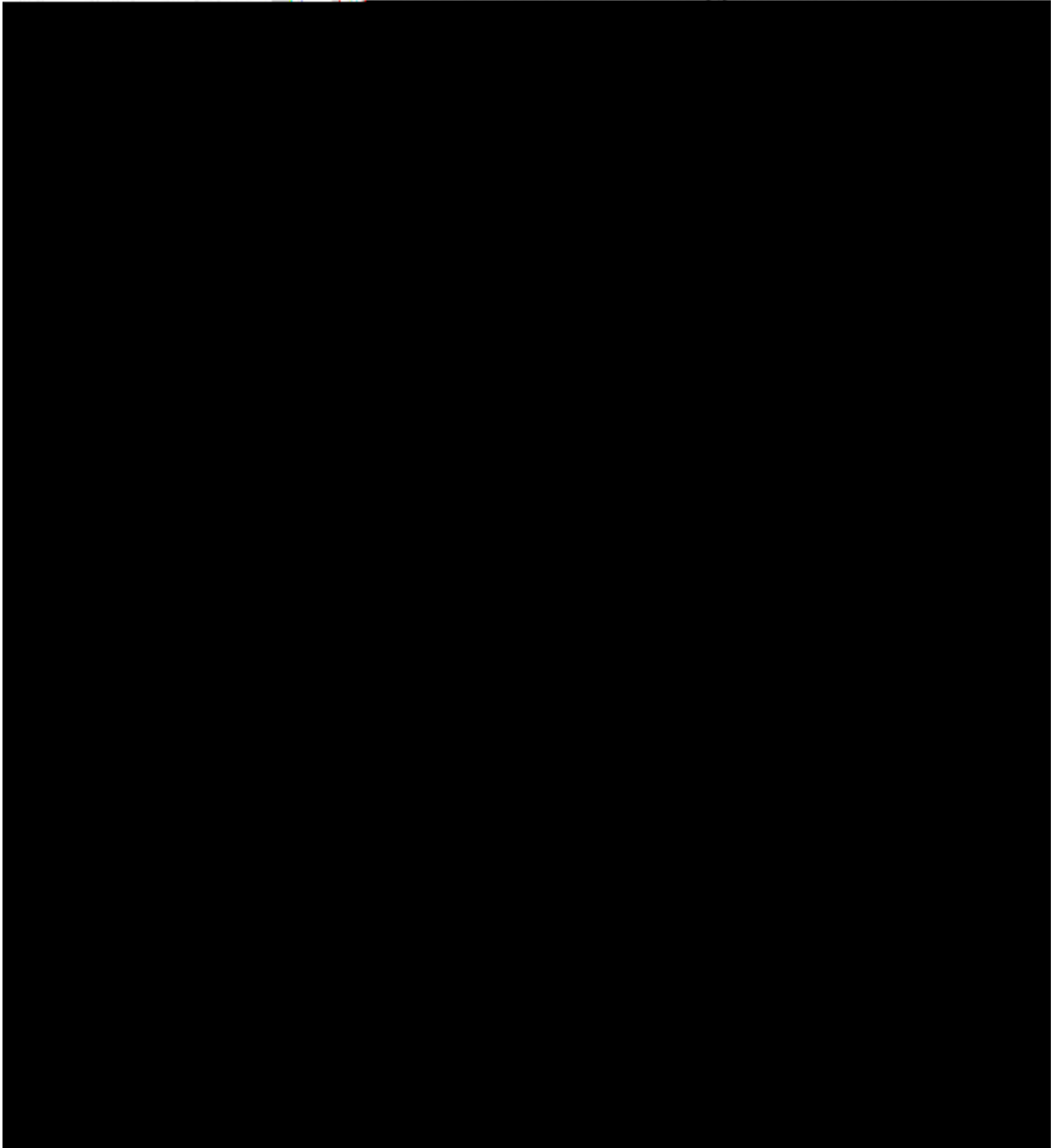


VCC Pin Voltage	$V_{VCC}$	-0.3~36.0	V
BAT Pin Voltage	$V_{BAT}$	-4.2~18.0	
CHRG/STDBY Pin Voltage	$V_{CHRG/STDBY}$	-0.3~13.0	
PROG Pin Voltage	$V_{PROG}$	-0.3~5.5	
Other Pin Voltage	$V_{TEMP/CE}$	-0.3~5.5	
Operating Ambient Temperature Range	$T_{OP}$	-40~+85	°C
Storage Temperature	$T_{stg}$	-65~+150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

