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B	2020/11/4	1 5 2	6 7 8 9 : ; < = > ?	@ A B	

BRCL3230BZF

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BRCL3230BZF /

BRCL3230BZF

MOSFET

BRCL3230BZF DFN2×2-6L

BRCL3230BZF

The BRCL3230BZF series product is a high integration solution for lithium-ion/polymer battery protection. BRCL3230BZF contains advanced power MOSFET, high-accuracy voltage detection circuits and delay circuits.

BRCL3230BZF is put into an ultra-small DFN2×2-6L package makes it an ideal solution in limited

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/Parameter

/Symbol

/Value



Equivalent FET on Resistance						
Equivalent FET on Resistance	R_{DS}	$V_{dd}=3.6V, I_{VM}=1A$	15	25	40	mΩ
Over temperature protection						
Over Temperature Protection	OTP		125	140	155	°C
Over Temperature Recovery Degree	OTPR		100	115	130	°C

Delay time

Functional Description

BRCL3230BZF

MOSFET

25mΩ

The BRCL3230BZF monitors the voltage and current of a battery and protects it from being damaged due to overcharge voltage, overdischarge voltage, overdischarge current, and short circuit conditions by disconnecting the battery from the load or charger. The peripheral circuit is very simple. The MOSFET is integrated and its $R_{DS(ON)}$ is as low as 25mΩ typical.

Normal Operating mode

If no exception condition is detected, charging and discharging can be carried out freely. This condition is called the normal operating mode.

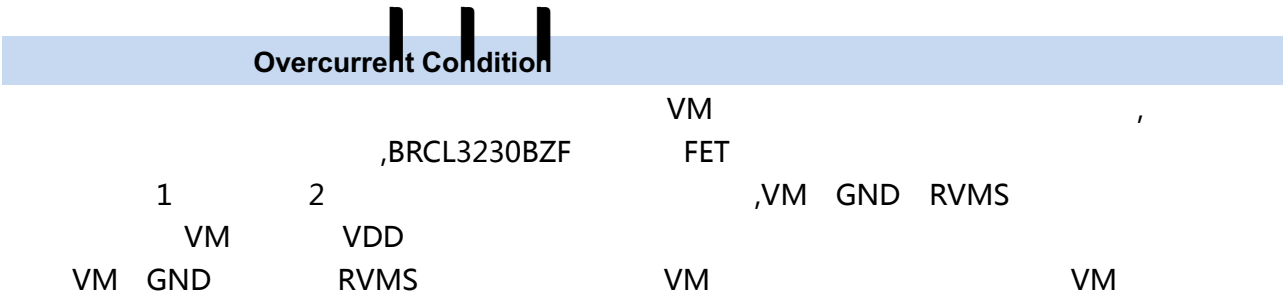
Overcharge Condition

The diagram illustrates a vehicle control system architecture. Key components and their connections include:

- TCU** (Top Left): Connected to **BRCL3230BZF** and **VCU**.
- BRCL3230BZF** (Top Middle): Connected to **TCU**, **FET**, and **VCL**.
- FET** (Top Right): Connected to **BRCL3230BZF** and **VCU**.
- VCU** (Top Far Right): Connected to **FET** and **VM**.
- VCL** (Middle Left): Connected to **BRCL3230BZF** and **BRCL3230BZF**.
- BRCL3230BZF** (Middle Middle): Connected to **VCL** and **VM**.
- VM** (Middle Right): Connected to **VCU** and **0.7V**.
- 0.7V** (Middle Far Right): Connected to **VM**.
- BRCL3230BZF** (Bottom Left): Connected to **VCU** and **BRCL3230BZF**.
- VCU** (Bottom Middle): Connected to **BRCL3230BZF** and **VM**.
- VM** (Bottom Right): Connected to **VCU** and **1**.
- 1** (Bottom Far Right): Connected to **VM** and **VCU**.
- VCU** (Bottom Far Right): Connected to **1** and **2**.
- 2** (Bottom Far Right): Connected to **VCU** and **1**.

