RICOH

R5462K Series

High Accuracy Li-ion/polymer 2Cell protector

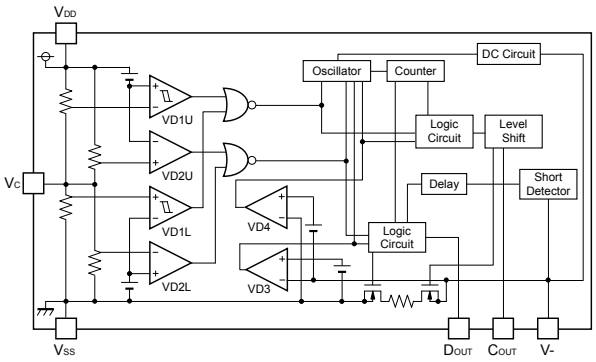
The R5462x Series are high voltage CMOS-based protection ICs for over-charge/discharge of rechargeable two-cell Li-ion/Lithium polymer, further include a short circuit protection circuit for preventing large external short circuit current and the protection circuits against the excess discharge-current and excess charge current.
Each of these ICs is composed of six voltage detectors, reference units, a delay circuit, a short circuit protector, an oscillator, a counter, and logic circuits. The over-charge detector threshold is high accuracy such as ±10mV(0°C~50°C). DFN(PLP)1820-6B package is available.

FEATURES

- Supply Voltage (V_{DD}) ····· 12V (Absolute Maximum Rating)
- Charger Negative Input Voltage (V-) ····· –30V (Absolute Maximum Rating)
- Operating Input Voltage Range (V_{DD}) ····· 1.5V to 10.0V
- Supply Current (I_{DD}) ····· Typ. 4.0µA
- Standby Current (I_S) ····· Max.0.1µA or 2.0µA
- Over-charge (V_{DET1}) — Detector Threshold Range ····· 3.65V to 4.32V (0.005V Steps); Voltage Accuracy ····· ±10mV (0°C~50°C); Output Delay Time (tV_{DET1}) ····· 1.0s
- Over-discharge (V_{DET2}) — Detector Threshold Range ····· 2.0 to 3.2V (0.1V Steps); Voltage Accuracy ····· ±1.0%; Output Delay Time (tV_{DET2}) ····· 128ms
- Excess discharge-current (V_{DET3}) — Detector Threshold Range ····· 0.05V to 0.2V (0.005V steps); Voltage Accuracy ····· ±10mV; Output Delay Time (tV_{DET3}) ····· 12ms
- Excess charge-current (V_{DET4}) — Detector Threshold ····· –0.2V to –0.1V; Voltage Accuracy ····· ±20mV; Output Delay Time (tV_{DET4}) ····· 8ms
- Short Protection — Detector Threshold (V_{short}) ····· Typ. 1.0V; Output Delay Time (t_{short}) ····· Typ. 300µs
- 0V-battery charge ····· Selectable
- Packages ····· DFN(PLP)1820-6B

BLOCK DIAGRAMS

R5462K2xxAG



SELECTION GUIDE

Halogen Free	Package	Quantity per Reel	Part No.
H/F	DFN(PLP)1820-6B	5,000 pcs	R5462K2xx$∗-TR

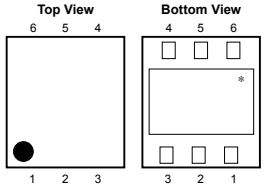
xx: Serial Number for the R5462x Series designing input four threshold for over-charge, over-discharge, excess discharge-current and excess charge-current detectors.

$: Designation of Output delay option of over-charge, over-discharge, excess charge-current, excess discharge-current.
(A) tV_{DET1}=1s, tV_{DET2}=128ms, tV_{DET3}=12ms, tV_{DET4}=8ms

∗: Designation of protection type.
(G) Auto Release after Over-charge and with Latch function after Over-discharge. 0V-battery charge is unavailable.

PACKAGE

DFN(PLP)1820-6B



1	C_{OUT}
2	V-
3	D_{OUT}
4	V_{SS}
5	V_{DD}
6	V_C

∗) The tab is substrate level (V_{DD})

APPLICATIONS

- Li-ion/Li polymer protector of over-charge, over-discharge, excess discharge-current, excess charge-current for battery pack
- High precision protectors for DSLR, portable DVD player and any other gadgets using on board Li-ion/Li polymer battery

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RICOH COMPANY., LTD. Electronic Devices Company

■Ricoh presented with the Japan Management Quality Award for 1999.
Ricoh continually strives to promote customer satisfaction, and shares the achievements of its management quality improvement program with people and society.

■Ricoh awarded ISO 14001 certification.
The Ricoh Group was awarded ISO 14001 certification, which is an international standard for environmental management systems, at both its domestic and overseas production facilities. Our current aim is to obtain ISO 14001 certification for all of our business offices.

RoHS Compliant
Ricoh completed the organization of the Lead-free production for all of our products. After Apr. 1, 2006, we will ship out the lead free products only. Thus, all products that will be shipped from now on comply with RoHS Directive.

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