REFINITIV STREETEVENTS

EDITED TRANSCRIPT

DIOD.OQ - Q2 2023 Diodes Inc Earnings Call

EVENT DATE/TIME: AUGUST 08, 2023 / 9:00PM GMT

CORPORATE PARTICIPANTS

Brett R. Whitmire *Diodes Incorporated - CFO*

Emily Yang *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Gary Yu *Diodes Incorporated - COO*

Keh-Shew Lu *Diodes Incorporated - Chairman, CEO & President*

CONFERENCE CALL PARTICIPANTS

David Neil Williams *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Gary Wade Mobley *Wells Fargo Securities, LLC, Research Division - Senior Analyst*

Matthew D. Ramsay *TD Cowen, Research Division - MD & Senior Research Analyst*

Tristan Gerra *Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst*

William Stein *Truist Securities, Inc., Research Division - MD*

Leanne K. Sievers *Shelton Group - President*

PRESENTATION

Operator

Good afternoon, and welcome to the Diodes Incorporated Second Quarter 2023 Financial Results Conference Call. (Operator Instructions) As a reminder, this conference call is being recorded today, Tuesday, August 8, 2023. I would now like to turn the call over to Leanne Sievers of Shelton Group Investor Relations. Leanne, please go ahead.

Leanne K. Sievers - *Shelton Group - President*

Good afternoon, and welcome to Diodes' Second Quarter 2023 Financial Results Conference Call. I'm Leanne Sievers, President of Shelton Group, Diode's Investor Relations firm. Joining us today are Diodes' Chairman, President and CEO, Dr. Keh-Shew Lu; Chief Operating Officer, Gary Yu; Chief Financial Officer, Brett Whitmire; Senior Vice President of Worldwide Sales and Marketing, Emily Yang; and Director of Investor Relations, Gurmeet Dhaliwal.

I'd like to remind our listeners that the results announced today are preliminary as they are subject to the company finalizing its closing procedures and customary quarterly review by the company's independent registered public accounting firm. As such, these results are unaudited and subject to revision until the company files its Form 10-Q for its fiscal quarter ending June 30, 2023. In addition, management's prepared remarks contain forward-looking statements, which are subject to risks and uncertainties, and management may make additional forward-looking statements in response to your questions. Therefore, the company claims the protection of the safe harbor for forward-looking statements that is contained in the Private Securities Litigation Reform Act of 1995. Actual results may differ from those discussed today, and therefore, we refer you to more detailed discussion of the risks and uncertainties in the company's filings with the Securities and Exchange Commission, including Forms 10-K and 10-Q.

In addition, any projections as to the company's future performance represent management's estimates as of today, August 8, 2023. Diodes assumes no obligation to update these projections in the future as market conditions may or may not change, except to the extent required by applicable law.

Additionally, the company's press release and management statements during this conference call will include discussions of certain measures and financial information in GAAP and non-GAAP terms. Included in the company's press release are definitions and reconciliations of GAAP to non-GAAP items, which provide additional details. Also, throughout the company's press release and management statements during this conference call, we refer to net income attributable to common stockholders as GAAP net income.

For those of you unable to listen to the entire call at this time, a recording will be available via webcast for 90 days in the Investor Relations section of Diodes' website at www.diodes.com.

And now I'll turn the call over to Dr. Lu, Dow's Chairman, President, and CEO. Dr. Lu, please go ahead.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Thank you, Leanne. Welcome, everyone, and thank you for joining us today. During the second quarter, the recovery in the Asia market was slower than we expected, especially in China. But I'm pleased with our team's execution to deliver record gross margin. Additionally, our achievement of record product revenue in the Automotive and Industrial markets is strong testament to the continued success of our total solutions sales approach and content expansion initiatives.

This quarter was sixth consecutive quarter gross margin was above our target model of 40%, and the sixth consecutive quarter Automotive and Industrial increased as a percent of the revenue.

With that, let me turn it over to Gary Yu, Diodes' Chief Operating Officer, for some additional comments on the quarter.

Gary Yu - *Diodes Incorporated - COO*

Thank you, Dr. Lu. Revenue in the second quarter was $467.2 million, with gross margin reaching a record 41.8% of revenue. The recovery in the consumer, computing and communications markets was much slower than we had originally expected. Whereas the trend in the automotive market remained relatively strong.

