"Y ت / Descriptions

BRCL4058NSE 1A /
BRCL4058NSE
P-MOSFET 4.2V
4.2V 1/10

BRCL4058NSE

● / Features

6.8V OVP
VDD 36V

0V
1A
/ /

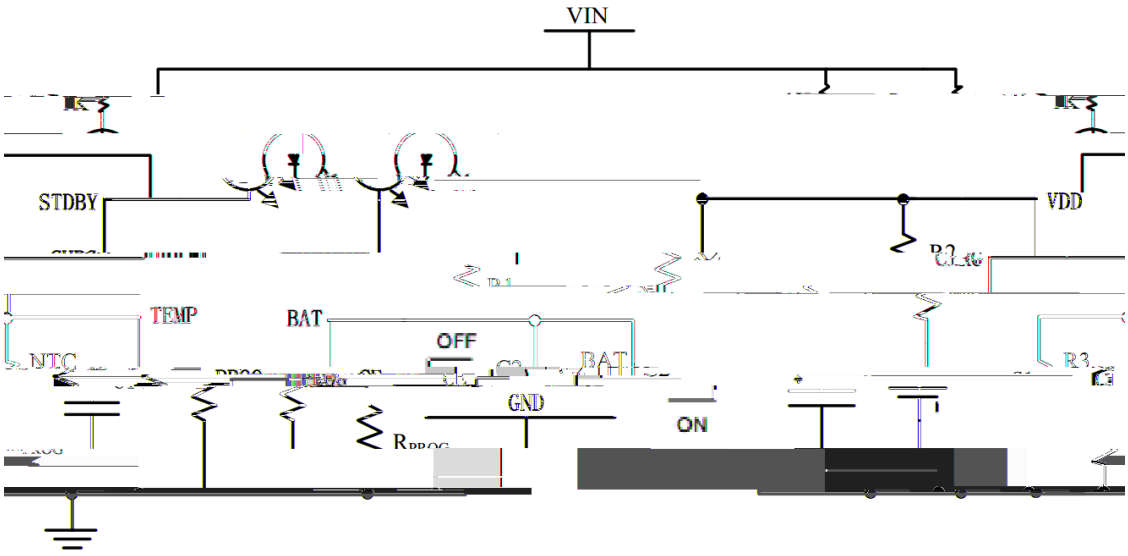
2.8V

ESOP-8
RoHS

ẓ ɤ / Applications

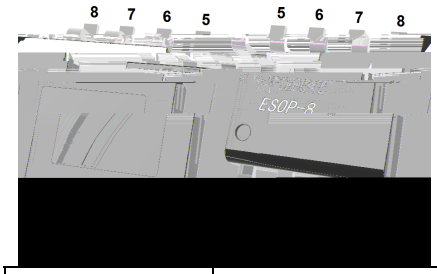
USB

ẓ ɤ ⸗ ع / Application Circuit



C SMD 1-10uF R SMD 4.7-10R

ã ⅄ / Pinning



PIN Num.	Symbol	Function
1	TEMP	
2	PROG	
3	GND	
4	VDD	5V
5	BAT	
6	STDBY	
7	CHRG	
8	CE	

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PARAMETER	SYMBOL	RATINGS	UNITS
VDD/CHRG/STDBY Pin Voltage	$V_{VDD/CHRG/STDBY}$	-0.3~36	V
VCE Pin Voltage	V_{CE}	-0.3~32	
BAT Pin Voltage	V_{BAT}	-5~15	
PROG Pin Voltage	V_{PROG}	-0.3~6	
TEMP Pin Voltage	V_{TEMP}	-0.3~15	
Operating Ambient Temperature Range	T_{OP}	-40~+85	°C
Storage Temperature	T_{stg}	-55~+150	°C
Lead Temperature (Soldering, 10s)	T_{solder}	260	°C
ESD	HBM	2000	V
	MM	200	V

