



QP TECHNOLOGIES

September
2022

Events: iMAPS Boston 2022



We are excited to be attending the 55th International Microelectronics Assembly and Packaging Society (iMAPS) Symposium located at the Hynes Convention Center in Boston, MA. This year's event will focus on packaging technologies across the whole spectrum of the electronics market such as 5G, high performance computing, automotive, defense/space, industrial, medical, and beyond!

Please join us October 3 - 6 in booth #113 to connect with one of our tech team members to learn more about the broad range of packaging and assembly solutions we provide for various end applications and markets.

Also, don't miss out on our interactive poster presentation during the "Posters and Pizza" session taking place October 6 at 11:30am. Sam Sadri, a senior process engineer at QP Technologies, will explain the benefits of our proprietary Open-Cavity Plastic Packages (OCP) and how it offers a robust solution for various high-reliability applications.

Technology Focus: Ceramics

Ceramic Packaging for High-Power Applications

Widely used for silicon, gallium arsenide (GaAs), and gallium nitride (GaN) RF power transistors, ceramic packaging is well suited for high-power RF and microwave applications because the material has insulating and impedance properties that protect components from moisture and humidity. Chipmakers often opt for its use in such military-aerospace, medical and other high-reliability environments.

QP Technologies can procure and assemble virtually every type of ceramic package available, in the most common sizes and configurations and open-tooled designs. No matter how large or small the requirement, we offer a reliable way to shorten lead times and reduce cost of materials. Packages are available with a variety of lids including taped-on, ceramic, combo, glass and hermetically sealed.

Assembly options include:

- Die attach: filled epoxies, silver-glass, silver-filled cyanate ester and gold eutecic
- Nondestructive bond pull for Class S standard
- Solder, glass or epoxy lid seal
- Glop-top available
- Mil-standard permanent marking

We provide a full, turnkey ceramic solution – from wafer dicing and backgrinding, package procurement and preparation to die attach, wire bonding, encapsulation, remolding and marking. We deliver production-quality prototype parts for internal testing or customer samples to meet your deadline.

Employee Spotlights

The practical aspects of our business can't be overlooked, or overestimated. We offer a high-quality suite of products and services, but everything we create still needs to get where it needs to be, safely and on time, or our customers won't meet their deadlines. This month, we profile our team member responsible for making sure everything gets from point A to point B.



Crystal Ramirez, Material Handler

One of our newer team members, Crystal Ramirez joined QP Technologies at the beginning of the year. Her role is focused on shipping and logistics, for which she has primary responsibility. She has a strong background in customer service and project management outside the technology sector, and the skills she garnered in these areas have helped her develop processes and procedures for inventory management, staging and tracking.

Crystal sends out all customer orders, maintaining the shipping log to ensure that there's a record of everything. She works closely with the production team and customer service, making sure that the purchase orders, travelers and work order forms all match up. Any discrepancies that arise are reported to the Quality Assurance department. She also collaborates with supervisors throughout the company to help increase efficiency throughout all departments.

Crystal noted that one thing she really enjoys about her job is the opportunity to have everything set up the way she wants it – basically, running her own department. Having been allowed this freedom has heightened her confidence and recognition for her performance within the company. She also cited the family environment and great relationships with her co-workers as contributing to her enjoyment of her job. Her primary challenge is meeting month-close goals to ensure as many orders are shipped as possible – while this creates some added pressure, she enjoys the challenge.

Getting out from behind her desk and relishing her free time is important to Crystal, as well. An admitted “outdoor person,” she loves to hike and ride her road bike, as well as go camping and kayaking. She likes to travel and try new foods – and she enjoys trying new things... like skydiving, as you can see in the photo. She liked it so much, she plans to do it again soon!

News Highlight: Coverage Recap

Recently in Semiconductor Engineering, editor Adele Hars explored the evolution of the GaN market and how various companies participate. The article notes that revenues in the power GaN market are growing at a 59% CAGR (2021 to 2027), on target for hitting \$2 billion in five years (according to Yole Group). For her article, Adele spoke with our director of sales and marketing, Tom Bianchi, who noted the important role the package plays in contributing to overall device performance:

“As the chip performance increases, the package and connect technology demands increase, Bianchi noted. GaN is pushing the back-end material demands for better die attach and enhanced wire bond technology. ‘That’s why QPT is working with equipment manufacturers to enhance wirebond design to optimize GaN RF performance,’ he said.”

The article also describes QP Technologies’ range of capabilities related to GaN, including specialized dicing, which is necessary to prevent damage to the substrate, as GaN’s hardness is much greater than that of silicon. To read the full article, click here: <https://semiengineering.com/equipment-suppliers-brace-for-gan-market-explosion/>.

Another recent article in Semi Engineering includes quotes from Chip Greely, VP of engineering for our parent company, Promex Industries. The piece looks at the rise of fan-out wafer-level packaging (FOWLP), which has overcome manufacturing hurdles to become a key enabler in the industry move from transistor scaling to system scaling and integration. Chip’s comments address the assembly challenges associated with FOWLP, including stress and warpage, as well as the question of the process shifting from wafers to panels – noting that the idea is good, but the execution faces some longer-term challenges. To read the full article, click here: <https://semiengineering.com/fan-out-packaging-gets-competitive/>.



U.S. Chip Packaging with Mil-Spec Precision

A reliable and affordable alternative to ceramic packaging – Open-Cavity Plastic Packages (OCP).

Our latest white paper expands on the benefits of OCP for the mil-aero market. Download the paper here to learn how QP Technologies' OCP can save you time, space, and money.

DOWNLOAD OUR WHITE PAPER

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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