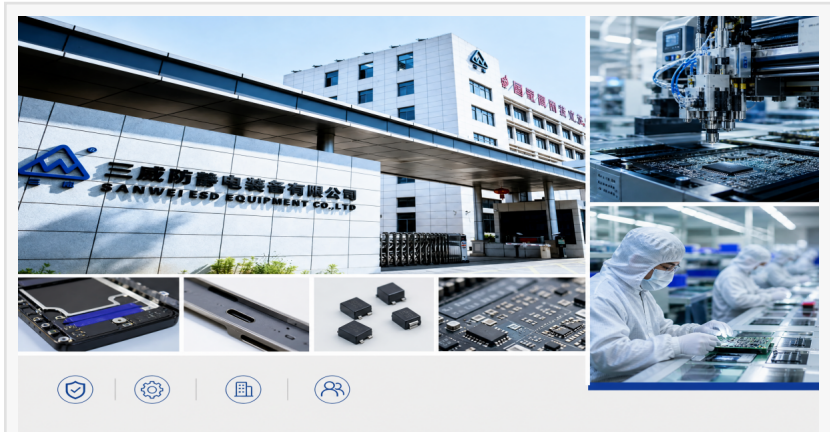


Sanwei (SWESD): A Leading ESD Protection Manufacturer for Semiconductor & Precision Electronics

Sanwei (SWESD) delivers robust ESD Racks and precision IC Tray products, ensuring compliant electrostatic discharge protection for electronics manufacturing.

YUEQING, ZHEJIANG, CHINA, July 10, 2026 /EINPresswire.com/ -- In high-stakes industries like semiconductor fabrication, aerospace electronics, and precision SMT manufacturing, even minor electrostatic discharge (ESD) events can cause irreversible damage to sensitive components, leading to product failures, costly rework, and compromised reliability. For facilities seeking proven, standards-aligned electrostatic control solutions, [ESD Protection Manufacturer](#) Sanwei (SWESD) stands as a global pioneer with nearly 40 years of dedicated R&D and manufacturing expertise.

Founded in 1988, Sanwei has evolved from a specialized anti-static material research firm into China's leading integrated ESD solutions provider, serving 80+ export markets across North America, Europe, Southeast Asia and beyond. Its 70,000+ square meter state-of-the-art production facility in Yueqing, Zhejiang, supports full in-house manufacturing from raw material formulation and mold development to finished product testing and global delivery, enabling full quality control at every production stage.

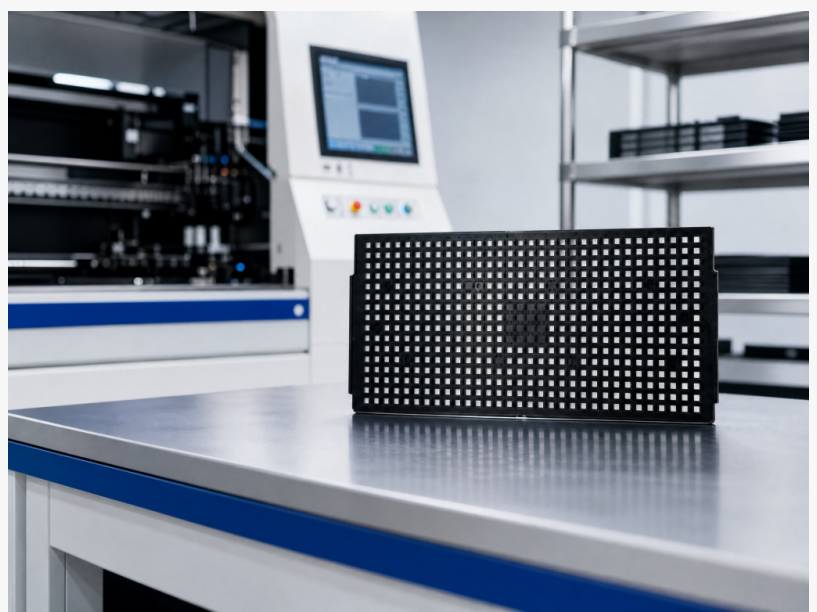


esd protection manufacturer



esd-bin-esd-rack

What distinguishes SWESD in the global market is its unrivaled technical authority. The company holds dozens of independent patents for anti-static material formulations, and serves as an official drafting unit for three Chinese national and military ESD standards — a credential that validates its leadership in setting industry benchmarks. All SWESD products are engineered to comply with strict international standards including IEC 61340-5-1, ANSI/ESD S20.20, ISO 9001, ISO 14001, RoHS and SGS certification requirements.