When the

BRCL3230BZF



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When the discharging current becomes equal to or higher than a specified value (the VM pin voltage is equal to or higher than the overcurrent detection voltage) during discharging under normal condition and the state continues for the overcurrent detection delay time or longer, the BRCL3230BZF turns off



0V Battery Charging Function

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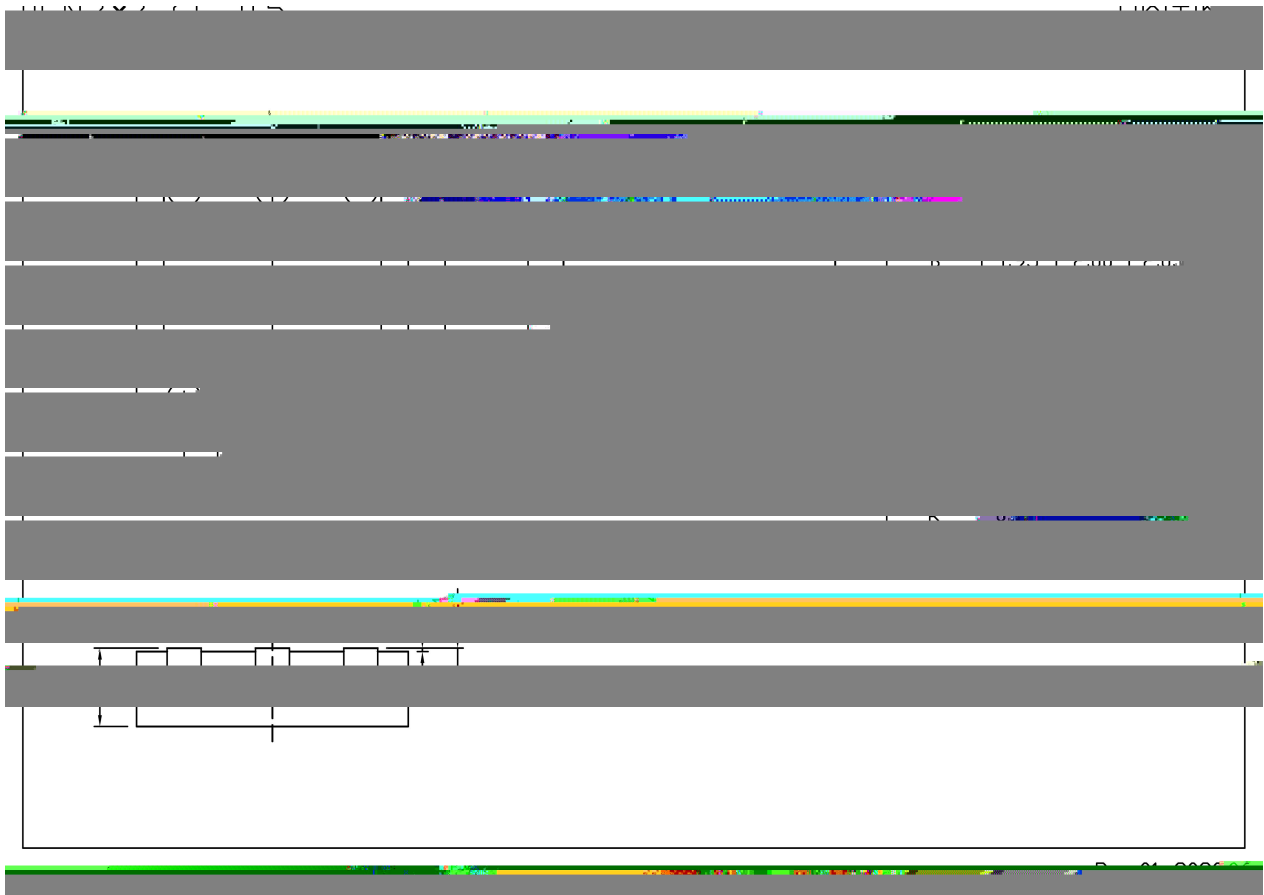
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/ Package Dimensions



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