

ipTEST



NEWSLETTER || Q1 2024

COMPANY UPDATE

Nick Dajda
Sales & Marketing Director



ipTEST



Since our last update in 2023 we have enjoyed another particularly busy period, and we have a lot to tell you in this issue!

We've opened the doors to two new ipTEST facilities. Our new manufacturing facility, located next to our headquarters in Guildford, and our first overseas regional office which is located in Ipoh, Malaysia. Our new manufacturing space gives us much needed additional capacity and room to grow our business over the coming years, and the Malaysia office is home to our new team of support and applications engineers based in the country.

We've been busy developing new test generator capabilities which we will cover in the next issue.

And finally, our Technical Director Demos Malaos got to visit Buckingham Palace to meet King Charles, in recognition of the success of our DS5 dynamic switch test generator. We've included some photos of the event on page 3.

Looking back through our recent newsletters, one theme which has come up every time is growth and this update is certainly no different. Every area of our business has grown this year driven by the exciting

adoption of wide bandgap devices across the power products industry.

We've grown significantly as a company this year. Our headcount has increased by 50% over the last 9 months as more people have joined the ipTEST team, and our new facility has doubled our manufacturing space. And as our team has grown larger, many of us have taken on new responsibilities, learned new skills, and rallied together to overcome the challenges of growth. All of this is really important as we seek to deliver high quality products on time.

Our product range is also growing at an exciting pace. Silicon Carbide and Gallium Nitride wide bandgap devices place completely different demands on testers than conventional silicon devices. Our engineering teams have brought many new capabilities to market this year to test and stress wide bandgap devices to their limits.

2023 has been a busy year and everyone at ipTEST has put in tremendous effort. I want to thank everyone at ipTEST for their dedication this year. Looking back, it's amazing how much we've achieved, and I am looking forward to an exciting year ahead for 2024!

KING'S AWARD



CELEBRATING SUCCESS: KING'S AWARD

This year ipTEST were honoured with the King's Award for Enterprise.

The award was in the Innovation category, in recognition of our DS5 dynamic switch tester. DS5 enables our customers to rapidly characterize their fastest and most powerful devices.

Every award winner gets to visit Buckingham Palace for a royal reception with King Charles. Our Technical Director, Demos Malaos represented ipTEST and met the King along with all the other winners of this year's King's Award for Enterprise.

To celebrate this achievement, everyone at ipTEST gathered for a delightful cupcake celebration at the factory. It was a sweet way to express our gratitude for dedication and hard work of the entire ipTEST team!



THE NEXT CHAPTER



ipTEST's NEW MANUFACTURING FACILITY



Getting the new facility ready



All finished and moved in

As we gave you a clue in the previous newsletter, finally the day has come and we moved to our new building. This is a huge milestone for ipTEST as we continue to grow and expand our operations.

The move was the culmination of 6 months of planning and building work, that has doubled our manufacturing space and output capacity. The new facility allows us to increase our production capacity, improve our efficiency, and enhance our quality standards. We are confident that this expansion will enable us to serve our customers better for years to come.

Our manufacturing, stores and test departments have made the move to the new

building, with our growing applications, research and development, and new product introduction teams filling the space left behind.

There were of course challenges along the way and some funny moments made it easier to push onwards. For instance, when the time came to move to the new building, wet concrete was still being poured into the stores area two days before move in day. We had to get creative and act wisely to find a solution to move everything in time without causing further impairment.

Surprisingly, every time we had a significant move of equipment, our managing director mysteriously went away on business travel!

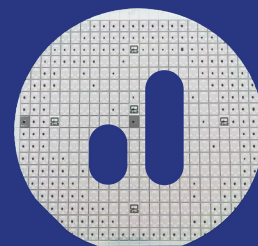


April 2023 our 8,000 square foot manufacturing facility opened



- Expanded manufacturing facility
- Dedicated testing bays
- Dedicated space for wafer and DS4 testing
- Dedicated space for repair solutions

APPLICATIONS CORNER



THE IMPORTANCE OF SHORT-CIRCUIT TESTING SILICON CARBIDE (SiC) DEVICES

SiC devices offer a dramatic improvement in conversion switching efficiency for high power applications compared with previous generations of devices such as IGBT's. Due to their short channel length, SiC peak currents can be up to ten times the nominal DC current compared with around 4x for IGBTs.

For applications such as power train drives where devices are operated in a half-bridge configuration, short-circuit handling capability is a must have criterion.