During the quarter, our Automotive and Industrial product revenue reached a record 48% of total product revenue and enabled us to maintain revenue flat sequentially and in line with our guidance while also delivering record gross margin. Also notable in the quarter, we continued to generate strong cash from operations of $92.6 million that enabled us to reduce our total debt by $34.4 million to $89 million as of June 30.

Looking forward, we have begun to see early indications of market improvement with inventory days decreasing in the second quarter, coupled with the increase in worldwide POS revenue. Although, we expect a further reduction in channel inventory into third quarter, Diodes' ongoing strategy to improve sales and product mix, including growing revenue contribution from the Automotive and Industrial markets, positions us to continue achieving our long-term growth and margin targets.

Let me now turn the call over to Brett to discuss our second quarter financial results and our third quarter guidance in more detail.

Brett R. Whitmire - *Diodes Incorporated - CFO*

Thanks, Gary, and good afternoon, everyone. Revenue for the second quarter 2023 was $467.2 million, decreasing 6.8% from $501 million in the second quarter of 2022 and flat with $467.2 million in the first quarter of 2023.

Gross profit for the second quarter was $195.4 million or 41.8% of revenue compared to $206.5 million, or 41.2% of revenue, in the prior year quarter and $194.5 million, or 41.6% of revenue, in the prior quarter.

GAAP operating expenses for the second quarter were $105.8 million or 22.7% of revenue. And on a non-GAAP basis, were $102 million or 21.8% of revenue, which excludes $3.8 million of amortization of acquisition-related intangible asset expenses. This compares to GAAP operating expenses in the second quarter 2022 of $100.3 million, or 20% of revenue, and $108 million, or 23.1% of revenue, in the prior quarter. Non-GAAP operating expenses in the prior quarter were $101.3 million, or 21.7% of revenue.

Total other income amounted to approximately $11.4 million for the quarter, consisting of $12.2 million unrealized gain on investments, $2.2 million of interest income, $1.4 million of other income, $2.2 million of interest expense, and a $2.2 million of foreign currency loss.

Income before taxes and noncontrolling interest in the second quarter 2023 was $101 million compared to $101.2 million in the prior year quarter and $88.6 million in the previous quarter.

Turning to income taxes, our effective income tax rate for the second quarter was approximately 17.1%.

GAAP net income for the second quarter of 2023 was $82 million, or $1.77 per diluted share, compared to $80.2 million, or $1.75 per diluted share, in the second quarter 2022 and $71.2 million, or $1.54 per diluted share, in the first quarter 2023. Share count used to compute GAAP diluted EPS for the second quarter of 2023 was 46.2 million shares.

Non-GAAP adjusted net income in the second quarter was $73.3 million or $1.59 per diluted share, which excluded net of tax $3.1 million of acquisition-related intangible asset amortization and $11.7 million related to equity investments. This compares to $86.9 million, or $1.90 per diluted share, in the second quarter 2022 and $73.4 million, or $1.59 per diluted share, in the prior quarter.

Excluding noncash share-based compensation expense of $6 million net of tax, for the second quarter both GAAP earnings per share and non-GAAP adjusted EPS would have increased by $0.13 per diluted share.

EBITDA for the second quarter was $133.5 million or 28.6% of revenue, compared to $130.6 million or 26.1% of revenue in the second quarter 2022 and $121.8 million or 26.1% of revenue in the prior quarter.

We have included in our earnings release a reconciliation of GAAP net income to non-GAAP adjusted net income and GAAP net income to EBITDA, which provides additional details.

Cash flow generated from operations was $92.6 million for the second quarter. Free cash flow was $55.6 million, which included $37 million for capital expenditures. Net cash flow was a negative $1.2 million, including the paydown of $34.4 million of total debt.

Turning to the balance sheet, at the end of the second quarter, cash, cash equivalents, restricted cash, plus short-term investments totaled approximately $334 million. Working capital was $747 million and total debt, including long-term and short term, was $89 million.

In terms of inventory, at the end of second quarter, total inventory days were approximately 112 as compared to 116 last quarter. Finished goods inventory days were 30 compared to 31 last quarter. Total inventory dollars decreased $16.2 million from the prior quarter to approximately $325.7 million. Total inventory in the quarter consisted of a $7.2 million decrease in finished goods, a $7 million decrease in work-in-process, and a $2 million decrease in raw materials.

