

How to discharge an integrated power supply



Overview

There are three methods to safely discharge the capacitors of the PSU. Don't bet your life on it though! I've zapped myself with 400 V DC off the PFC stage once. A prototype board made by yours truly. In spite of all the care we engineers take, it is nearly impossible to eliminate static electricity completely. Semiconductor manufacturers add chip protection to make their devices more resistant to stray. As supporting elements in electrical/electronic/programmable electronic (E/E/PE) safety-related systems, power supply blocks are critical to the transition such systems into a safe state. By improving the robustness and systematic capability of these blocks, related systematic failures are. The process is different for desktops and laptops, but the goal is the same: disconnect all power sources, let stored charge dissipate, and avoid shorting or damaging sensitive components. Thermaltake Smart 600W ATX 12V V2. 3/EPS 12V 80 Plus Certified Active PFC Power.



Article Content

Designing power supply clamps for electrostatic discharge protection

This paper is aimed at reviewing the various methods for providing ESD links among the power supplies so that ESD current can pass harmlessly through the chip for all ESD stresses and

How to Discharge a Capacitor: Comprehensive Guide

This comprehensive guide provides a detailed overview of how to discharge capacitors safely, addressing the importance of this process and the potential

How To Discharge A Capacitor In The Safest Way

Knowing how to discharge a capacitor is an important step in safe working with electronic circuits. Using the right tools and proper procedure, you

How do i disassemble this PSU without frying myself?

If you have experience with these kinds of power supplies, then I'll take your word for it. Still, it's good practice to manually discharge all capacitors when working

What You Need to Know about Internal ESD Protection on Integrated

Most of the integrated circuits that I work with are electrostatic discharge (ESD)-sensitive. In spite of all the care we engineers take, it is nearly impossible to eliminate static electricity completely.

How to Drain Power From the Motherboard

Learn how to drain power from the motherboard safely with desktop and laptop steps, key precautions, discharge signs, and when to stop

How to Discharge a Capacitor

To cut off the initial power supply to your capacitor, you have to unplug the device it is in from its main power source. For instance, if you want to discharge a

How to Discharge a Capacitor: A Step-By-Step Guide

Learn why safely discharging capacitors is critical and how to discharge a capacitor before servicing or modifying circuits.

How to Discharge a Capacitor?

This surge can blow fuses, damage integrated circuits, or even destroy other capacitors or power supply components that aren't designed to

How to Discharge Capacitors in a Switched-Mode Power Supply

It is a very simple and effective process, taking mere seconds to completely discharge the capacitor. There's really no reason to discharge a capacitor with a screwdriver when all you need is a

What is the easiest and safest way to discharge a computer power supply ...

However after about 30 seconds this is unnecessary because power supplies that are UL and IEC certified or built to discharge to a safe voltage after the amount of time. If the supplies been

Capacitor Discharging

Capacitor Discharging- Explained The Capacitor discharging cycle that a capacitor goes through is the cycle, or period of time, it takes for a capacitor to discharge

How to Reset PSU [Step-by-Step Guide 2024]

Learn how to reset PSU safely in 2024: desktop ATX power discharge, laptop power reset steps, server hot-swap guidance, and fixes for no power

What is the easiest and safest way to discharge a computer power

The standard practice is to take a screwdriver and short out the terminals to ground with the unit unplugged. However after about 30 seconds this is unnecessary because power supplies

Discharging an AT power supply for maintenance

The power supply for one of my computers needs a new fan. How do I discharge the power-supply capacitors to make it safe to open up? With an ATX power supply, it's just a matter of

How to discharge a computer power supply? (3 Best Methods)

If you don't drain this charge, it will result in electrocution and sometimes may cause some harm. Therefore, it is important to know how to discharge a computer power supply.

Lesson 1 - ESD Models and Methods

What is Electrostatic Discharge (ESD)? It is the discharge of triboelectric charging that occurs when two materials separate How does ESD Influence Integrated Circuits? 1. ESD voltage creates large

How to Discharge a Capacitor? Using Bleeder Resistor,

In fact, a properly design power supply uses this method to discharge the output capacitors after disconnecting the power supply. In this method, a

On-Chip Electrostatic Discharge Protection for ICs

Learn about the electrostatic discharge (ESD) events, component ESD qualification tests, and the ESD protection strategies commonly employed

Discharging PSU... | Overclockers Forums

It's the only safe way to discharge a cap. You can blow the etches off a board by shorting things dead short it all depends on what the maximum surge rating of the etches is. Some power

How to properly discharge a psu before cleaning?

Unplug it from your computer and take it to somewhere that has compressed air, blow it out without disassembling it. Don't open it up, do as @Levent suggested use compressed air, out of

How do you properly discharge a PSU so it can be safely opened for ...

Hitting the power button over and over again, or holding it, won't discharge the capacitors. When you remove AC from a power supply that's operating, it will continue to operate

Addressing Power Supply Systematic Failures—Part 1: Using Output

This discusses systematic failures in power supplies by ensuring reliable output discharge to support functional safety compliance.

2026 Event Agenda | CWIEME Berlin

CWIEME Berlin 2026 brings together the entire global coil winding, transformer, motor, power grid, distribution, and emobility community for three

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://kilitech.co.za>

Email: info@kilitech.co.za

Phone: +44 20 7183 2649

Address: 1st Floor, The Shard, 32 London Bridge Street, London, SE1 9SG,
United Kingdom

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