In extreme cases, both upper and lower devices may briefly conduct simultaneously, whether through gate driver layout parasitics, or extreme operating conditions. Short-circuits as low as 2 or 3 microseconds can be destructive for SiC's due to the concentration

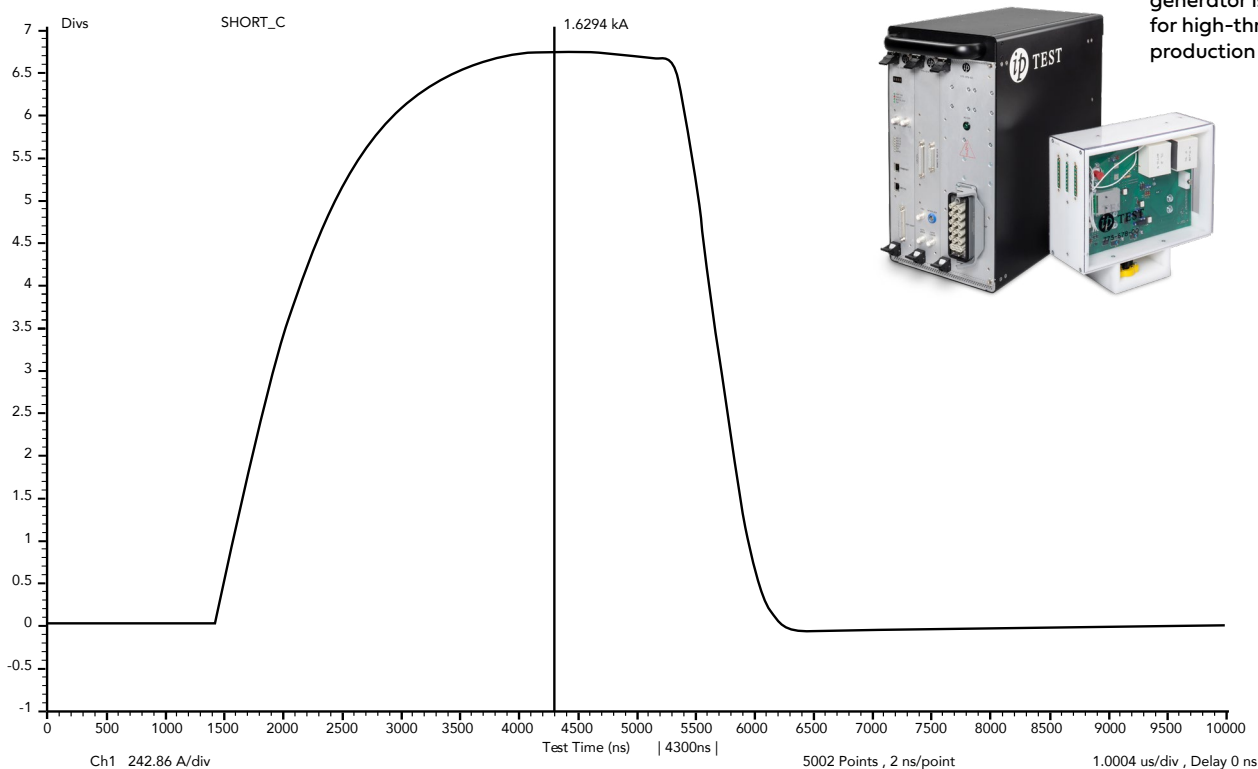
of charge in the very thin drift zone that is close to the surface of the chip.

ipTEST's short-circuit Application Adaptor is ideal for high-throughput production test and achieves up to 2000A current for up to 10 μ s with rail voltages up to 1200V.

Parasitic inductances down to 30nH are achievable using hard- or soft-docking application-specific device 'daughter boards' designed for use with a rotary turret and pick and place handlers. Programmable gate voltages up to ± 30 V and independent Vg-on and Vg-off resistances up to 250ohms allow precise control over the gate dv/dt.

Abnormally high leakage current monitoring is also available with a programmable delay after the main pulse, useful for detecting post-short-circuit thermal runaway failure in some IGBTs.

MOTOR CONTROLLER



1600A S/C current applied in 4 μ s

ipTEST's DS5 test generator is ideal for high-throughput production test.



FROM LOCAL TO GLOBAL



ipTEST MALAYSIA

We are thrilled to announce that as of February 15th, 2023, ipTEST has officially established a branch in the vibrant country of Malaysia. Our support office is strategically located in the beautiful city of Ipoh, in the heart of Perak.

This allows us to provide the highest level of in region customer

support, including service, maintenance, and spare parts support to all ipTEST users in Malaysia, Indonesia and the neighbouring regions. With a dedicated team of three highly trained Test Support Engineers based in Ipoh and Melaka,



together with an Applications Engineer, we are committed to delivering quick and efficient, local support. Our goal is to ensure that ipTEST customers continue to receive our highest standards assistance whenever they need it.



Support engineer Irfan Nazri at our Ipoh facility.

nexter



ipTEST CHINA

This year we have grown and further developed our China service and support network.

We have welcomed a new partner to ipTEST's distributor network, Tyrian Technologies, and a new ipTEST support engineer as well. Both are based in the Shenzhen region and can also support other parts of the country.