Capital expenditures on a cash basis were $37 million for the second quarter or 7.9% of revenue and within our target model of 5% to 9%.

Now turning to our outlook, for the third quarter of 2023, we expect revenue to be approximately $425 million, plus or minus 3% as we expect to continue reducing channel inventory due to the slower recovery in the consumer, computing, and communications markets. We expect GAAP gross margin to decrease sequentially to 40.0%, plus or minus 1%, primarily due to the impact of our manufacturing service agreements, but remains at our target model. Non-GAAP operating expenses, which are GAAP operating expenses adjusted for amortization of acquisition-related intangible assets, are expected to be approximately 23% of revenue, plus or minus 1%. We expect net interest expense to be approximately $1 million. Our income tax rate is expected to be 20%, plus or minus 3%, and shares used to calculate EPS for the third quarter are anticipated to be approximately $46.7 million.

Not included in these non-GAAP estimates is amortization of $3.1 million after tax for previous acquisitions.

With that said, I will now turn the call over to Emily Yang.

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Thank you, Brett, and good afternoon. Revenue in the second quarter was flat quarter-over-quarter, reflecting the slower-than-expected recovery in China and the 3C markets, as Gary mentioned, while the Automotive/Industrial markets reached a record 48% of the total product revenue. Looking more closely at this quarter's revenue, revenue in Europe was a record. Distributor inventory in terms of weeks decreased sequentially. The good news is our worldwide POS revenue increased over the first quarter and the growth was mainly from Asia. Overall, our design pipeline continues to be very strong, especially in the Automotive market, which is expected to serve as a key driver to our long-term future outlook towards our 2025 operating goals.

Looking at the global sales in the second quarter, Asia represented 67% of revenue, Europe 20%, and North America 13%.

In terms of our end markets, Industrial was 29% of Diodes' product revenue. Automotive was a record 19%. Computing 22%. Consumer 18%. And communication 12% of product revenue. Our Automotive and Industrial end markets, combined at 48% of product revenue, represented the fifth consecutive quarter above 40% and is 8 percentage points above our 2025 target. This achievement underscores the ongoing success of our content expansion strategy and market share gains.

Now let me review the end market in greater details. In the Automotive market, our record revenue represented a growth of 22% year-over-year. We continue to ramp up design wins while maintaining ongoing design win momentum across multiple applications.

Our SBR and bipolar junction transistors won new designs in both battery and plug-in electric vehicles for battery management systems, electric control units, distribution control units, and vehicle control units. Also, our clock buffer and crystal oscillators are being used in EVs for smart cockpit and ADAS applications. We also saw design wins for TVS products for power line protection in EV charging plugs and data line protection within the domain control units.

Our automotive USB-C power delivery controllers and gate drivers are being designed into car chargers modules and wireless charging solutions. And our Rectifier and Zener diodes continue to see growth in conventional inverter circuits, wireless power circuits, as well as body controllers.

Additionally, our linear LED drivers and controllers are seeing traction in infotainment and heads up display, while DC-DC buck converters and transistors continue to see solid demand from LED lighting, audio/video navigation, and instrument cluster systems.

Also during the quarter, we introduced 110 new automotive-compliant parts, including silicon carbide MOSFETS. These N-channel MOSFETs are designed to address the growing demand for silicon carbide solutions in electric and hybrid vehicle subsystems, such as battery chargers, onboard chargers, high-efficiency DC-DC converters, motor drivers and traction inverters along with a series of lower voltage MOSFETs in battery management systems, WiFi telecommunications, and infotainment applications.

In the Industrial market, our silicon carbide Schottky diodes and MOSFETs, along with high current transistors, are seeing increasing traction in the power factor correction applications, which helps improve voltage regulation as well as system capacity. Our products are also being used in industrial motor drivers, solar inverters, power supplies as well as DC converters.

Renewable energy continues to be a key focus area for us with design wins for high-current transistors, bridge rectifiers, and gate drivers ICs into wind, energy, energy storage systems. Our rectifier and Zener diode products also continued to see growth in applications ranging from smart energy metering to high-efficiency LED backlighting, factory automation, ESG green building control systems, as well as renewable power generation and distribution systems.