⁄ ƎÃ / Electrical Characteristics(Ta=25)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Power Suplly						
Input Supply Voltage	V_{DD}		4.5	5.0	6.0	V
V_{DD} Under Voltage Lockout Threshold	V_{DD_UV}	V_{DD} from Low to High		3.8		V
V_{DD} Under voltage Lockout Hysteresis	$V_{DD\_UV\_HYS}$	V_{DD} from High to Low		200		mV
Input Over-Voltage Protection Voltage	V_{DD_OVP}		6.3	6.8	7.3	V
Input Over-Voltage Protection Voltage Hysteresis	$V_{DD\_OVP\_HYS}$			500		mV
Input Power Supply Current	I_{CC}	Charging mode (R_{PROG}=1K)		240	360	μA
		Standby mode, charging terminated		70	120	μA
		Shutdown mode (R_{PROG} not connected, V_{CC}<V_{BAT})		50	100	μA
Charging Current Setting						
R_{PROG} voltage at Constant Current Mode	V_{PROG}	V_{DD}=5V;R_{PROG}=1K	0.85	1	1.15	V
BAT Pin Current	I_{BAT}	V_{DD}=5V;V_{BAT}=3.6V R_{PROG}=1K		1000		mA
		V_{DD} not connected V_{BAT}=4V		0.5	1	μA
Trickle Charge Current	I_{TRIKL}	V_{BAT} V_{TRIKL} R_{PROG}=1K		100		mA
C/10 Charging Termination Current	I_{TERM}	R_{PROG}=1K		100		mA
Trickle Charge Threshold	V_{TRIKL}	V_{BAT} from Low to High		2.8		V
Trickle Charge Hysteresis	V_{TR_HYS}	V_{BAT} from High to Low		150		mV
Battery Terminal BAT						
Regulated Output (Float) Voltage	V_{FLOAT}	V_{DD}=5V;R_{PROG}=1K	4.158	4.2	4.242	V
Rechargeable Battery Voltage	V_{RECHRG}	V_{FLOAT}-$V_{RECHARH}$		150		mV
Recharge Comparator Filtering Time	$T_{RECHARG}$	V_{BAT} from High to Low	0.8	2	4	mS
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{BAT}=3.8V;R_{PROG}=1K		700		mΩ

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Indicator Pin Status CHRG/STDBY						
CHRG Pin Output Current	I_{CHRG}	V_{DD}=5V;V_{CHRG}=1V	1	2.5	5	mA
STDBY Pin Output Current	I_{STDBY}	V_{DD}=5V;V_{STDBY}=1V	1	2.5	5	mA
Internal Temperature Compensation						
Internal Temperature Compensation	T_{OTC}			140		
Overtemperature Detection Threshold	T_{OTPH}					

