

## High-Voltage Monitor IC Replaces Bulky Resistors

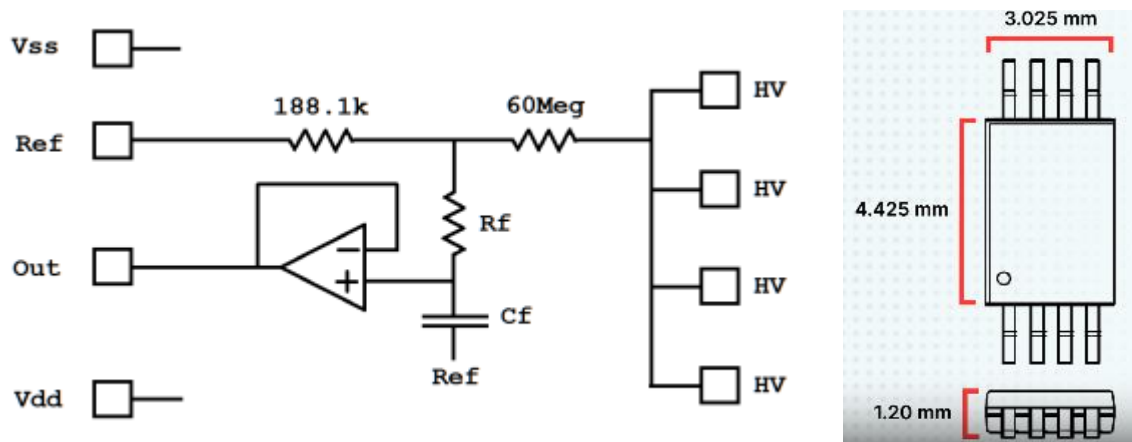
[SimpleChips Technology](#)'s 18SCT005 is described as the industry's first 1200-V high-voltage monitor IC. With superior output accuracy of 0.7%, this monolithic IC is well suited for a variety of applications, including automotive EV powertrain and inverters, cardiac defibrillators, and industrial high-voltage sensing. It integrates high-voltage capability up to  $\pm 1200$  V, a 1-kHz low-pass filter and a voltage buffer in a small TSSOP8 4.4-mm package (see the figure).

"Not only is the 18SCT005 the first of its kind, but it's also the only chip in the world capable of this level of performance," says Alain Comeau, CEO and CTO of SimpleChips. "This single-chip solution replaces bulky resistors, avoiding the expensive and time-consuming task of temperature coefficient matching, while also integrating discrete components that typically take up valuable board space. It is a low-cost, space-saving and very efficient solution for the fast-growing high-voltage market."

Key specifications include:

- Voltage sensing up to  $\pm 1200$  V
- 3125-ppm divider ratio (2.500 V at 800 V)
- 0.75% accuracy (23 ppm)
- $\pm 2$ -ppm temperature stability
- $\pm 2$ -ppm gain linearity over voltage
- Wide temperature range from  $-55^{\circ}\text{C}$  to  $125^{\circ}\text{C}$

For product information, including the datasheet, visit the [18SCT005](#) product page. To request product samples, contact [SimpleChips](#).



*Figure. The 18SCT005 high-voltage monitor IC integrates a voltage buffer with rail-to-rail output and less than 2 mV of output offset. It also includes a 1-kHz, second-order low-pass filter to reduce noise from voltage pumps on the high-voltage side. Shown here are an internal block diagram (left) and a package drawing (right).*