ic-tray

This commitment to quality and innovation has earned SWESD long-term trust from global industry leaders including Intel, Motorola, Siemens, IBM, Panasonic, Nokia and Dell. Complementing its manufacturing capabilities, the brand provides 24/7 technical support and after-sales service to global customers, ensuring that ESD systems maintain consistent performance and compliance throughout their entire service life.

1.Modular [ESD Racks](#) for Organized, ESD-Safe Component Storage

For electronics assembly lines, component warehouses, and R&D labs, maintaining consistent electrostatic protection while optimizing storage density and operational efficiency is a core challenge. SWESD's ESD Racks and matching ESD bin systems deliver a complete modular storage solution designed specifically for ESD-sensitive environments, balancing robust static control with flexible, space-saving design.

The rack systems are constructed with powder-coated steel frames and fitted with ESD conductive casters for full grounding continuity, ensuring that static charge is safely dissipated at every point of the storage system. Shelves are adjustable at 25mm pitch increments, allowing facilities to customize configurations to fit different bin sizes, component dimensions, and workspace layouts. Each shelf supports a load capacity of 50 to 150 kg depending on configuration, making the system suitable for everything from small surface-mount components to larger assembly fixtures.

A key advantage of SWESD ESD Racks is their integrated grounding design: each rack is fitted with a 10mm grounding stud, allowing easy connection to a common facility ground point or ESD wrist strap station to maintain continuous electrostatic protection. The matching ESD bins are manufactured with permanent static-dissipative material properties, eliminating the risk of

coating flaking or performance degradation over time that is common with lower-quality coated alternatives.

Additional practical features include open hopper fronts for easy component access during kitting and assembly, and integrated back label holders for barcode or part number identification, streamlining inventory management and traceability. The systems operate reliably across a temperature range of -20°C to +80°C, with special high-temperature bin options available for more demanding environments.

SWESD ESD rack and bin systems are widely deployed across use cases including line-side component kitting, workstation organization for manual assembly, warehouse storage for ESD-sensitive parts, and R&D labs and testing facilities. For facilities with unique layout or storage requirements, SWESD's in-house engineering team can develop custom rack configurations and specialized bin sizes to match exact operational needs.

2. Precision [IC Tray](#) Solutions for Semiconductor Packaging & Testing

For semiconductor packaging, assembly and testing facilities, the safe handling and storage of integrated circuits demands ultra-precise ESD protection, dimensional stability, and compatibility with automated production equipment. SWESD's IC Tray product line is engineered to meet these rigorous requirements, delivering JEDEC-compliant chip storage solutions trusted by leading semiconductor manufacturers worldwide.

Also known as electronic chip trays, IC trays are specialized plastic trays designed for IC packaging, testing, transportation and storage processes. SWESD IC trays are fully compliant with JEDEC international standards, providing reliable electrostatic protection to prevent ESD-related chip damage while supporting automated detection and assembly workflows.

The trays are compatible with a wide range of semiconductor package types, including BGA, QFN, QFP, PGA, TSOP, TQFP, LQFP, PLCC, SOC and SiP packages, covering the vast majority of mainstream chip packaging formats. Each tray features precision-machined cavity designs tailored to specific package dimensions, with tight tolerances to hold chips securely in place and prevent pin bending or breakage during handling and transportation.

To meet the demanding performance requirements of semiconductor manufacturing, SWESD engineers its IC tray materials with five core performance attributes:

ESD protection: Materials are modified with anti-static agents, conductive carbon black or conductive carbon fibers to maintain a stable surface resistance of 10^5 to 10^{11} ohms, falling within the static-dissipative range required for ESD-sensitive environments.

High temperature resistance: Trays withstand continuous temperatures up to 150°C, making them suitable for chip baking processes required to remove moisture before terminal

assembly.