Input Supply Voltage	$V_{CC}$		4.5	5.0	36.0	V
Input Power Supply Current	$I_{CC}$	Charging mode ( $R_{PROG}=1.0k$ )		260	360	A
		Standby mode, charging terminated		180	300	A
		Shutdown mode ( $R_{PROG}$ not connected, $V_{CC}<V_{BAT}$ , or $V_{CC} \emptyset$ $V_{UV}$ )		180	300	A
		OVP mode( $V_{CC}=30V$ )		180	300	A
Regulated Output (Float) Voltage	$V_{FLOAT}$	0 0 $T_A$ 085 , $R_{PROG}=1.0k$	4.158	4.2	4.242	V
BAT Pin Current	$I_{BAT}$	$R_{PROG}=1.0k$ Ę Current mode	855	950	1045	mA
		Standby mode, $V_{BAT}=4.2V$	0	-2.5	-6	A
		Shutdown mode ( $R_{PROG}$ not connected)		f 1	f 2	A
		Sleep mode, $V_{CC}=0V$		-1	-2	A
Trickle Charge Current	$I_{TRIKL}$	$V_{BAT} \{ V_{TRIKL} \}$ Ę $R_{PROG}=1.0k$	62	95	128	mA
Trickle Charge Threshold	$V_{TRIKL}$	$R_{PROG}=1.0k$ $V_{BAT}$ from Low to High	2.3	2.5	2.7	V
Trickle Charge Hysteresis $V_{CC}$	$V_{TR\_HYS}$	$R_{PROG}=1.0k$	120	160	200	mV

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V <sub>CC</sub> Under voltage Lockout Hysteresis	V <sub>CC_UV_HYS</sub>	V <sub>CC</sub> from High to Low	100	200	300	mV
V <sub>CC</sub> -V <sub>BAT</sub> Lockout Threshold	V <sub>ASD</sub>	V <sub>CC</sub> from Low to High	100	125	150	mV
		V <sub>CC</sub> from High to Low	30	65	100	mV
C/10 Charging Termination Current	I <sub>TERM</sub>	R <sub>PROG</sub> =1.0k	62	95	128	mA
R <sub>PROG</sub> voltage at Constant Current Mode	V <sub>PROG</sub>	R <sub>PROG</sub> =1.0k, Current mode	0.9	1.0	1.1	V
CHRG outputs low voltage	V <sub>CHRG</sub>	I <sub>CHRG</sub> =5mA		0.3	0.6	V
STDBY outputs low voltage	V <sub>STDBY</sub>	I <sub>STDBYG</sub> =5mA		0.3	0.6	V
Rechargeable Battery Voltage	V <sub>RECHRG</sub>	V <sub>FLOAT</sub> -V <sub>RECHARH</sub>	100	150	200	mV
Junction temperature in limited temperature mode	T <sub>LIM</sub>			145		
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>			500		m
Soft start time	t <sub>ss</sub>	I <sub>BAT</sub> = 0 to I <sub>BAT</sub> = 950V/R <sub>PROG</sub>		20		s
Recharge Comparator Filtering Time	t <sub>RECHARG</sub>	V <sub>BAT</sub> from High to Low	0.8	1.8	4.0	ms
Terminate comparator filtering Time	t <sub>TERM</sub>	I <sub>BAT</sub> drop to I <sub>CHG</sub> /10	0.8	1.8	4.0	ms
PROG pin pull-up current	I <sub>PROG</sub>			1.0		A
TEMP high-side protection voltage	V <sub>TEMP-H</sub>			80	82	%V <sub>CC</sub>
TEMP low-side protection voltage	V <sub>TEMP-L</sub>		43	45		%V <sub>CC</sub>



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BRCL4079SE-4.2 ©%². ... k 9' ä 9% -eO Y ÿ P J É v /É 9 ĺ Ä -  
 ~ož Ü U ^ ä 1.0A - v g™ %² ½ — 'ñ PCB b B h y r 1% ± † • - 9ož  
 BRCL4079SE-4.2 ± è 4%² Ä B P?ú 3 ä MOSFET C ½ ² - è k — ñ œ Y 8 â 'ê Û B v y  
 Šožœ 4 k Â Î - ~ è N ñ Û B « ^ ož N ò 4 k BRCL4079SE-4.2 U Y N USB › W • ož

