



ZHEJIANG UNIÜ-NE Technology CO.,LTD

浙江宇力微新能源科技有限公司



## U0512 Data Sheet

V 1.2

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## Positive voltage regulators

### Description

The U 0512 series of three terminal positive regulators employ internal current limiting and thermal shutdown, making them essentially indestructible. If adequate heat- sink is provided, they can deliver up to 100 mA output current. They are intended as fixed voltage regulators in a wide range of applications including local or on- card regulation for elimination of noise and distribution problems associated with single- point regulation. In addition, they can be used with power pass elements to make high- current voltage regulators. The U0512 series used as Zener diode/ resistor combination replacement, offers e improvement along with lower quiescent current and lower noise.

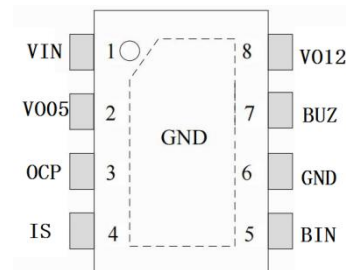
### Typical application

- Twist the car controller
- Balancing car controller
- Power tool
- Electric vehicle controller
- Six Sound card and computer motherboard

### Features

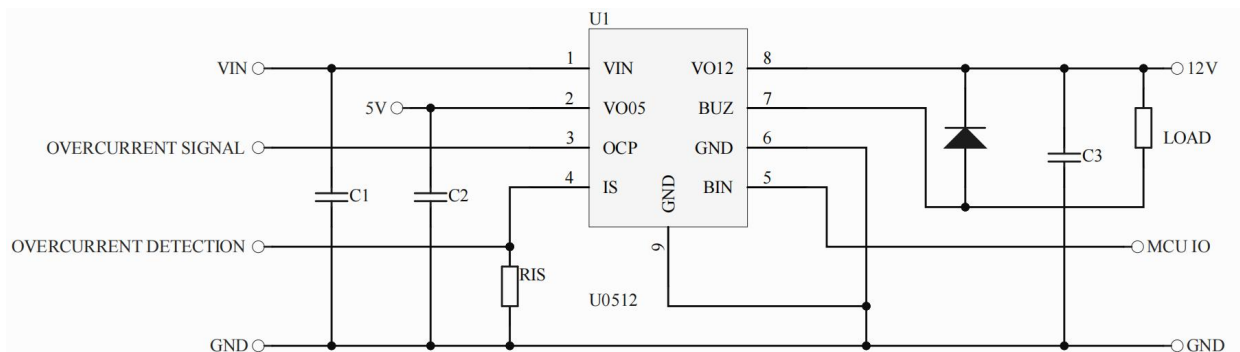
- Maximum Output Current IO:0.1 A
- Output Voltage  $V_o$  : 5V /12V
- Continuous Total Dissipation PD:0.6 W ( $T_a = 25^\circ\text{C}$ )

### Packages



ESOP8

### Application Circuit



\* Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

## ■ Pin configuration

Pin NO.	Symbol	Description
1	VIN	Input Voltage
2	VO05	The output voltage is 5V
3	OCP	overcurrent protection
4	IS	Detection of overcurrent protection
5	BIN	Power transistor input port
6	GND	The ground reference for the IC
7	BUZ	Power transistor output
8	VO12	the output voltage is 12V
9	GND	The Exposed pad

## ■ Absolute Maximum Ratings

(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Min	Max	Unit
Input Voltage	VIN	-0.3	36	V
5V power output	VO05	-0.3	VIN+0.3	V
Overcurrent protection triode output port	OCP	-0.3	VO05+0.3	V
Overcurrent protection triode input port	IS	-0.3	36	V
Power triode input port	Bin	-0.3	36	V
Power triode collector output port	BUZ	-0.3	36	V
12V power output	VO12	-0.3	36	V
Operating Junction Temperature Range	T <sub>OPR</sub>	-30	125	°C
Storage Temperature Range	T <sub>STR</sub>	-55	150	°C
Leadtemperature(soldering,10seconds)	TL	-	300	°C
Environment temperature	TA	-45	125	°C
Electrostatic protection	ESD (HBM)	2	-	KV

## ■ Order Information

Part Number	Package	Description
U0512	ESOP-8	halogen free , 4000Pcs/Reel

## 1、版本记录

DATE	REV.	DESCRIPTION
2018/11/15	1.0	首次发布
2020/09/18	1.1	调整布局
2022/5/10	1.2	优化驱动和电流检测电路

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