QPTECHNOLOGIES

May 2023

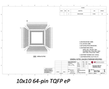
Technology Focus:

Broadening Options for Robust Packaging Requirements

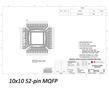
Automotive, industrial, military-aerospace, and other applications demand affordable, robust device packaging that provides high thermal and electrical performance. QP Technologies recently expanded our proven portfolio of plastic packages with the addition of two new products: a 64-pin thin quad flat pack (TQFP) and a 52-pin metric quad flat pack (MQFP) plastic encapsulated package.

Specs and features

The TQFP is a 10x10mm exposed-pad (eP) package with a very thin profile (nominal 1mm thickness) and excellent thermal management, making it ideally suited for applications where space is at a premium. As with quad flat no-lead (QFN) packages, its backside eP construction helps to optimize power dissipation and electrical performance when soldered directly to the PCB. The 10x10mm MQFP (nominal 2mm thickness) is a popular solution for customers requiring a more basic option where package height and heat dissipation are less critical. Both packages (see drawings below) are built at QP Technologies to JEDEC standards using industry-standard materials and customized for each user's internal configuration requirements.



10x10 64-pin TQFP eP



10x10 52-pin MQFP

The new TQFP and MQFP products provide additional alternatives for customers needing high-reliability solutions that can be customized to accommodate their existing footprint and configuration. For our mil-aero customers and others requiring stateside assembly services, it's an additional option for them to do this cost-effectively.

The new packages deliver high performance on the JEDEC moisture sensitivity level (MSL) scale, which defines storage and handling constraints for plastic-encapsulated microcircuits during manufacturing. This is a key parameter for devices that will be exposed to extremes of temperature over long periods of time.

For other QFP packages and pin-count options, customers can utilize QP Technologies' OCPP [Open Cavity Plastic Package] process, which entails reclaiming their existing QFP packaged devices to build their new products.

Employee Spotlight

Michael Shimotsu, Senior Customer Service Representative

Our customers and regular readers of this newsletter know that we are strongly focused on assembling and maintaining a top-notch lineup of contributors throughout the company. This is certainly true for those on our sales and customer service team, who regularly serve as the face of QP Technologies, securing and fulfilling orders to ensure customers are satisfied and keep coming back.

One of the newest members of the sales team joined us in February 2023, and has jumped in with both feet. As a senior customer service rep, Michael (Mike) Shimotsu supports our sales engineers, following up on and processing orders to ensure that all aspects of the customer's requirements are addressed. In addition, he has own list of customer accounts that he services directly – a role similar to that he held at his prior company, Integra Technologies.

Mike says he enjoys working with the team. One of the challenges that he's addressing is learning how our outside sales engineers work – getting to understand how they think so that he can "read their minds" is key to establishing a seamless sales/service workflow. He's also excited to contribute to the company's growth, for which he sees huge potential.

Mike's particularly excited to be part of our team since the opportunity was in the works for a while, thanks to COVID-19. "I originally spoke with [our VP of sales & marketing] Rosie Medina three years ago, and three days after that first conversation, the COVID shutdown happened," he says. It took some time for them to reconnect and for the logistics to work out, but work out they did, and he is now on board, having relocated to San Diego from the Bay Area.

When Mike isn't working, he enjoys the great outdoors; like Marthus Victoria, whom we profiled in our last issue, Mike likes to fish. He also enjoys a highly popular indoor hobby: assembling complex LEGO sets. As an AFOL (adult fan of LEGOs), he finds the process both challenging and relaxing. He has tackled a number of the Technic and Speed Champions sets, and recently, he completed the famous Hokusai Great Wave LEGO wall art. The ability to focus on minute details while seeing the big picture surely comes in handy when Mike's on the job!

Event Recap

Open House a Big Success!

On March 22, QP Technologies held our long-delayed open house to welcome customers and partners to our new facility in Escondido, Calif. Opened in April 2020, just after the pandemic hit, the facility was built out specifically to accommodate our production processes, with the layout designed to follow the flow of material as it moves through the line to make manufacturing more efficient. We were excited to finally get to show off our site, including our engineering capabilities and our cleanroom space.

In the midst of California's historic rains, the weather cooperated, which contributed to a fun and relaxing event. In addition to getting a glimpse "under the hood" of our facility, the more than 30 attendees on hand enjoyed delicious, locally sourced food and drink, including craft beers from some of our local San Diego brewers, and a lucky few won some great door prizes.

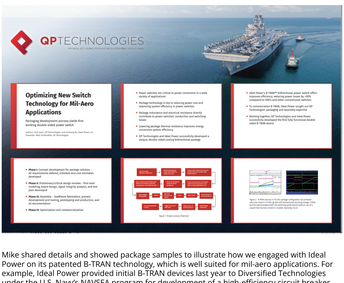
Thank you to all who attended, and we look forward to seeing you again soon!

iMAPS Device Packaging Conference

At this key annual packaging industry event, held in mid-March, QP Technologies manned a booth on the show floor, which kept our team busy throughout the exhibition. Also at this year's DPC, our senior packaging engineer Sam Sadri presented a paper titled, "Optimizing New Power Switch Technology Using Flip-Chip Assembly," detailing our work with Ideal Power on packaging its B-TRAN™ double-sided switch technology. A number of audience members for the well-attended session stayed afterward for more in-depth discussion with Sam.

GOMACTech 2023

March was a busy month for QP Technologies! The annual GOMACTech conference was held this year in San Diego the week of March 20, providing the perfect opportunity to hold our open house. The event itself kept us busy, both in our booth and at the poster session, where QP Tech sales engineer Mike Strittmatter presented "Optimizing New Switch Technology for Mil-Aero Applications" (see below).



Mike shared details and showed package samples to illustrate how we engaged with Ideal Power on its patented B-TRAN technology, which is well suited for mil-aero applications. For example, Ideal Power provided initial B-TRAN devices last year to Diversified Technologies under the U.S. Navy's NAVSEA program for development of a high-efficiency circuit breaker.

Interested in reading more on our work in both of our presentations? Click below to download our full white paper to see how we were able to provide custom DBC packaging solutions to Ideal power's exclusive double sided BTRAN power switches in our white paper below

Download Our White Paper

Upcoming Events

- iMAPS New England: May 2 in Boxborough, Mass.
- ECTC 2023: May 31 - June 1 in Orlando, Fla.
- International Microwave Symposium: June 13 -15 in San Diego, Calif.
- Sensors Converge: June 20 - 22 in Santa Clara, Calif.

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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