

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

STRUCTURE Silicon Monolithic Integrated Circuit

PRODUCT CONSTANT VOLTAGE AND CONSTANT CURRENT
CONTROLLER FOR BATTERY CHARGERS AND ADAPTORS

TYPE **B D 6 5 5 1 G**

FEATURE

- Constant voltage and constant current control
- Power supply voltage: 1.8V~12V
- High accuracy reference voltage: 1.21V±1%
- An accuracy for current-detecting voltage: 200mV±2%

○ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	Symbol	Limit	Unit
Power Supply Voltage	VMAX	-0.3 ~ 14	V
ICT Pin Maximum Voltage	VICTMAX	-0.3 ~ VCC	V
Power Dissipation	Pd	675 *1	mW
Operating Temperature Range	Topr	0 ~ +85	°C
Maximum Junction Temperature	Tjmax	150	°C
Storage Temperature Range	Tstg	-55 ~ +150	°C

*1 Pd derated at 5.4mW/°C for temperature above Ta=25°C,
mounted on 70mm × 70mm × 1.6mm glass-epoxy PCB.

○ OPERATING CONDITIONS (Ta=0~+85°C)

PARAMETER	Symbol	Limit	Unit
Power Supply Voltage	VCC	1.8~12 *2	V

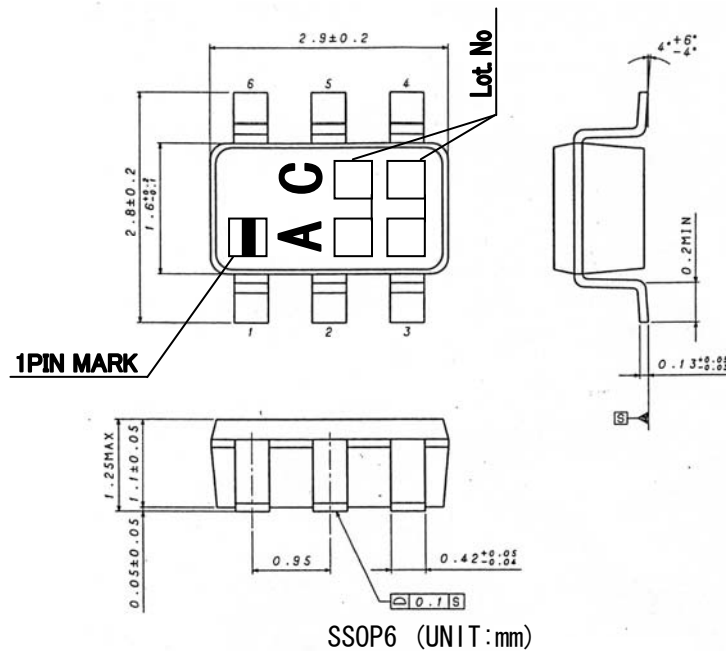
*2 Except an amplifier for voltage control loop guaranteed above VCC=2.5V.

○ ELECTRICAL CHARACTERISTICS (Ta=25°C and Vcc=+5V (unless otherwise specified))

