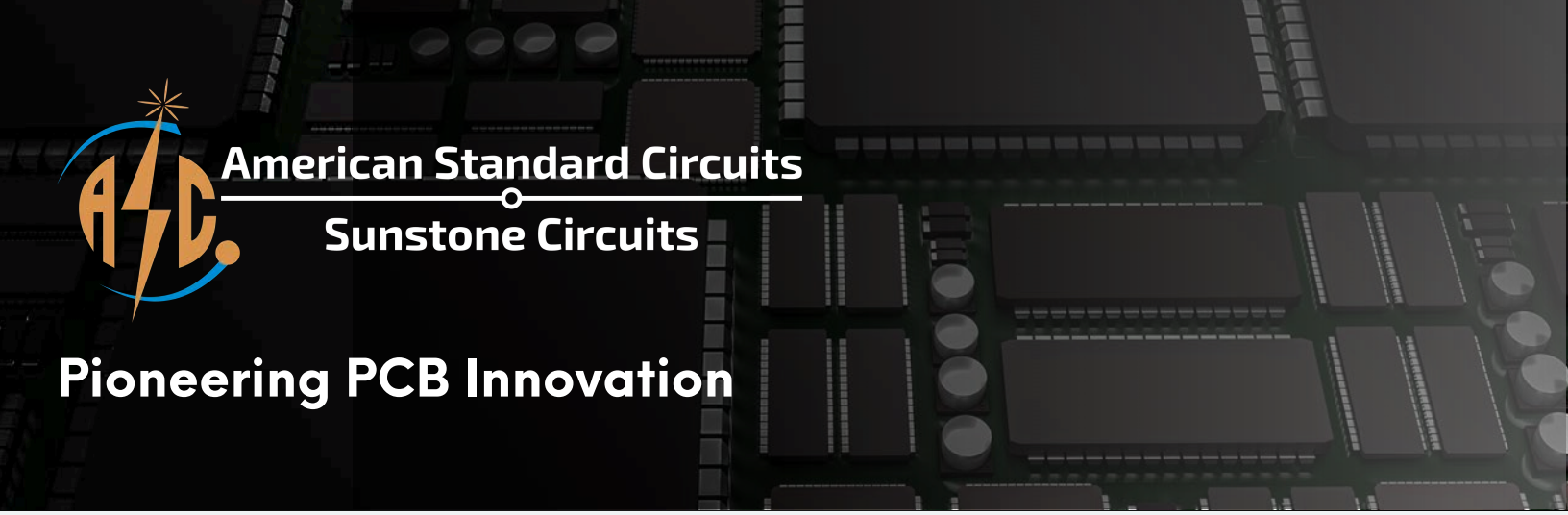

American Standard Circuits

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American Standard Circuits Case Study: Innovative In Banking Technology with Organic PCB Solutions

Discover American Standard Circuits commitment to close collaboration with their customers, showcasing how obstacles seamlessly transform into opportunities and long term solutions

USE CASE SUMMARY

In the banking industry, where security, reliability, and efficiency are crucial, technological advancements play a crucial role in driving operational perfection and customer satisfaction. This case study explores how our innovative organic PCB solutions transformed banking technology for a major financial institution, surpassing expectations while significantly reducing lead times and costs.

THE CHALLENGE

A leading bank aimed to improve the performance and reliability of its banking technology infrastructure by transitioning from traditional ceramic components to advanced organic PCBs. This upgrade posed significant challenges, including extended lead times, elevated costs, and the need to develop intricate 3D PCB designs with mechanical features surpassing conventional capabilities.

THE SOLUTION: CONVERSION TO ORGANIC PCBs

To meet the requirements of a major banking organization, we transitioned from traditional ceramic parts to Rogers TMM organic PCBs. This material provided improved performance, reliability, and flexibility in design while significantly reducing production lead times from 20 weeks to 6 weeks. By optimizing materials and manufacturing processes, we lowered overall costs by 30% without compromising quality. The project also involved the development of complex 3-D PCB designs with Z-axis features, requiring specialized diamond saw cutting to achieve precise tolerances of 0.5 mil. The boards were integrated with stainless steel heat sinks using Electrasil bonding for effective heat dissipation, along with securely mounted connectors for reliable operation. These solutions addressed the bank's technical challenges while providing a scalable platform for their infrastructure.