We have also focused on further training with our partners Nexter and Pomme who support all our new products in the China region.



MEET THE TEAM



**JESSICA
SHUFF**



**KEY ACCOUNTS
MANAGER**



What is your role and what does your job entail?

As Key Accounts Manager, I regularly communicate with our top customers, providing updates on future project plans, identifying their top priorities, and relaying this information to our internal planning team.

When did you start at ipTEST?

I joined ipTEST in 2021. Initially, I was among the earlier members, and since then, our team has significantly expanded.

What is the best thing you like about your job?

My favourite part of my job is the variety. Everyday is different and presents me and my team the opportunity to build relationships and achieve requirements, gaining more insight into the industry in the process.

What are the toughest challenges you've had at work?

One of the toughest challenges has been remembering everyone's names, during our rapid growth I have seen lots of new team members and a location move. However with this bought new modern facilities and the exciting opportunity to work with lots of people I may have not met otherwise.

How do you see the environment of ipTEST and its culture?

The culture at ipTEST is unique. Internal and external training opportunities are offered, allowing further development of existing skills. There is also a focus on knowledge sharing, with regular time spent in other departments to understand the 'full picture'. Overall we are well supported and the atmosphere is friendly and enjoyable.

What three words would you use to describe your role?

Finding root cause, Being on the front end, Solving problems: Challenging, Thrilling & Interesting!

What was your first impression of ipTEST upon Joining?

It was great. Everybody tries to be helpful here and they embrace to share and teach. Every question was answered no matter if it is just a basic knowledge. My co-workers also guided me well in doing this job and I am grateful for it.

How did you first learn about ipTEST?

Completely by accident, I was browsing on LinkedIn when I came across a job hiring post from an employee at ipTEST. I decided to reach out and get in touch, which led me to where I am now.

How did you notice that you have passion for the electronic industry?

I was passionate about maths and physics. Initially my uncle recommended me to study electronics. My major consisted of communication, power, and semiconductor. In the last year I chose to enter semiconductor professionally.

What is your favourite aspect about the electronics industry?

What I truly appreciate the most is our commitment to continuous improvement for our products. The process of actively planning, implementing, checking, and troubleshooting improvements on products is genuinely satisfying.



**IRFAN
NAZRI**



**TEST SUPPORT
ENGINEER**



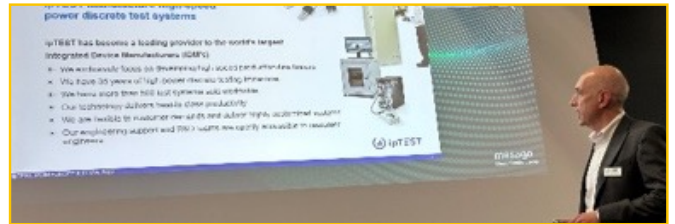
ipTEST OUT & ABOUT



PCIM 2023

In May 2023, ipTEST participated in PCIM, one of the leading exhibitions in the power electronics industry. During the event, we showcased our wide bandgap testing capabilities while engaging in discussions about the challenges associated with working with SiC and GaN materials.

It is always incredibly rewarding to present our products and capabilities to others in our industry. We get to interact with pioneers in the semiconductor and power electronics industry at an exciting time given the continuous development wide bandgap power devices.



Robert Pulman, Product and Applications Manager presenting at PCIM.

NOTTINGHAM

This year's Centre for Power Electronics conference in Nottingham was a great opportunity for the ipTEST applications team to discuss the latest challenges and breakthroughs in the power electronics industry. Particularly the need for semiconductor devices that can operate at higher currents, voltages, temperatures, and switching frequencies.

The first day featured a training workshop led by university lecturers and semiconductor industry professionals, focusing on Power Semiconductors Packaging. On the second day,

the core of the event comprised discussions among semiconductor industry professionals, power electronics experts, material and equipment suppliers, lecturers, and researchers from academia.



Manuel Capaldi, Applications Engineer, manning the booth at the Centre for Power Electronics conference.

UPCOMING EVENTS

APEC 2024

We're delighted to announce that we will be attending the Applied Power Electronics Conference February 25-29, in Long Beach, California, in partnership with our US representative CWI. We'll be available to discuss the ipTEST product range and show off some key test adaptors.



FROM WINTER TO SUMMER, HAVING FUN AT ipTEST

We believe in striking the balance between work and play, creating an environment where our incredible team can thrive both professionally and personally. In the winter months, you'll find some team members enjoying our outside open areas building snowmen or engaging competitively in throwing snowballs relentlessly!



As the seasons change, with transition to the warmth of the summer months we continue to utilise our locations surroundings hosting outside social activities to assist with building good working relationships between our teams.

At ipTEST, we cherish these moments as they not only manifest our dedication to work-life balance but also reflect the strong sense of community that defines our company.



iptest.com

 linkedin.com/company/iptest