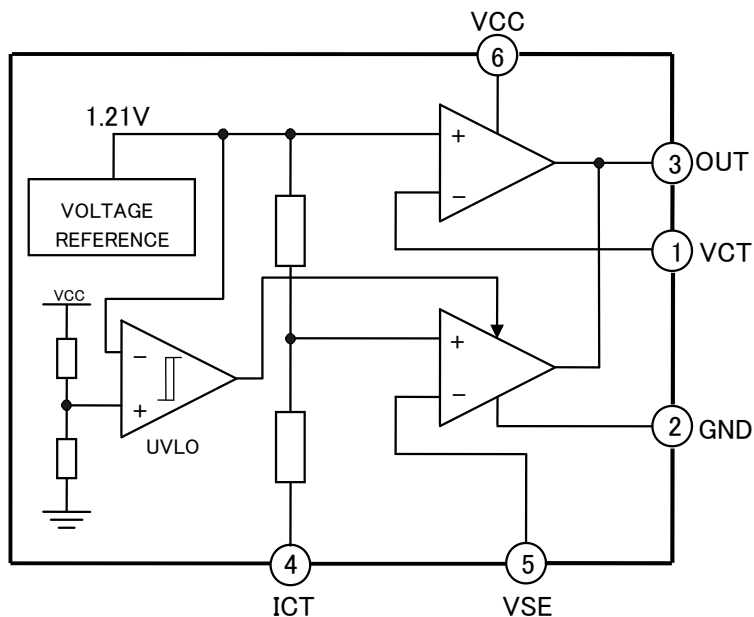
PARAMETER	Symbol	Limit			UNIT	Conditions
		MIN.	TYP.	MAX.		
【Total Current Consumption】						
Total Supply Current - not taking the output sinking current into account	ICC	-	0.6	2	mA	Ta=25°C
【Voltage Control Loop】						
Transconductance Gain(VCT). Sink Current Only	GMV	1.0	4.5	-	mA/mV	Ta=25°C
Voltage Control Loop Reference at 1.5mA sinking current	VREF	1.198	1.21	1.222	V	Ta=25°C
		1.186	1.21	1.234		0 < Ta < 85°C
【Current Control Loop】						
Transconductance Gain(ICT). Sink Current Only	GMI	1.5	3.5	-	mA/mV	Ta=25°C
Current Control Loop Reference at 2.5mA sinking current	VSE	196	200	204	mV	Ta=25°C
		192	200	208		0 < Ta < 85°C
Current out of pin ICT at -200mV	Ibi	13	23	33	μA	Ta=25°C
【Output Stage】						
Output Short Circuit Current, Output to VCC, Sink Current Only	IOS	-	25	50	mA	Ta=25°C, OUT=VCC, VSE=0V, ICT=-0.3V
【UVLO】						
UVLO Threshold Voltage	VVT	1.8	1.9	2.0	V	VCC=L→H
UVLO Hysteresis Width	DVVT	40	100	160	mV	
Output Short Circuit Current at Full Drive	IOS2	5.0	-	-	mA	Ta=25°C VCC=OUT=1.8V

● This product is not designed for protection against radio active rays.

○ PACKAGE, MARKING SPECIFICATION



○ BLOCK DIAGRAM



○ PIN No. & PIN NAME

PIN No.	PIN Name	Function
1	VCT	Input Pin of the Voltage Control Loop
2	GND	Ground Line. 0V Reference For All Voltages
3	OUT	Output Pin. Sinking Current Only
4	ICT	Input Pin of the Current Control Loop(+)
5	VSE	Input Pin of the Current Control Loop(-)
6	VCC	Positive Power Supply Line. This pin doubles low voltage input detection pin.

○ Operation Notes

1) Absolute maximum ratings

An excess in the absolute maximum rating, such as supply voltage, temperature range of operating conditions, etc., can break down the devices, thus making impossible to identify breaking mode, such as a short circuit or an open circuit. If any over rated values will expect to exceed the absolute maximum ratings, consider adding circuit protection devices, such as fuses.

2) GND voltage

The potential of GND pin must be minimum potential in all condition. As an exception, the circuit design allows voltages up to -0.3 V to be applied to the ICT pin.

3) Thermal design

Use a thermal design that allows for a sufficient margin in light of the power dissipation (Pd) in actual operating conditions.

4) Inter-pin shorts and mounting errors

Use caution when positioning the IC for mounting on printed circuit boards. The IC may be damaged if there is any connection error or if pins are shorted together.

5) Actions in strong electromagnetic field

Use caution when using the IC in the presence of a strong electromagnetic field as doing so may cause the IC to malfunction.

6) Mutual impedance

Power supply and ground wiring should reflect consideration of the need to lower mutual impedance and minimize ripple as much as possible (by making wiring as short and thick as possible or rejecting ripple by incorporating inductance and capacitance).