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ϕ VCC - 9 UVLO y' u Y " PROG - a \$ • N 4%² ± † 1% —  
 Š k w ϕ%² P - ~ ÿ ß € , ž k%² - ² ê • ÷ ož ò ç BAT - u z 9 V TRIKL k é -  
 ~ μ @ Â v - % " ož " ¥ % " k BRCL4079SE-4.2 U ^ ³ 1/10 — - v k Y Ž 1 P 9

U ñ%² ¶ u k R ò è v - ož

ϕ BAT - 9 V TRIKL Y ž k - ~ μ É v % " k 4 ž g P U ^ É - vožϕ BAT  
 - 9 ñ Â Ä • - 9 g V FOLOAT h ž k BRCL4079SE-4.2 μ É 9 - % " k - v • ÷ x  
 4ož ϕ - v ' — › 1/10 k - ² ê È Ø ož

⟨ ñ Ô Ô W f '

- v © J %² N " PROG - a \$ • Š Ů — ož P - v © PROG - ÿ ß  
 v 950 • ož — Š y - v J ç , " Ů ' y

$$R_{PROG} = 950 / I_{CHG} \text{ k } \hat{e} \text{ } I_{CHG} = 950 / R_{PROG}$$

RBAT - ÿ ß - v U \* ! , PROG - 9 š ž G k , " ò y

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

+ 9 Ý 9 0.5A - v • k / ì ½ O , + ů Ý k ' " † O ò k ' z - v k c ê È y  
 j v , " ' ò - › - J ± ¶ %² ož ĭ • k U ŷ G ñ L # H ` Ý 4 R PROGOŽ



Rev.A Dec.-2025

$V_{TEMP1} = \frac{R2 || RTL}{R1 + R2 || RTL} V_{IN}$   
 $V_{TEMP1} = \frac{R2 || RTH}{R1 + R2 || RTH} V_{IN}$

$V_{TEMP1} = V_{HIGH} = k2 \times V_{CC} (k2 = 0.9)$   
 $0.45 \times V_{TEMP1} = V_{LOW} (k1 = 0.1)$

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

$V_{TEMP1} = V_{HIGH} = k2 \times V_{CC} (k2 = 0.9)$   
 $0.45 \times V_{TEMP1} = V_{LOW} (k1 = 0.1)$

$V_{TEMP1} = V_{HIGH} = k2 \times V_{CC} (k2 = 0.9)$   
 $0.45 \times V_{TEMP1} = V_{LOW} (k1 = 0.1)$

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 %² š - ² ê t Ä 2 k BRCL4079SE-4.2 y / J %² À Ä 1.8ms j f ž • A û ~ Û + BAT -  
 9 g Ò ! O o ž ç P 9 ' 4.05V g Ý + • 9 P O 80% 90% h Y ž k - ²  
 ê M • • ÷ o ž G ' 4 P t Ó 4 " g ê N h %² - Û Á k w ² " 4 g u Ê Á - ² ê o  
 ¬ } o ž " Ç - ² ê i k CHRG - ý ß µ %² Û Á o ž

