

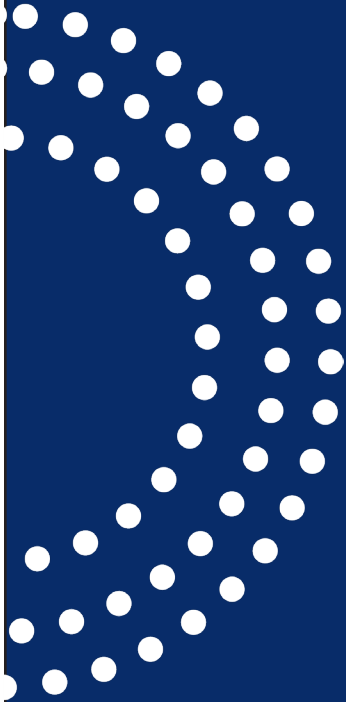


SIERRA
ELECTRONICS



Business White Paper

Reels



www.tapesplice.com

Driving SMT Line Efficiency with Sierra Electronics TapeSplice SMD Reels

Executive Summary

Executive Summary In high-volume electronics manufacturing, Surface-Mount Technology (SMT) demands precision, speed, and consistency. A critical component of this process is the **SMD Reel**, which ensures reliable storage, protection, and smooth feeding of components into pick-and-place machines. Sierra Electronics, through its TapeSplice product line, provides high-quality SMD Reels engineered to reduce defects, protect sensitive components, and

The Industry Challenge

Electronics manufacturers face multiple challenges when using low-quality or incompatible reels:

- Component damage due to poor reel material or static buildup
- Feeder jams that interrupt production and increase downtime
- Inconsistent dimensions that cause misalignment in high-speed pick-and-place machines
- Shorter reel life, leading to higher waste and cost

These issues disrupt production flow, compromise product quality, and reduce overall equipment effectiveness (OEE).

The TapeSplice Solution

Sierra Electronics' SMD Reels are designed to meet the exacting standards of today's SMT lines. Manufactured with durable, precision-molded materials, these reels ensure consistent performance across a wide range of applications.

Key Benefits:

- Robust construction for reliable, long-term use
- Smooth edges and precise tolerances to prevent feeder jams
- Antistat ESD-safe options to protect sensitive electronic components
- Compatibility with industry-standard carrier tapes and feeders



Expanded Comparative Advantage

Unlike low-cost alternatives, Sierra Electronics' SMD Reels are engineered to withstand demanding environments. Their tight dimensional tolerances ensure smooth feeding across multiple SMT platforms, while their anti-static construction prevents component damage during handling. In testing, manufacturers reported up to a 35% reduction in feeder stoppages and 20% faster reel loading times when switching to TapeSplice reels.



Case Example

An electronics assembly company switched to Sierra Electronics' SMD Reels after experiencing frequent feeder jams. Over six months:

Reel-related stoppages dropped by 30%

Scrap due to damaged components decreased by 15%

Operator reel-loading time improved by 20%

Technical Highlights

Material: Anti-static polycarbonate / polystyrene blend for strength and ESD protection

Sizes Available: 7", 13", 15" and custom diameters

Core Diameter: Industry-standard hubs compatible with SMT feeders

Durability: Resistant to cracking, warping, and static buildup

Comparative Advantage

Compared to generic or low-cost reels, Sierra Electronics' SMD Reels deliver:

Higher reliability with reduced feeder-related stoppages

Consistent tolerances, eliminating misfeeds in automated systems

Longer product lifecycle, lowering replacement costs

Proven ESD protection, reducing component damage

Return on Investment

By eliminating feeder errors, reducing scrap, and extending reel life, Sierra Electronics' SMD Reels provide measurable cost savings. Improved efficiency directly translates into greater throughput, reduced downtime, and stronger profit margins

These benefits mean that the investment in high-quality SMD Reels pays back quickly - often within a single production cycle - while continuing to generate long-term savings and higher productivity.

Conclusion

In competitive SMT production environments, high-quality reels are not optional - they are essential. Sierra Electronics' TapeSplice SMD Reels provide manufacturers with durable, ESD-safe, and precision-engineered solutions that maximize uptime and protect valuable components.

