QPTECHNOLOGIES

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QP Technologies Wins Supplier Award from Mixed-Signal Devices

Relationships are foundational to QP Technologies' success. We don't simply take and fulfill orders – we partner with our customers to determine their advanced packaging and assembly needs so that we can devise the best solution. To achieve this level of collaborative success, we are increasingly tapping into our team's substrate expertise, as well as our established packaging, assembly and related capabilities. We're pleased and honored to have been recognized for these efforts with an award for Excellence in Manufacturing Achievement from our customer Mixed-Signal Devices (MSD).

At an event held at our Escondido facility in September 2023, QP Technologies COO Ken Molitor and several key team members were on hand to accept the award from MSD VP of Operations Jay Mali. Jay shared his company's enthusiasm about our partnership and the solutions we've developed to help them speed time to market for their high-performance clock and timing products.

Jay noted that QP Technologies has played an important role in MSD's success: "We appreciate the QP Technologies team and everyone involved in making this work happen. It takes a lot of people and processes, and we needed a flexible partner that could work with a small startup… Cost was also critical, but the biggest factor was time to market. We needed customer samples as quickly as possible. It sometimes took us two and half months to build parts at the beginning, and we couldn't find the right company to work with until we found QP Technologies."

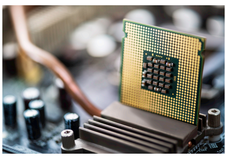
Jay told the team that he had remembered working with us in the past (as Quik-Pak) when he was at Broadcom, making use of our QFN packages and assembly capabilities, and he was eager to see if we could handle his current needs. MSD was building a new approach to clock technology, with a complex package that featured multiple components, a multilayer substrate, overmolding, underfill, etc. Working closely with our packaging guru Sam Sadri, Jay and his team went through some learning curves, but in just 18 months, they had completed six substrate designs and 30 builds with extremely high quality and good cycle times.

As a result, MSD was able to announce its flagship family of MS11xx crystal oscillators offering the industry's highest performance – a testament to the collaboration of the MSD and QP Tech teams and the strong support that we provided throughout the project.

Jay stated that the customer samples have garnered excellent feedback, and they plan to move to production quantities by end of year. QP Technologies is proud of our role in bringing this project to fruition and helping enable new business opportunities for Mixed-Signal Devices.

Technology Focus

Leveraging Custom Substrates in Quickturn Assembly



Although silicon substrates have been the industry standard for many years, new applications are driving implementation of new and emerging substrate materials. Power and RF semiconductors and high-speed solid-state drive (SSD) devices (e.g., SerDes chips) are key drivers for the use of compound semiconductors, including silicon carbide (SiC), gallium nitride (GaN) and graphene.

However, these high-frequency applications can lose signal due to unwanted substrate characteristics such as increased heat, surface reflection, etc. Chipmakers need a board package and assembly approach that can make the most of their unique design. Advanced laminates such as FR-5, BT and ABF are enabling optimal packaging and assembly methods for end-use implementation, but they each pose some unique challenges that require development by a company and team with a high degree of substrate expertise.

Serving as the carrier for microelectronic devices, the substrate is the part of the IC package that provides mechanical strength and electrical connectivity, via an interposer, and is useful in facilitating build-up and integration of complex microcircuits. The material used to create the substrate depends on the desired properties of the device being manufactured. Regardless of these requirements, substrate development can be time-consuming when customization is required.

QP Tech's substrate design, fabrication and development service fills technology gaps that standard, off-the-shelf packages cannot accommodate. Customers are increasingly coming to us for quickturn, small-volume custom substrate solutions in several key areas – most notably, high-power and high-speed applications; IP verification; and creation of test board and samples.

To learn more about our substrate development offerings, please visit our website or contact us to talk to a team member about your project. And look for our newest white paper later this year sharing further details and use case examples of custom substrate projects.

