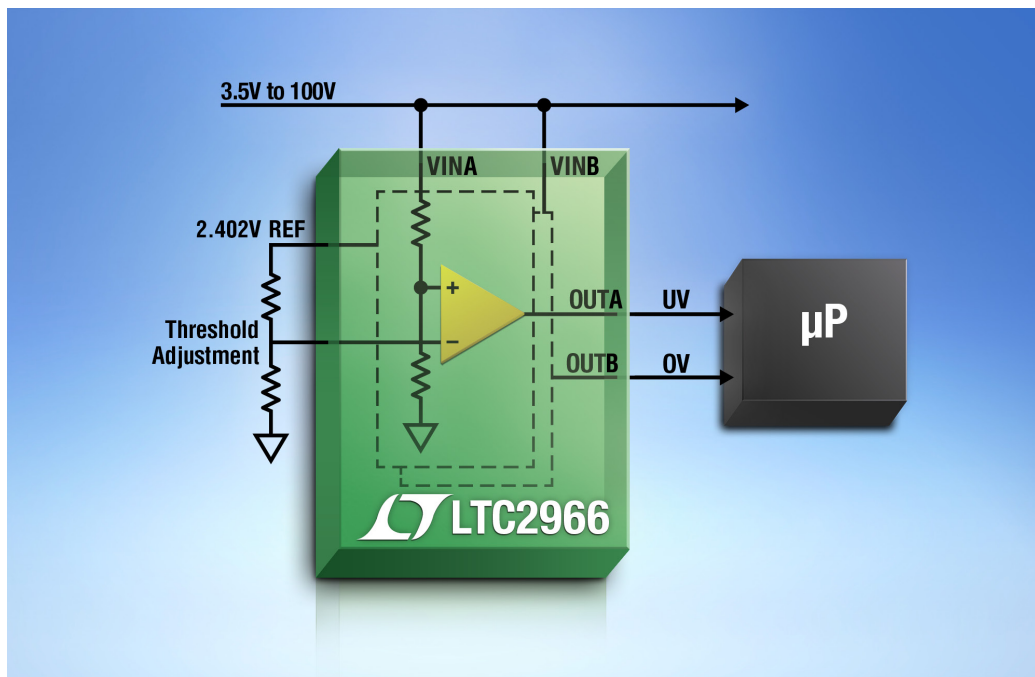


100V Micropower Voltage Monitor



Configure High Voltage Designs for 1.4% Accuracy

The LTC[®]2965 (single) and LTC2966 (dual) high voltage monitors feature a wide operating range, low power consumption and configurable input/outputs. Each device includes resistor-programmable threshold inputs to facilitate simple undervoltage, overvoltage or window monitoring of positive or negative rails to within $\pm 1.4\%$ accuracy over temperature. Integrated high value resistive dividers with selectable gain offer improved accuracy and flexibility compared to solutions using external high value resistors.

Features

- Wide Operating Range: 3.5V to 100V
- Quiescent Current: 7 μ A Typical
- Adjustable Threshold Range
- Internal High Value Resistive Dividers
- 1.4% Accuracy Over Temperature
- Adjustable Output Polarity
- High Voltage Rated Outputs
- Adjustable or Built-In Hysteresis
- Guaranteed Operation to 125°C

Product Selection

Part Number	Number of Channels	Packages
LTC2965	1	3mm x 3mm DFN-8, MSOP-16
LTC2966	2	3mm x 3mm QFN-16, SO-20

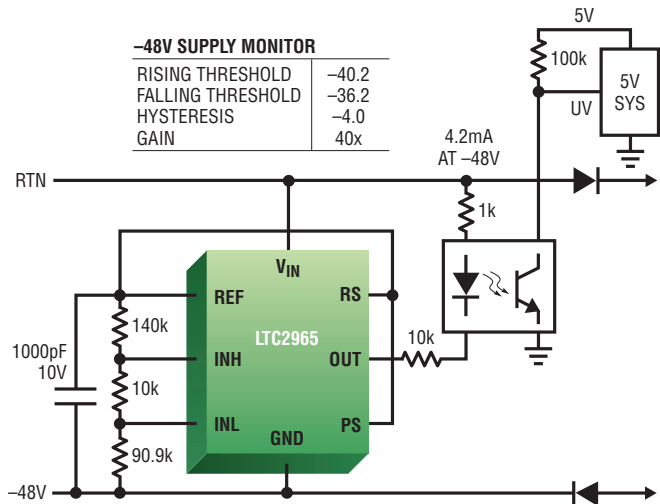


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Application Examples

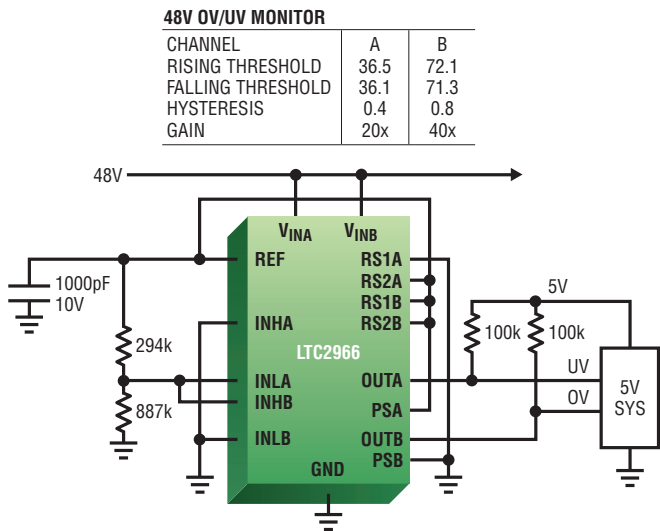
Single -48V UV Monitor

In this circuit, the LTC2965's inverting-configured output forces a UV pin to pull to 5V when the -48V input supply drops below -36V. The 100V OUT pin allows the LTC2965 to drive an opto-coupler to translate the undervoltage signal to the 5V system.



48V UV and OV Monitor

In this circuit, the LTC2966 provides window detection, where Channel A monitors for a 36V UV condition and Channel B monitors for a 72V OV condition. If either threshold is exceeded, the system's UV or OV output pulls to 5V. Connecting INHA and INLB to ground enables internal hysteresis for each channel in the appropriate direction and reduces the number of external components.



12V Battery UV and OV Monitor

In this circuit, the LTC2966 provides window detection for a vehicle battery, where the detection window is configured to be $\pm 25\%$ of the nominal 12V battery voltage. Channel A monitors for an OV condition and Channel B monitors for a UV condition. By connecting the LTC2966's outputs together, FAULT is pulled low if either threshold is exceeded. The LTC2966 also tolerates load dump voltage transients $> 72V$ without additional components.