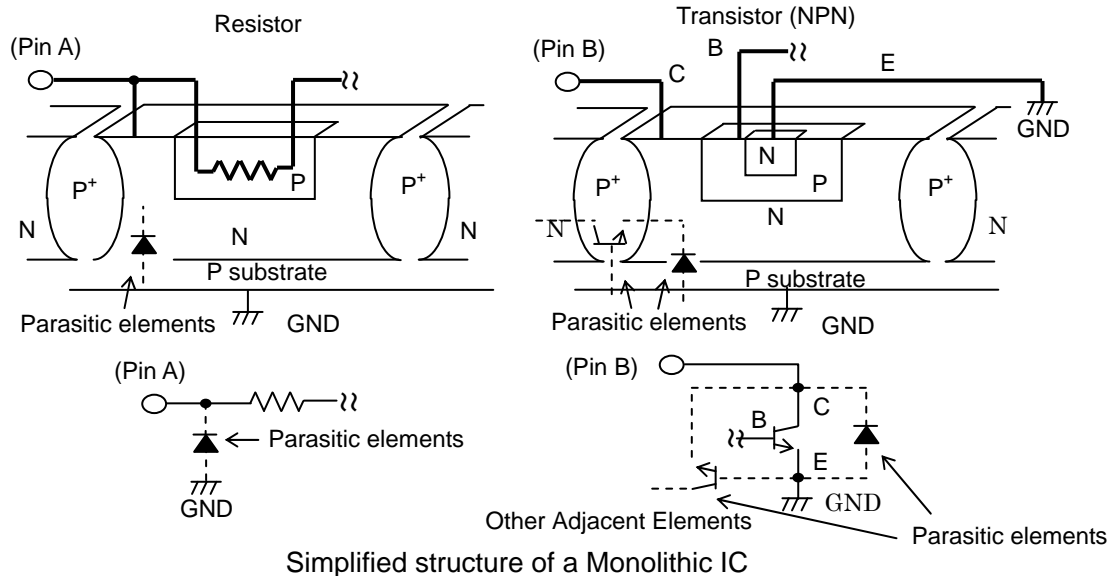
7) Regarding input pin of the IC

This monolithic IC contains P+ isolation and P substrate layers between adjacent elements in order to keep them isolated. P-N junctions are formed at the intersection of these P layers with the N layers of other elements, creating a parasitic diode or transistor. For example, as shown in the figures below, the relation between each potential is as follows:

When $GND > Pin A$ and $GND > Pin B$, the P-N junction operates as a parasitic diode.

When $GND > Pin B$, the P-N junction operates as a parasitic transistor.

Parasitic diodes can occur inevitable in the structure of the IC. The operation of parasitic diodes can result in mutual interference among circuits, operational faults, or physical damage. Accordingly, methods by which parasitic diodes operate, such as applying a voltage that is lower than the GND (P substrate) voltage to an input pin, should not be used. Although the circuit design allows voltages up to -0.3 V to be applied to the ICT pin, voltages lower than this may cause the behavior described above. Use caution when designing the circuit.



Notes

No copying or reproduction of this document, in part or in whole, is permitted without the consent of ROHM Co.,Ltd.

The content specified herein is subject to change for improvement without notice.

The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request.

Examples of application circuits, circuit constants and any other information contained herein illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.

Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of such information, ROHM shall bear no responsibility for such damage.

The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM and other parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the use of such technical information.

The Products specified in this document are intended to be used with general-use electronic equipment or devices (such as audio visual equipment, office-automation equipment, communication devices, electronic appliances and amusement devices).

The Products specified in this document are not designed to be radiation tolerant.

While ROHM always makes efforts to enhance the quality and reliability of its Products, a Product may fail or malfunction for a variety of reasons.

Please be sure to implement in your equipment using the Products safety measures to guard against the possibility of physical injury, fire or any other damage caused in the event of the failure of any Product, such as derating, redundancy, fire control and fail-safe designs. ROHM shall bear no responsibility whatsoever for your use of any Product outside of the prescribed scope or not in accordance with the instruction manual.

The Products are not designed or manufactured to be used with any equipment, device or system which requires an extremely high level of reliability the failure or malfunction of which may result in a direct threat to human life or create a risk of human injury (such as a medical instrument, transportation equipment, aerospace machinery, nuclear-reactor controller, fuel-controller or other safety device). ROHM shall bear no responsibility in any way for use of any of the Products for the above special purposes. If a Product is intended to be used for any such special purpose, please contact a ROHM sales representative before purchasing.

If you intend to export or ship overseas any Product or technology specified herein that may be controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to obtain a license or permit under the Law.



Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available, please contact us.

ROHM Customer Support System

<http://www.rohm.com/contact/>