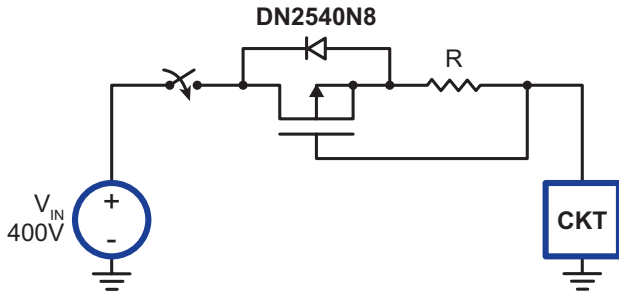


# High Voltage Regulators and Linear Circuits using DN25

Depletion-mode MOSFETs can be used either as “normally closed” switches or current sources. This note shows circuits, utilizing depletion mode devices, that will benefit many applications. The main performance features of the circuits

and examples of applications are listed. For more applications information on depletion mode MOSFETs, refer to other LND1 and DN25 series application notes.

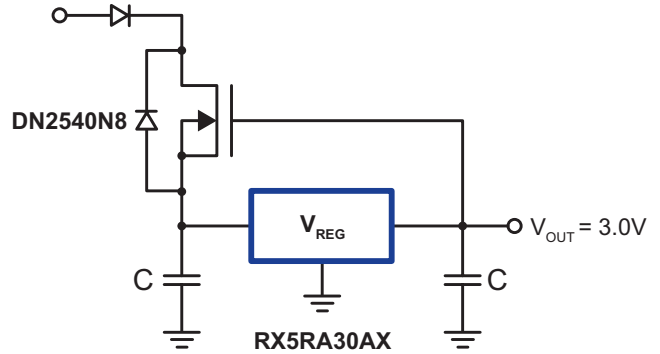
## Current Surge Protection



- ▶ Current limit up to 150mA
- ▶ Back-to-back pair for bi-directional limiting

Inrush limiting for lamps/motors/capacitive loads, instrumentation, telecommunication

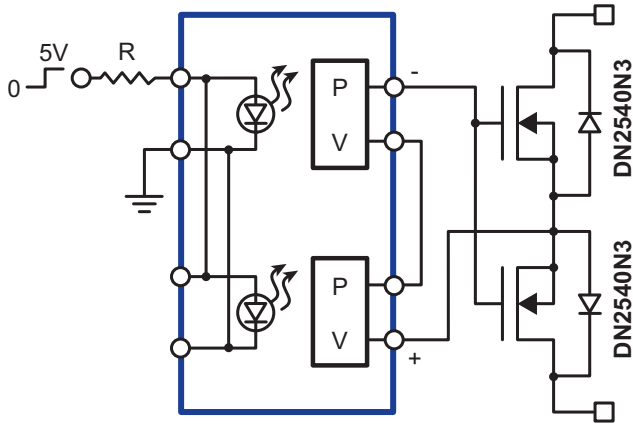
## High Voltage Protected Regulator



- ▶ ±400V transient protection
- ▶ +5.0 to +400V operation
- ▶ Typically 800nA quiescent current

Telecommunication, automotive, fax machines, off-line control circuits

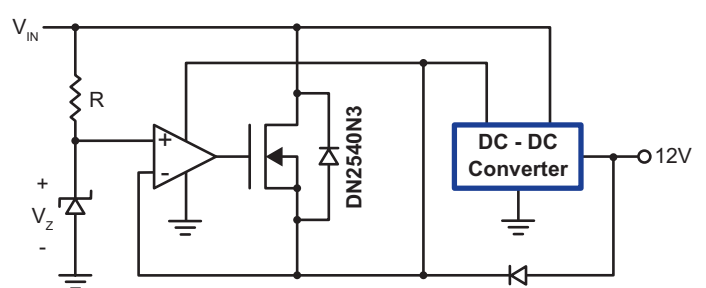
## Solid State Relay



- ▶ Normally on
- ▶ ±400V blocking
- ▶ Low C<sub>IN</sub> for fast switching

Telecommunication, instrumentation, fax machines, modems, data line diagnostics

## SMPS Start-Up



- ▶ Off-line capability
- ▶ Switchable to save power
- ▶ Improves efficiency

Switchmode power supply

**Supertex inc.** does not recommend the use of its products in life support applications, and will not knowingly sell them for use in such applications unless it receives an adequate “product liability indemnification insurance agreement.” **Supertex inc.** does not assume responsibility for use of devices described, and limits its liability to the replacement of the devices determined defective due to workmanship. No responsibility is assumed for possible omissions and inaccuracies. Circuitry and specifications are subject to change without notice. For the latest product specifications refer to the **Supertex inc.** (website: <http://www.supertex.com>)