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KEY STEPS

1: **Conversion to Organic PCBs:** We recommended the use of Rogers TMM® organic PCB material as a superior alternative to traditional ceramic parts. The organic PCB solution offered enhanced performance, reliability, and cost-effectiveness while facilitating faster production cycles and greater design flexibility.

2: **Lead Time Reduction:** By leveraging our expertise in PCB manufacturing and optimization, we streamlined production processes, reducing lead times from a lengthy 20 weeks to a mere 6 weeks. This dramatic reduction in lead time enabled the banking outfit to rapidly deploy and scale their technology infrastructure to meet evolving market demands.

3: **Cost Reduction:** The transition to organic PCBs resulted in a significant overall cost reduction of 30% for the banking outfit. Through strategic material selection, process optimization, and supply chain management, we identified cost-saving opportunities without compromising on quality or performance.

4: **Development of 3-D PCBs:** Our R&D efforts focused on developing innovative 3-D PCB designs with traces on the top side that wrap into slots on the Z-axis, enabling unprecedented flexibility and functionality. The intensive one-year R&D program culminated in the successful development and production of 3-D PCBs capable of meeting the banking outfit's stringent requirements.

5: **Diamond Saw Cutting Service:** To meet the intricate mechanical feature requirements of the 3-D PCBs, we developed an outside service to diamond saw cut teeth into the PCBs with precision and accuracy. This innovative approach ensured edge tolerances as tight as .5 mil, meeting the exacting standards of the banking outfit.

6: **Integration with Heat Sink and Connector:** The 3-D PCBs were seamlessly integrated with stainless steel heat sinks bonded with Electrasil, ensuring efficient heat dissipation and mechanical stability. Additionally, connectors were securely attached to the PCBs, enabling seamless connectivity and functionality.

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THE RESULTS: ENHANCED PERFORMANCE AND RELIABILITY

The collaborative efforts between our team and the major banking outfit yielded significant outcomes:

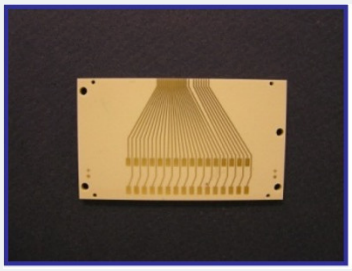
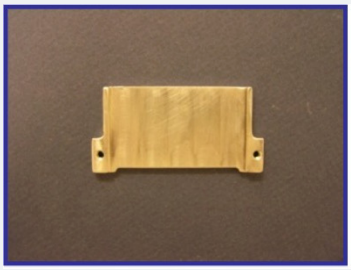
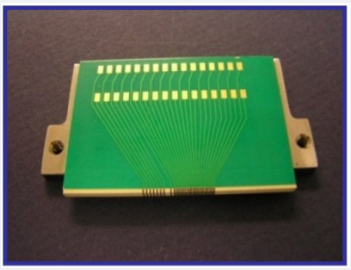
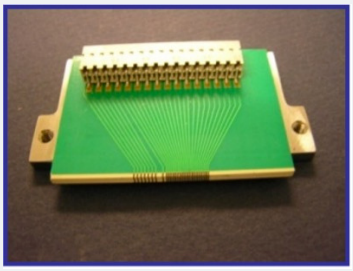
- **Enhanced Performance and Reliability:** The transition to organic PCBs and the development of 3-D PCB designs resulted in enhanced performance, reliability, and functionality, surpassing the banking outfit's expectations and delivering superior banking technology solutions.

- **Reduced Lead Times and Costs:** By streamlining production processes, reducing lead times, and optimizing costs, we enabled the banking outfit to achieve greater agility, scalability, and cost-effectiveness in their technology infrastructure deployments.