Contact us

Employee Spotlight

Michael Harris, Customer Service Representative

As with any company, we have no business without our customers. And ensuring you, our customer, gets your project in a timely manner, doesn't happen without our top-notch customer service team. In this issue, we are happy to introduce Michael Harris, a vital member of this team.

Recently promoted to his current position, Michael is responsible for supporting sales in Northern California, the Pacific Northwest and parts of Canada. As the main point of customer contact, he pulls together all paperwork, makes sure all materials required for a job are in hand, and the job is scheduled appropriately so that the team has sufficient time to complete the project. QP Technologies is well known for its rapid turnaround and delivery, but, as Michael notes, we are always working to optimize this timeframe for each customer engagement.

Michael joined the company nearly six years ago when we were still known as Quik-Pak, and has had a unique path to his current role. Originally hired to work in shipping, Michael was excited about the company's rapid growth and what takes place inside the cleanroom. He soon decided he wanted to expand his skillset within QP Tech. Subsequently, he learned such vital jobs as wire bonding, OCPP package overmolding, package opening, backgrinding and wafer dicing. Each job presents different challenges that gave him new insights into how the process works and how to establish and maintain channels of communication throughout.

Gaining this hands-on experience not only gave Michael strong understanding of how our processes work but enabled him to use that knowledge in his current role to help with developing the schedule for customers seeking new development work. He notes that meeting about projects and technicalities with some of the industry's best-known tech companies has been something he'd never dreamed of getting a chance to do.

He says he enjoys working with customers to help bring their projects to fruition – it requires the ability to be flexible and stay on top of the fast pace associated with many jobs being pursued at once, especially as supply chain issues continue to loosen. "I see a lot of work coming our way, a lot more challenges, and I'm ready to tackle them" along with others on the team, Michael says – noting the close-knit, open and collaborative environment that we strive to maintain.

To unwind from his busy workdays, Michael and a group of friends play disc golf at local courses nearly every weekend, taking advantage of the temperate San Diego area climate. He also enjoys checking out local swap meets, often coming away with such vintage finds as a 1960s kaleidoscope. Thanks again, Michael, for sharing your insights – we're fortunate to have you as a part of the QP Technologies team.

Recent Events

iMAPS CHIPcon

This event, formerly known as the Advanced SiP Conference, was rebranded this year to reflect its focus on Chiplet & Heterogeneous Integration Packaging. Held in San Jose in late July, the event is highly focused and proved valuable for our team, who met with interested attendees at our tabletop exhibit. According to iMAPS, the event welcomed over 200 attendees, which exceeded by 20% attendance at SiP 2019, which had been the highest to date. With the strong growth of chiplets and advancement of the Heterogeneous Integration Roadmap, we expect to see this event continue to grow and provide valuable relationship-building opportunities.

Electronics Packaging Symposium

The 34th annual EPS was held in September at the Albany Nanotech Complex in upstate New York. Jointly presented by Binghamton University, GE Global Research and IBM Research, the event brought together experts from industry, academia and government to discuss new advances in electronic packaging technologies and solutions. QP Technologies exhibited at this two-day event, and we took away some valuable insights into the status of industry-academia partnerships and development work, including interconnects, thermal management for power electronics, and flexible hybrid electronics, to name a few.

iMAPS International Symposium on Microelectronics

QP Technologies had a strong presence as an exhibitor and premier sponsor at the annual iMAPS International Symposium, held in early October in San Diego. Our team was well represented in our booth at the show, whose sessions were strongly focused on chiplets and the applications they are enabling – in particular, high-performance computing (HPC), artificial intelligence (AI) and automotive. The show floor was quite active, and our well-placed booth was consistently busy. We enjoyed numerous networking opportunities with interesting discussion around the CHIPS Act and emerging packaging trends.

About Us

QP Technologies is a leading provider of microelectronic packaging and assembly, wafer preparation, and substrate design and development services. We leverage proven technologies developed by our skilled staff, and we work closely with you to get your products to market quickly, with the highest quality prototype and production volumes.

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