



SBT3001 Instant Off Autonomous Power Line Smart AC Switch Controller

SBT3001

Industry's First Autonomous Power Line Smart AC Switch Controller Solutions

- Built-in, instant turn-off feature for load isolation
- Cost Effective & High Value Solution
- 90% Space Savings (vs. discrete solution)
- Low Power, High Efficiency, Small Footprint

SiliconBrite has created a portfolio of the World's First Smart Autonomous Protection IC Solutions (global patents). Many electronic components are sensitive and cannot handle frequent or continuous line overvoltage conditions. The SBT3001 is a superior solid-state-based solution that can control IGBTs or MOSFETs to protect electronic components. By directly monitoring the AC line voltage continuously, the SBT3001 instantly turns off IGBTs or MOSFET switches to protect against - overvoltage failures.

The SBT3001 eliminates 23 different ICs in a single IC



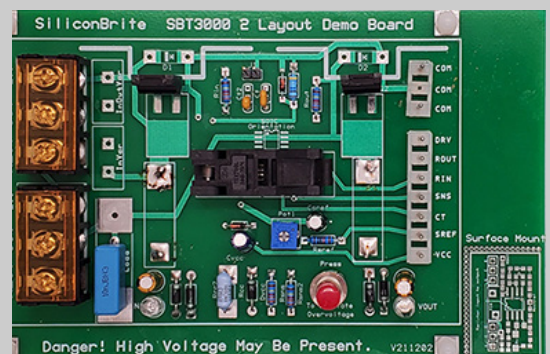
The robust SBT3001 solution features a unique architecture that automatically detects AC line over and under-voltage conditions. It safely isolates the power line from the load until the AC input voltage is within its normal range. The SBT3001 can also be used in conjunction with a varistor to provide superior and unmatched line voltage protection..

SBT300x Instant Off Autonomous Power Line Smart AC Switch Controller Evaluation Module

The SBT300x Evaluation Module (EVB), is an engineering circuit board designed for testing the operation of the SBT3001 integrated circuit.

The SBT300x EVB contains all the necessary support components to be able to apply an input voltage and a moderate load to evaluate the overvoltage protection features of the device

Various application notes and User's Guide are also available and be request via email at info@siliconbrite.com.



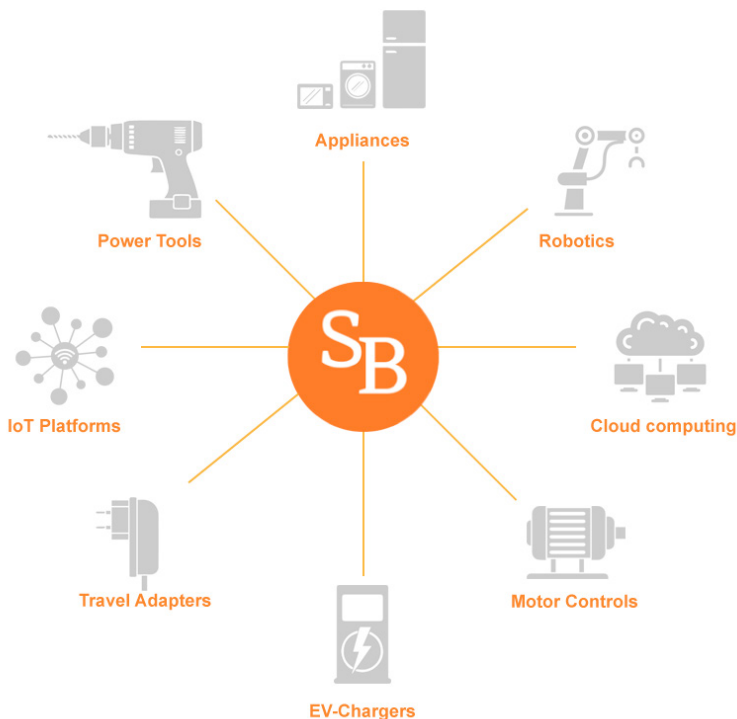


Cleanest AC power?

Power utilities around the world attempt to provide the cleanest AC power to their customers, but how common is a voltage swell, where the line voltage is above normal for more than a few milliseconds that can be just enough to destroy sensitive electronics in end-applications? In the USA, there is an organization called the Information Technology Industry Council (ITIC). Amongst other functions, this organization gives recommendations to power utility companies on how long a “normal” voltage swell can last. SBT300x family of products protects circuitry against these line voltage swells.

Voltage swells of less than 100 milliseconds are likely within the protection domain of a varistor, however, they cannot protect against longer-term overvoltage swells because the energy exceeds the long-term power dissipation capability of a varistor. There is a large difference between the short time and continuous power handling capability of a varistor. Even a large 20mm varistor can only dissipate about 1 watt continuously. Therefore, long-term overvoltage conditions will likely damage a varistor, eventually causing a costly sometimes unreparable destruction to customers’ end products. SiliconBrite has created the SBT300x family of products which will ensure robust and uninterrupted long-term reliable operation in a broad range of applications..

SBT3001 Applications



Did you Know ?

One issue that can seriously affect an end-product reliability is AC line voltage surges, or longer-term line voltage swells. Surges are normal shorter duration kilovolt type high voltage spikes, in the order of microseconds. Voltage swells are normally hundreds of volts and can range in duration from milliseconds, to continuous.

Varistors are often used to protect electronic circuits against short duration line voltage surges because they can absorb large amounts of current for a short time. However, the internal damage created by pulse energy absorption in a varistor is cumulative, and each pulse that a varistor absorbs, can shorten its life. Generally, the more energy a varistor absorbs, the shorter its life becomes.

The SBT300x family of provide superior protection with solid- state reliability. To request IC samples, please contact our sales team at sales@siliconbrite.com

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