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BRCL4058NSE / BRCL4058NSE

USB AC 1A , 36V

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140 BRCL4058NSE

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VDD VDD

UVLO VDD 200mV گ

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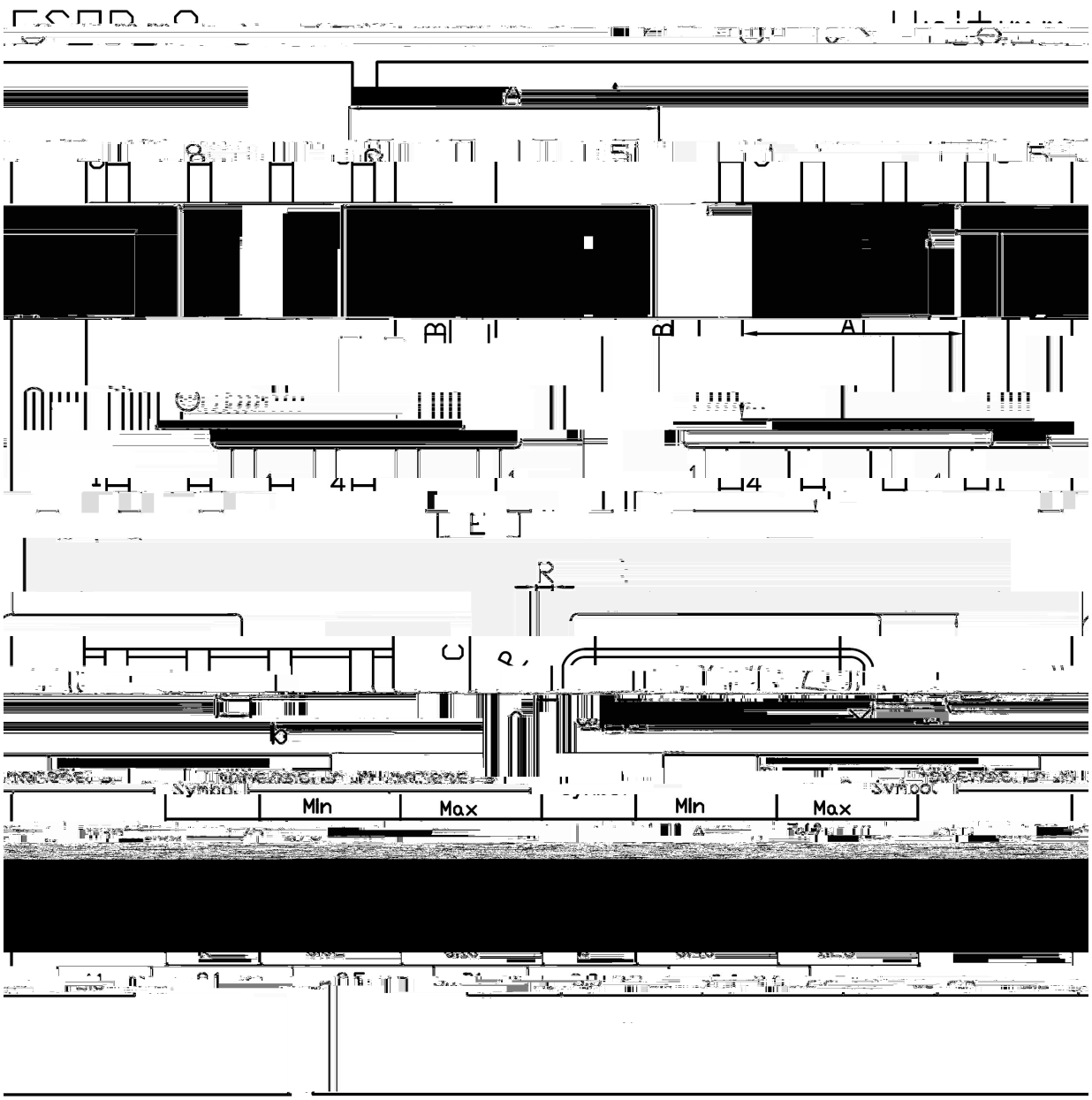
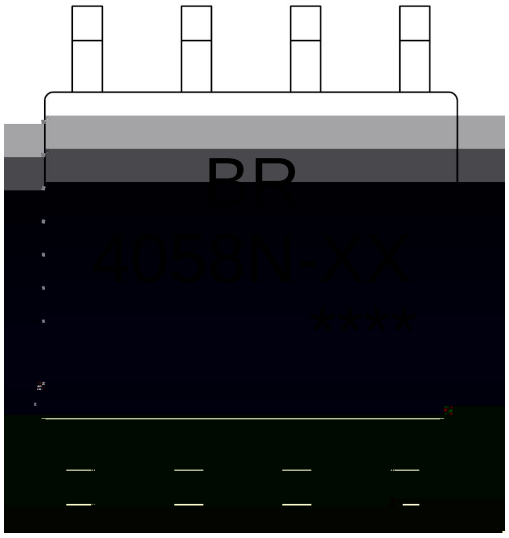


Ł. L'Ω / Marking Instructions



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BRCL4058NSE-4.2	BR/4058N-42/****

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						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.