We also saw strong growth during the quarter from rectifiers in embedded computing modules for robotic controls, building automation and point-of-sales terminals. Our SBR, power devices and bridges have been adopted in power over Ethernet server applications, while our IntelliFETs are being designed into power generator control modules.

The ever-increasing data transmission rates and high-frequency switch-mode power supplies continue to drive demand for Diodes' ultrafast recovery rectifiers, that are also expanding into AI-driven automated vehicle control systems as well as connected home, and smart factory automation control systems.

In the Computing market, we continued to secure design wins for our PCI Express clock generators and buffers, I2C MOSFETS and current monitor products in datacenters and servers, including AI servers, while our low-voltage Hall sensors, Schottkys and TVS products are seeing demand in notebooks and Chromebooks. In fact, the computing end market is one area where we are starting to see some recovery signs.

We also experienced solid growth across multiple rectifier products in desktop PCs, high-efficiency switch-mode power supplies, and notebook PC adapters, along with high-efficiency bridge products for high-voltage server power application. Additionally, momentum for power switches continued in USB Type A and C power source applications in notebooks, desktops and docking stations while our contact image sensor products saw new design wins in scanners and printer applications.

In the Communication market, our timing products, including clock buffers and differentiated crystal oscillators, are seeing new design wins for network interface cards and Ethernet switching applications. Our SBR products are being designed into server and access point routers and are also seeing traction in Low Earth orbit and 5G applications.

Lastly, in the Consumer market, our bridge rectifiers, Hall latch switches and TVS products are gaining traction in home appliance applications like air conditioners, washing machines and refrigerators. Our rectifier and diodes continue to see growth from fire and carbon monoxide sensors, LED lighting circuits for home appliances, as well as 4K TV panels, while the momentum for LED drivers, SBR and Piezo sound drivers continued in virtual reality headsets, TVs, and tracker applications.

In summary, we have begun to see early indications of market improvement with inventory days decreasing in the second quarter, coupled with an increase in worldwide POS revenue. Our focus going into the third quarter continues to be on POS growth and depleting channel inventory. Diodes' ongoing strategy to improve sales and product mix, including growing revenue contribution from automotive and industrial markets, positions us to continue to achieve our long-term growth and margin targets. With that, we now open the floor to questions. Operator?

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) At this time, we will take our first question which will come from Gary Mobley with Wells Fargo Securities.

Gary Wade Mobley - *Wells Fargo Securities, LLC, Research Division - Senior Analyst*

Emily, I presume that distribution inventory while down sequentially, is still above the targeted level. And I ask the question because I'm trying to get a sense of the seasonal headwinds that you'll face throughout the balance of the calendar year. Would you expect a normal seasonal decline in the fourth quarter or maybe something atypical in one direction or the other?

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes. Gary, I did mention, unfortunately, the China recovery and 3G recovery is slower than our expectation. I think the good news that we start seeing some signs, especially in the computing segment. As I reported earlier, Q2 POS increased and the channel inventory decreased. And unfortunately, it's still higher than our normal range. We'll continue to drive the inventory depletion in the third quarter. The key is really driving the POS revenue growth. Since the market is really dynamic at this moment, and the inventory weak is really calculated based on the POS revenue. I think, just as I said, that will be our continued focus for the coming quarters, and we'll definitely keep you posted when we see some updated information.

Gary Wade Mobley - *Wells Fargo Securities, LLC, Research Division - Senior Analyst*

Okay. Appreciate that color, Emily. Can you help me understand what you mean specifically by the gross margin headwind for manufacturing agreements? Are these manufacturing agreements with the sellers of your fabs that you recently took over TI and ON specifically?

Gary Yu - *Diodes Incorporated - COO*

Yes, Gary, this is Gary. I won't be able to disclose too much detail about that. But however, you know we do have a manufacturing service agreement in place supporting our OEM customer in both assembly and testing and foundry service. And due to the soft loading for the third quarter this year by the contract and this really kind of have our impact for our net revenue to decrease slightly. That's all I can talk about it.

Operator

And our next question will come from Matt Ramsay with TD Cowen.