- **Innovation and Partnership:** The successful development and production of innovative organic PCB solutions cemented our partnership with the banking outfit, positioning us as a trusted and reliable partner for future technology initiatives and endeavors

CONCLUSION: AMERICAN STANDARD CIRCUITS' EXCELLENCE IN BANKING TECHNOLOGY

Through innovation, collaboration, and relentless dedication to excellence, we successfully transformed banking technology for a major financial institution, surpassing expectations while reducing lead times, costs, and enhancing performance and reliability. This case study underscores our commitment to delivering value-added solutions and driving technological advancements in the dynamic landscape of banking technology.

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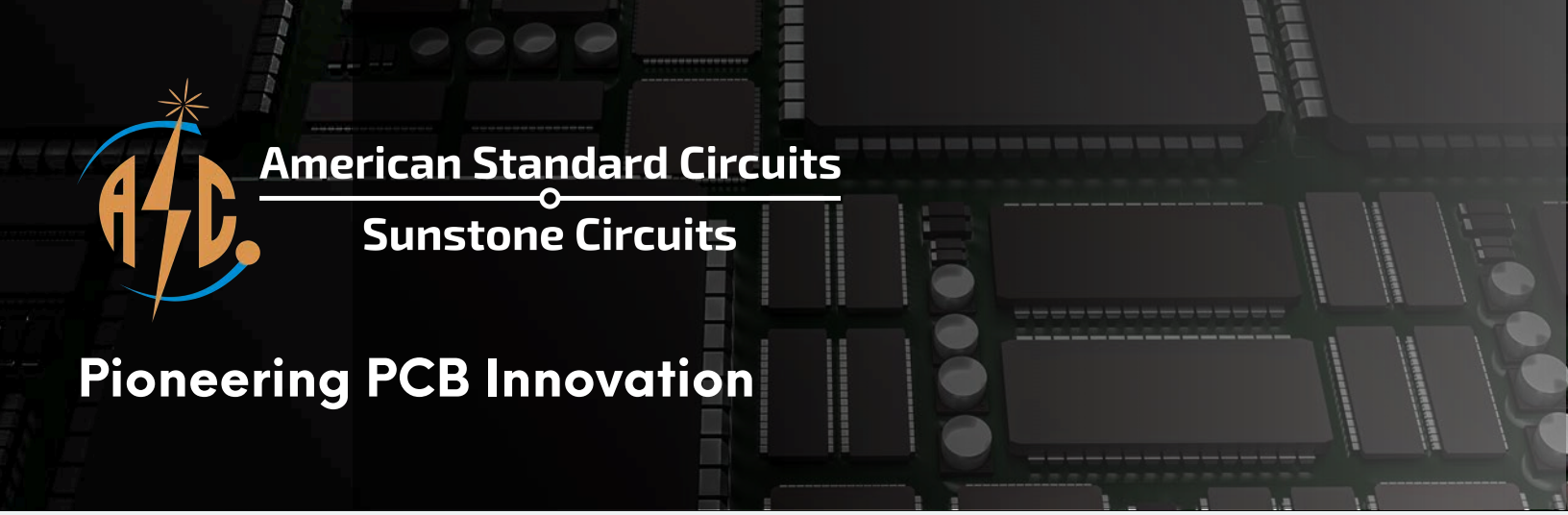

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About Us

At American Standard Circuits, our mission is to partner with our customers to provide the ultimate PCB solution. With over 50 years of combined expertise, we deliver a full range of innovative, high-quality products—from ultra HDI to flex and rigid-flex PCBs—designed to meet the unique needs of industries like aerospace and defense. By focusing on Design for Manufacturability, we streamline the entire process, from concept to production, while leveraging advanced technology and unmatched customer support to ensure precision, reliability, and success in every project.

Industries We Serve

- Military
- Aerospace
- Medical
- Commercial
- Industrial
- Telecom

Certifications

- ISO 13485:2016
- AS9100:D
- IATF16949:2016
- ITAR Registered
- MIL-PRF-31032
- UL Certified

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