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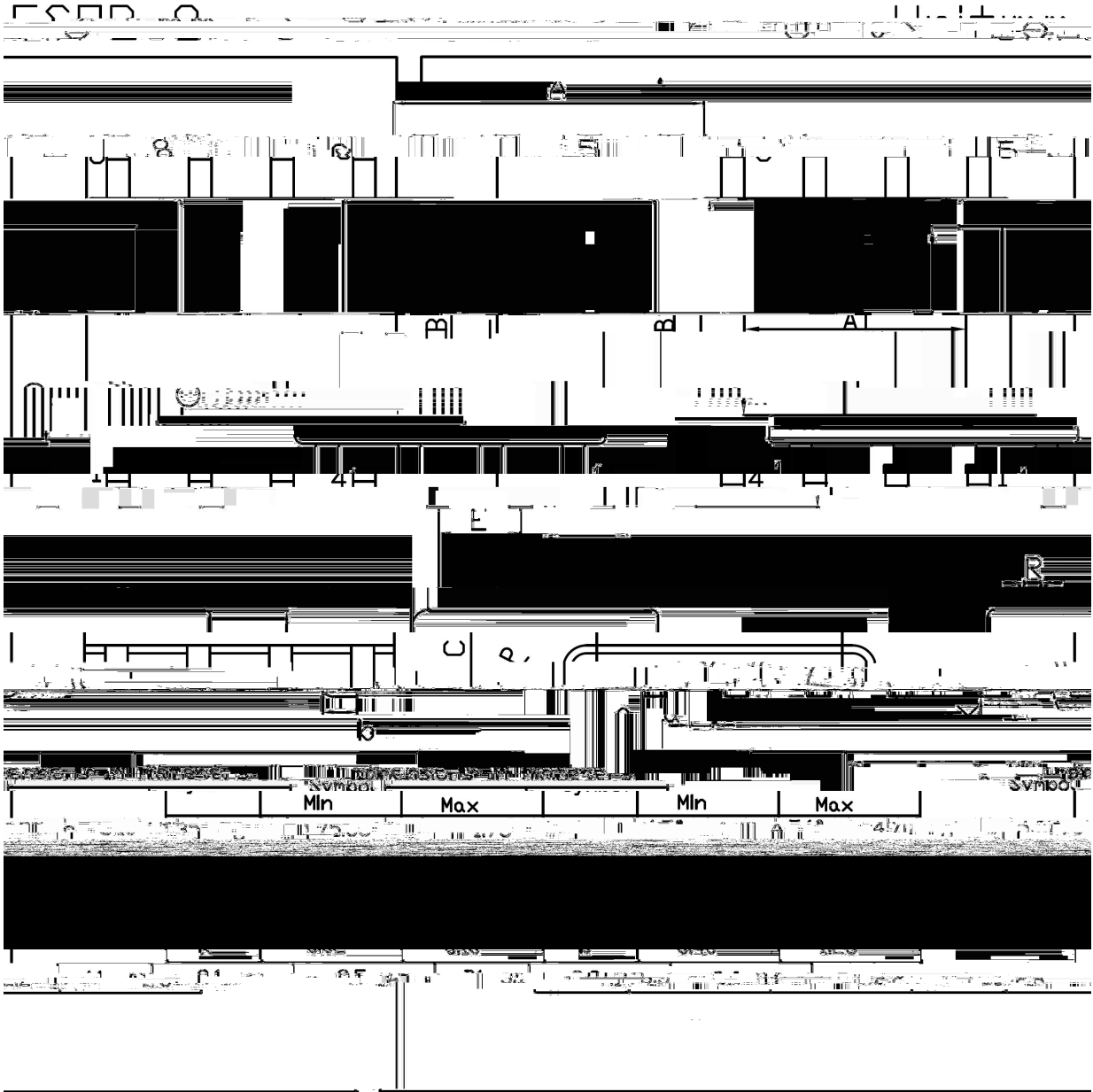
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4 l o ž " Z Ä N P ž k 4 x 4 ¼ f 9 k • ' J %² ý ß o ž ç J Ý f ) z ESR — G <sup>-</sup>

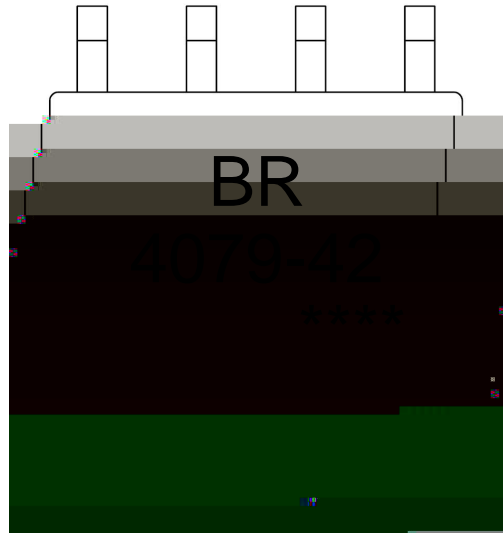
ž k • ' í %² û 1 S Š o ž ò ç ... e k é ¬ } û Š o ž

" É v % " k y 9 F Ø ê è © PROG

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šWD t...•Žč x/ :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6


<sup>a</sup>čy

- 1o•Ä½“† 150½180 - kž• 60½90sec;
- 2o•Q›“† 245 r5 - kž•4Ò 5 r0.5sec;
- 3o•D Nò iÒ0,† 2½10 - /sec.

Note:

- 1.Preheating:150~180 - , Time:60~90sec.
- 2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.
- 3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p~»]

“†y 260 r5 - ž•y 10 r1 sec. Temp.:260±5 Time:10±1 sec

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2 & x / REEL

Package Type	Units ;>û !H	Dimension ;>û p .	(unit Åmm <sup>3</sup> )
7>û ~ E			