Matthew D. Ramsay - *TD Cowen, Research Division - MD & Senior Research Analyst*

For my first question, I wanted to build on maybe the first question that Gary asked. As we see some of these maybe trends that haven't recovered in China as you guys had hoped or expected that they would, it seems like the guide for the September quarter revenue contemplates some softness in the end markets, but also some drawing down of channel inventory. Maybe you could -- if you guys could give a little color on where you think your revenue trends are in the third quarter that you've guided versus what sell-through actually looks like in your end markets. Do you feel like you're under shipping sell-through to bring down channel inventory? And by how much?

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes, Matt, I think definitely, if you look at the POS, it's really the sell-through revenue. We reported by the end of Q2, we're actually seeing POS growth globally and the majority of the growth is really coming from Asia, which gives us a really good indicator of the actual market. Also, because like I mentioned, even there are some signs of recovery, but the recovery is definitely slower than what we expected. I would say the depleting of the channel inventory is slower than our expectation as well. That's the reason we guided a lower number for the third quarter. It shifts through into distribution lower. At the same time, increasing the POS revenue. But I also talked about the actual business signs, so there are signs of recovery in the PC market. There's signs even in the smartphone, especially with the leading manufacturer from the U.S., so not everybody equal, we also talk about it. We continue to believe as the inventory or the customers' inventory continue to deplete, as the actual business continues to recover, we are confident that our inventory position in the channel also helps us to support the customer with a last minute or short demand. That's pretty much what we believe.

Matthew D. Ramsay - *TD Cowen, Research Division - MD & Senior Research Analyst*

Got it. I guess as my follow-up question, I wanted to ask a couple not on revenue but on the rest of the P&L. You guided gross margin and discussed some of the obligations there that are affecting it. But how do you -- like how should we think about margins recovering? I mean is there some rule of thumb on return to revenue growth that would drive a margin recovery? Are some of these obligations things that are going to be there permanently as long as revenue is at a certain level? I'd just kind of like to understand that a little bit better. How would we model margins recovering as we come out of this? And the second part is on OpEx. Maybe, Brett, you could talk a little bit about what actions you guys might take given revenues have come down. Or is this something that you're going to continue to invest through? I'm just trying to understand philosophically how you want to control OpEx with the revenue down, I don't know, close to 20% year-over-year. Thanks.

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes. Maybe let me answer the first part. When the market is a little bit soft, especially in the 3C area, we do see a little bit more price pressure. The majority of the price pressure is really coming from the deep commodity area. We also, we mentioned strategically we try to walk away from there. And just like you said, in the Q3, the major margin impact is really due to some manufacturing service agreements. As we continue to I would say ramp up our internal capacity or internal Diodes' product, at the same time that's going to continue to improve. But keep in mind that the key margin improvement initiative from Diodes is actually focused on the product mix improvement. We believe that with the product mix initiative, including a lot of new product introductions, and that will continue to offset some of the price pressure, and that will continue to help us to drive the margin improvement in the longer term. Brett, do you want to cover the --

---

Brett R. Whitmire - *Diodes Incorporated - CFO*

Yes. I think, Matt, the way to think about the OpEx is what we would expect us to continue to do. And I think what you see is our R&D area we continue to invest in. In terms of our new products, our new processes. And then from an SG&A perspective, we continue to manage that very tightly and work within kind of our model. And I think as we go forward, you would expect that to kind of step back into the model that we advertise more broadly.

Operator

And our next question will come from Tristan Gerra with Baird.

Tristan Gerra - *Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst*

Just wanted to go a little bit some follow-up questions on gross margin in terms of how much of the decline embedded in the Q3 guidance is due to the service agreements that you referenced versus lower utilization rates on your core business? Could you give us a sense of what gross margin would be if you had shipped in line with end demand? And also, is that headwind from service agreements and presumably foundry customers kind of renegotiating lower volume? How long that can last? Will it linger for the next few quarters?

