



High-Voltage Regulators Boost Power Density

The ZXTR1005 family are high-voltage regulators that boost power circuit densities, through reductions in component count and footprint.

With the ability to take <math><100V</math> input and generate a fixed output voltage of

These regulators suit 48V DC-DC power system design in telecoms, networking, data storage and PoE, particularly for supplying a regulated voltage into micro-controllers.

For samples and quotations please contact your nearest Diodes sales office or representative.



The Diodes' Advantage

The ZXTR1005 family of devices are series linear regulators using an emitter-follower stage to step down to a

▪ Smaller footprint

Fully integrating this function into a single package (TO252 or PowerDi5060) helps to reduce component count and footprint.

▪ 100V V_{in}

High voltage capability means that the input will effectively tolerate spurious voltages up to a maximum of 100V, ensuring a good safety margin in the event of transient over-voltage conditions.

▪ Line and Load regulation

Output voltage is regulated under both line and load fluctuations ensuring the continued supply and preventing latch-up due to transient voltage drops.

Applications

Supply regulation in 48V DC:

- Telecoms
- Networking & Data Storage
- Power Over Ethernet (PoE)

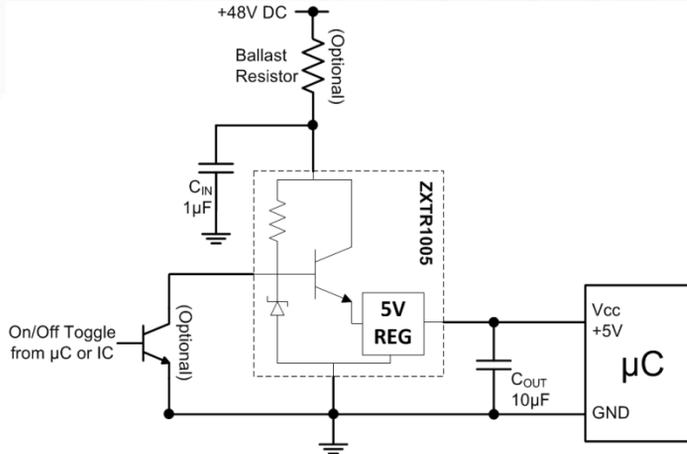
Compliance

- Fully RoHS compliant
- "Green" Device
- ESD rugged



**ZXTR1005
Family**

5V Regulator in 48V Telecom

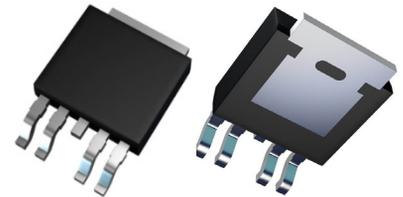


+5V power supply to a micro-controller in a typical 48V telecom application. ZXTR1005 can supply $5V \pm 2\%$ enabling a stable supply to the μC (min. 4.7 to max. 5.3V).

High Voltage Regulator Family

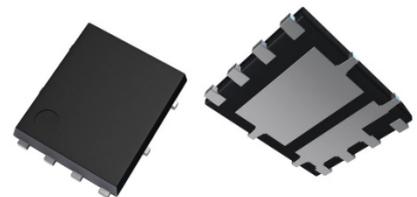
Parameter	ZXTR1005K4	ZXTR1005PD8
Input Voltage Range	10 to 100V	10 to 100V
Regulated Output Voltage	5V $\pm 2\%$	5V $\pm 2\%$
Continuous Output Current	50mA	50mA
Quiescent current	<500 μ A	<500 μ A
Line Regulation	<10mV	<10mV
Temperature Coefficient	0.44mV/ $^{\circ}$ C	0.44mV/ $^{\circ}$ C
Load Regulation	<50mV	<50mV
Power Supply Rejection Ratio	57dB	57dB
Temperature Range	-55 to 125 $^{\circ}$ C	-55 to 125 $^{\circ}$ C
Enable Function	Yes	Yes
Package	TO252-4	PowerDi5060-8

Key Differences



TO252-4

Pd >2W reduces Tj



**PowerDi5060-8 Type B
1.1mm low profile**