Dimensional stability: Precision material formulations ensure minimal warpage and tight dimensional tolerances, maintaining consistent tray alignment even after repeated thermal cycles to support automated production equipment.

Low water absorption: Materials are formulated to minimize moisture absorption, preventing humidity-related damage to sensitive chips during storage and transportation.

Reusability & recyclability: Trays are designed for repeated use to reduce operational costs and environmental impact, supporting circular manufacturing practices.

SWESD offers a broad portfolio of standard IC tray models, including common BGA configurations (6×8, 8×8, 11.5×13, 13×13) and QFN configurations (5×5, 7×7), with cavity matrix layouts optimized for maximum storage density per tray. For custom chip packages or specialized application requirements, the company's in-house R&D and tooling teams can develop custom tray designs and material formulations to meet exact customer specifications.

3.Frequently Asked Questions

Q: What credentials validate SWESD's expertise as an ESD Protection Manufacturer?

A: SWESD brings nearly 40 years of specialized ESD industry experience, with dozens of independent patents for anti-static materials and products. The company is an official drafting unit for three Chinese national and military ESD standards, and all its products comply with international benchmarks including IEC 61340-5-1, ANSI/ESD S20.20, ISO 9001, ISO 14001, RoHS and SGS certification. It has served as a trusted supplier to global industry leaders including Intel, Siemens and IBM for decades.

Q: What are the primary benefits of SWESD ESD Racks for electronics manufacturing facilities?

A: SWESD ESD Racks deliver three core value propositions: first, consistent ESD protection via fully grounded conductive frames and static-dissipative bins with permanent anti-static properties. Second, flexible modular design with 25mm-adjustable shelves to fit diverse component sizes and workspace layouts. Third, operational efficiency features including open hopper fronts for easy access and integrated label holders for streamlined inventory management. The systems also support 50–150kg per shelf load capacity for reliable heavy-duty use.

Q: Are SWESD IC Tray products compatible with standard semiconductor manufacturing processes?

A: Yes. All SWESD IC trays are manufactured in full compliance with JEDEC international standards, making them compatible with mainstream semiconductor packaging, testing and automated assembly equipment. They support 150°C high-temperature baking processes, maintain stable static-dissipative surface resistance, and feature precision cavity designs with tight dimensional tolerances to prevent chip pin damage. They are compatible with all common

package formats including BGA, QFN, QFP, TSOP and more.

Q: Can SWESD develop custom ESD storage solutions for unique application requirements?

A: Absolutely. As a full-stack ESD Protection Manufacturer with in-house R&D, mold making and production capabilities, SWESD provides comprehensive custom solutions. This includes custom-sized ESD racks and bins, specialized IC tray designs for unique chip packages, and custom anti-static material formulations tailored to specific temperature, chemical or environmental requirements. The engineering team partners with customers from initial concept through prototyping and full-scale production.

Q: What surface resistance range do SWESD ESD products maintain?

A: SWESD ESD products including ESD racks, bins and IC trays are engineered to maintain a stable surface resistance in the static-dissipative range of 10^5 to 10^{11} ohms, which aligns with IEC and ANSI/ESD standards for ESD-protected areas. This range ensures safe, controlled static dissipation without generating damaging discharge events, providing reliable protection for sensitive electronic and semiconductor components.

4.End-to-End ESD Solutions for Every Critical Application

From precision semiconductor chip storage to full-facility component storage and line-side handling systems, SWESD delivers comprehensive, standards-aligned electrostatic discharge protection tailored to the unique needs of each industry. As an experienced ESD Protection Manufacturer, the company combines deep material science expertise, large-scale manufacturing capacity, and end-to-end customization capabilities to solve the most demanding ESD challenges.

Whether you are outfitting a new SMT line with modular ESD Racks, sourcing JEDEC-compliant IC Tray products for semiconductor packaging operations, or developing a custom ESD solution for specialized aerospace or defense applications, the SWESD team provides expert technical support and reliable delivery at every project stage.

To explore the full SWESD product portfolio, download technical datasheets, request a custom quote, or consult with an ESD solutions specialist, visit the official website or contact the global support team today.

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