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes. Tristan, let me try to answer the question. I think like Brett mentioned in the guidance, majority of the margin impact is due to the service agreements. As we continue to ramp up our internal product, the utilization will continue to improve. We do expect this is going to be a short period of time. It's not going to be an ongoing issue. And then related to how long it's going to take, it really depends on some of the internal qualifications and progress. And I think overall, we're progressing really well.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Yes, if you want to talk about timing, I think we noticed the market was slow down such that our service agreement caused us the underloading issue. We are aggressively working on bringing our own product into our manufacturing to occupy that capacity. And it takes time to qualify and to ramp. But we are not talking about a year, 2 years. We can start to ramp it up in probably 6 months. And then from there, we can start to occupy that capacity due to our service agreement, our partner, or our competitors who underloaded. Our OEM customer, our foundry customer, they actually underloaded due to the market situation. But we're working toward to taking that capacity. I don't think it's a long-term problem. It is probably 6 months or shorter depending on how we ramp and how we PCN that product notification that our customers are accepting.

Tristan Gerra - *Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst*

Great, that's very useful. Thank you. And then for my follow-up question, you've mentioned some pricing pressure in the more commoditized segment of your business that obviously you're deemphasizing. Is that purely a function of supply/demand and lead time contracting? Or is it a function of higher competitive level from China-based supplier? And if that's the case, trying to understand the overlap from those emerging analog competitors in China relative to your product portfolio. And presumably, if that trend continues, what does that mean in terms of your mix which continues to evolve toward higher margin products? Thanks.

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes. Let me address the question. I think the pricing pressure is really more on the demand supply side. And then also, it's more on the inventory rebalancing. We talk about a lot of customers with a high inventory on hand, mainly in the 3C markets of computing, consumer, and communications, especially on the smartphone area. That's what we see. We don't really I would say interact a lot with the Chinese-based supplier, which is also our strategy, walk away from this area. We're really seeing more the top-tier, top-tier suppliers, not China-based, that we are really playing with. We believe that once the demand overall situation improves, then we're also going to see improvement in this area. For the very deep commodity, we also talk about walking away. That's really I would say a lot of area you might see some Chinese-based supplier, but this is really not our interest. That's really not impacting Diodes that much.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Well, if you look at in the past several years, we have focused our new products from the differentiation technology driven type of new product. That is the evidence of us to get away from the China commodity competitors. Therefore, our current situation is not due to China competitors. It's due to the market situation. If you look at from the past, we are talking about, even the 3C area, we are more focused on server for the computing and smartphone for the communication, and IoT for consumer business. If you can see we moved our commodity type of product into more differentiated technology enhancement type of new product. And we see the result, and that's why we are able to maintain our gross margin at our business model of 40%. And even this quarter, the second quarter, we already had the record to get to 41.8%. And we believe if we continue working toward this direction, our gross margin should be continue improve.

Gary Yu - *Diodes Incorporated - COO*

Yes, I think other than the product, the new product introduction from Dr. Lu's point, and also, we are focusing a lot on the automotive industry, which the pricing is relatively stable in these 2 applications, that you can see our focusing on those 2 areas increasing quarter by quarter. And I think that's a very good signal for us to keep our pricing stable for Diodes.

Operator

And our next question will come from William Stein with Truist Securities.

William Stein - *Truist Securities, Inc., Research Division - MD*

I didn't see if the Q was filed yet, but in that document you always disclose the revenue from channel versus direct. And I'm wondering if you can tell us what that was in the quarter?

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Usually, we have about 2/3 of revenue coming from the distribution and 1/3 from the direct, roughly, and we don't really expect significant change. But I can double check the ratio. I don't have the actual percentage in front of me at this moment, but I can double check.

Brett R. Whitmire - *Diodes Incorporated - CFO*

Yes, Will, so the direct portion this quarter was around 31%. You'd see that in the Q, and we have just filed that as well.

William Stein - *Truist Securities, Inc., Research Division - MD*

Okay, I'll check it out. But this whole dynamic that you're -- that you've highlighted with channel inventories that continue to flush sort of slower than expected, it sort of just reminds me of the various approaches that we've seen semi companies take in this unusual cycle that we've been through. Some of them have put these very long-dated agreements in place and they've sort of transitioned from short lead time and -- short lead time and very sort of early cycle companies to later. And others have, once they saw demand weakening, they just waved in all the cancels they could take. It looks like you're seeing -- I mean look, revenue growth has faded over the last 7 or 8 quarters, so it's not a total surprise, but this looks like a fairly abrupt change next quarter. I'm wondering if you can talk about how you're managing customer orders relative to lead times and customer requests to cancel or push orders? Was there a delay in the willingness to accept these and then they're all being accepted in Q3? Is that a big driver of the Q3 guidance? Or is there another dynamic there? Thank you.

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Will, I think we always talk about it, working with the customer closely, understanding their demand. I mean we have been, as we say, case-by-case working with the customers. Depends on their resets and make certain adjustments whether it's pushout or cancellation to reflect their true demand. We have ongoing effort that working with customers, at the end of the day, we want to make sure we have a structure and are nimble to support the customer and build long-term relationships. We definitely not the style that we're going to push down their throat whether they like it or not. There's ongoing effort that continues to drive the relationship and continues to help us to grow to the next level. I would say that's ongoing. Lead time definitely slowly coming down. That's also the reason that the backlog, usually customer-based on the lead time to place the backlog, so we're also working with the customers to make sure we understand their true long-term demands and make adjustments towards that. That has been an ongoing effort even when the market is different. We talk about we didn't really increase the price just blending, but in return, working on the demand creation, expanding the business, and that will continue to be the strategy and philosophy of Diodes overall.

Operator

(Operator Instructions) Our next question will come from David Williams with Benchmark.

David Neil Williams - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

I guess on the first, just wanted to touch on the automotive segment. And earlier I think you said that the demand there remains relatively strong. But just curious if you're seeing any posturing changes in the Tier 1s or the ODMs, particularly in the level of inventory they're willing to carry? And just in the general demand, are you seeing anything change there?

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes. I think in general, we're still seeing really strong demand from Automotive, especially on the design momentum as well as some of the ramping of the new designs. I talked about it even for the second quarter, Automotive is actually a record percentage, 19%, increased from 18% from the previous quarter. And then you know, we started tracking Automotive since 2013. To 2022, we have a compounded annual growth rate of 30%. Q2 represented 22% year-over-year growth. Yes, it's maybe a little bit less than 30%, but it still shows a really strong momentum. We do see some customers, automotive customers, adjusting some of the inventory. I also openly talked about it before. That has been an ongoing effort because not everything is equal, every car kind of varies a little. The customers do adjust it. It's not like they're waiting and not doing any action. But putting that aside, I think releasing 68 new products in second quarter just focused on automotive, with 110 new products in Q3, that actually shows the momentum as well as commitment from Diodes. We believe this will continue to help us to outgrow the market and continue to gain the market share. That will continue to be the number one focus for Diodes for the years to come.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Well, one more point is automotive business is a more stable type of business. From the new product design-in to the ramp, it takes 2 to 3 years from the time we announce the new product to their ramp, it takes 2 to 3 years. And therefore, we know how much new product we introduced in the past and when they're going to be ramped. And those are much more long-term, stable type of business than consumer. Even computer or communication, it takes much shorter time. Therefore, we believe since our effort in the past, our CAGR will continue that kind of momentum. When we're tracking, like Emily talking about since 2013, we are above 30% CAGR. We believe that kind of trend will continue. It won't be affected too much by the real business because, obviously, our customer builds the more car, won't be that much variance year-over-year or quarter-over-quarter.

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes, I think the other key focus is the content expansion. We're not only counting on the number of cars per year shipped to the consumer, but really, continue to expand in different applications. Like the connected driving, the comfort, safety, and lighting as well as connected cars. There's different areas we focus, and this is all very high growth area with the content expansion.

David Neil Williams - *The Benchmark Company, LLC, Research Division - Senior Equity Analyst*

Excellent color there. I certainly appreciate it. And then secondly, not to be on the gross margin too much, but just kind of curious, and Dr. Lu, you've been very upbeat on the margin progression and the sustainability there. The resiliency is certainly showing up this quarter in the third quarter guidance, down 180 basis points, given the magnitude of the revenue decline. But how should we think about the margin given the dynamics of the correction and just kind of thinking about some of these other segments maybe coming back? And as those recover, should we think about maybe a little more pressure on the gross margin side? Or is 40% kind of maybe a trough here that we should think about longer term?

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Well, maybe let me address the question first and Dr. Lu can add some color. With the product mix initiative, with the new product introduction, with the total solution sales, we are confident that we continue to drive our margin model up ahead of the 2025 model that we shared with you guys, which is 40%. Short term, we talked about the service agreements. But in the longer term, we are confident that our strategy and our direction is the right direction. We continue to improve. The other key point is, if you go back like back to 2021, I believe second quarter, similar revenue range, I think our margin was really in the 36% range, 36% range. From 36% to the guidance 40%, I know it sounds like we actually have a 1.8% retraction, which is short term, but that's still significant improvement over the longer term. We understand the concern, but we believe that we'll continue to drive the improvement over time.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Yes. If you want to talk about gross margin, I would say this. The price pressure is offset by our new products and product mix and total solution. Second is, what we -- when we do this, when we get to foundry or assembly, foundry especially, we negotiate with our foundry supplier to go down the price. We go through both directions. One is the material. Down. Second is new product, product mix. Third is market segment. We focus more on automotive industrial and reduce the 3C, which is low. From all these 3 directions, that's why our long term, our gross margin continue to improve. And like Emily just said, from 30-something percent, we continue to increase to this second quarter 41.8%. Now the drop down from 41.8% to 40% in this quarter is due to our service agreement. But how do we solve that is by ramping our own product into the capacity left over by our service agreement. You can see all the directions for us. We believe from a long-term point of view, we're able to, again, continue to improve that margin. And if you remember when I made out 2025 plan, $1 billion gross profit, we are setting the model of 40%, and we actually already exceeded that. And even with this quarter's service agreement, we're still able to maintain this above or at our business model. And we will continue to improve. That's the direction of what we are working on to work our business model and we know we're going to exceed our business model of 40% and continue our improvement.

Operator

And our next question will be a follow-up from Tristan Gerra with Baird.

Tristan Gerra - *Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst*

Just a follow-up on what you just mentioned. As you ramp and qualify new product to switch away from those service agreements, that implies that either you have a recovery in demand or/and that you're gaining share. And I know there's been share gain just on the basis of some of your peers deemphasizing some products and doing product pruning, but that trend presumably will slow down next year or even later this year as we see more balanced supply/demand. What's the level of confidence that you can actually find demand for those products that you're now qualifying at those fabs to replace those service agreements? And embedded in that question, how should we look at the gross margin differential between those service agreements versus what you plan on replacing with internal production?

Gary Yu - *Diodes Incorporated - COO*

Okay, this is Gary. Let me speak for that first and if Dr. Lu or Emily have any color, they can always plug in. First of all, and the project that we've been working on for years were so-called a second source project. Which means we are working with the fab or the facility we acquired from our peer, and we identified the process externally, and we want to internally transfer those kinds of external wafer fab loading into our internally. Which been said, the demand is very solid. We already have a customer base on those kinds of products we're already running for years. I would say the confidence level of the demand loading for the second source product internally is very high. As for the GP percent point of view, and I'm not talking about that we are kind of losing GP, but the majority is kind of under low cost hitting us at this moment. As long as we can load up product into the internal wafer fab, the underlying costs will be significantly reduced. And that's the way we can recover GP dollars from those kinds of costs. And I can tell you, just like Dr. Lu mentioned, about probably early next year, we can see those kind of demands start ramping up internally.

Emily Yang - *Diodes Incorporated - SVP of Worldwide Sales & Marketing*

Yes. Of course, that will couple with market improvement, and also, market share gains. We're actually going through all different directions to minimize the impact to continue to improve the gross margin percent.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Well, you know we have a lot of experience on the semiconductor business. One of the strategies will be the capacity fillers. They have a lot of products we can load in it and use it as a buffer to the loading. That's one. Second, like we have said, we have a lot of OEM and foundry business outside, and we can use that to start to develop the process internally. And then open up as a second source like Gary talking about, and then we can move in some of the requirements inside our own manufacturing. There is so many different ways we can, using our capacity, and to reduce the underloading cost and to improve the gross margin. There is so many different ways and we are working toward those directions.

Operator

This concludes our question-and-answer session. I'd like to turn the conference back over to Dr. Keh-Shew Lu for any closing remarks.

Keh-Shew Lu - *Diodes Incorporated - Chairman, CEO & President*

Thank you for your participation on today's call. Operator, you may now disconnect.

Operator

The conference has now concluded. Thank you very much for attending today's presentation. You may now disconnect your lines.
