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DIODES Market Update: Supply, Pricing and Availability

CLIENT BRIEF | MAY 2026

Executive Summary – A Structural Shift in Discrete Components

DIODES is experiencing a severe supply shortage driven by two converging forces.

First, the Nexperia crisis. In the fourth quarter of 2025, Dutch government intervention and subsequent Chinese export controls disrupted approximately 70% of Nexperia's global production capacity, primarily at its Dongguan facility. Global OEM are systematically migrating away from Nexperia to DIODES as a drop-in replacement.

Second, AI server demand expansion. AI data centres consume up to 15 times more power than traditional servers, pulling massive volumes of MOSFET, diodes, and logic IC from the discrete component market.

As a result, DIODES' lead times have extended to 48–52 weeks for critical categories (logic IC, Schottky diodes). Portfolio-wide price increases of 20%–30% took effect in February 2026, with selective additional increases in April 2026.

This brief provide an overview of current supply conditions, customer impact, and selected alternative sourcing references across affected DIODES categories.

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1. Market Drivers

The current tightening across the diodes market is primarily being driven by two overlapping market developments:

- Supply disruptions affecting part of the Nexperia ecosystem

- Accelerating AI server growth, increasing consumption of discrete semiconductor components

As customers increasingly diversify their sourcing strategies away from Nexperia, demand pressure across several diode product categories has continued to rise throughout 2026. At the same time, expanding AI infrastructure deployments are driving stronger consumption across:

- MOSFET
- Schottky diodes
- Logic IC
- Protection devices

The combination of redirected sourcing demand and AI-related component consumption is contributing to tighter allocation conditions across the diodes market.

2. Current DIODES Market Conditions – Lead Times and Pricing (May 2026)

2.1 Lead Time Snapshot

Product Category	Current Lead Time
Logic Integrated Circuits	48 – 52 weeks
Schottky Diodes	48 – 52 weeks
MOSFET	40 – 50 weeks
Small- Signal Transistors	36 – 44 weeks
Zener Diodes	36 – 48 weeks
ESD Protection Devices	40 – 48 weeks

2.2 Pricing Situation & Actions

Current market pricing conditions across the DIODES portfolio continue tightening as suppliers implement broader allocation and pricing adjustment.

Date	Action
February 2026	Portfolio-wide increase of 20% – 30%
April 2026	Selective product line increases, applied to both new orders and existing backlog

DIODES' Q1 2026 revenue reached $405.5 million (+22.1% YoY), with automotive revenue growing over 32% YoY. As supply conditions tighten further, customers relying on reactive procurement strategies may face increasing pricing and sourcing exposure.

3. Customer Impact – Who Is Hit Hardest?

Segment	Current Impact
Automotive	Most severe exposure. Honda, Toyota, Ford, BMW affected. Orders from late 2025 pushed to late 2026.
AI / High-Performance Computing	AI servers drive the shortage but also face allocation constraints; server shipment growth forecast cut from 20% to 13% due to component delays.
Industrial	Lower allocation priority vs. AI orders; production interruptions already reported in automation, energy, medical devices.

4. Alternative Part Numbers – DIODES-Compatible Replacements

The tables below provide direct DIODES alternatives for high-volume Nexperia parts.

Critical Note: DIODES alternatives are themselves under severe shortage. Customers are strongly advised to concurrently qualify onsemi, Vishay, Infineon, STMicroelectronics, and ROHM as secondary sources.

For a complete cross-reference list across all product categories, please contact the Briocean marketing team at marketing@briocean.com.

4.1 ESD Protection Devices

Nexperia Part Number	Diodes Alternative
PESD5V0S1BA	PESD5V0S1BA
PESD1CAN	PESD1CAN
PESD2CAN	PESD2CAN
PUSB3FR4	PUSB3FR4
PRTR5V0U2X	PRTR5V0U2X

4.2 Small-Signal MOSFET

Nexperia Part Number	DIODES Alternative	Onsemi Alternative
2N7002	DMN2990UDJ	BSS123
BSS138	DMN2990UDJ	BSS138
BSS123	BSS123	BSS123
NX7002AK	DMN2990UDJ	BSS123
PMV100ENEA	DMN2990UDJ	—

4.3 Schottky Diodes

Nexperia Part Number	DIODES Alternative	Vishay Alternative
BAT54S	BAT54S	BAT54S
BAT54C	BAT54C	BAT54C
BAT54W	BAT54W	BAT54W
PMEG4010EH	SBR1U40SA	SBR1U40SA
PMEG6020ER	SBR2U60SA	SBR2U60SA

5. Market Advisory – Recommended Customer Considerations

Based on current DIODES market intelligence, customers are advised to evaluate the following five areas to mitigate supply risk and maintain production continuity.

Area	Advisory Consideration
Forecast Visibility	Provide extended forecasts to your supply partners. Allocation decisions increasingly favour customers with clearer visibility. Reactive spot buying now carries significantly higher risk of extended lead times or allocation gaps.
Alternative Qualification	Accelerate qualification of second sources – particularly onsemi, Vishay, Infineon, STMicroelectronics, and ROHM – for discrete categories where DIODES is currently the primary choice. Pin-to-pin alternatives exist for most high-volume Nexperia/Diodes parts.
Vendor Diversification	Reduce single-source dependency across logic IC, Schottky diodes, MOSFET, and ESD protection devices. A dual-source or multi-source AVL is no longer the best practice but a necessity in this market.
Inventory Planning	Reassess safety stock levels for high-risk categories (logic IC, Schottky diodes, MOSFET). Holding buffer inventory – even in small volumes – can prevent line stops when allocation tightens further.

Replacement Readiness	Pre-validate alternative part numbers for your critical BOM lines. Engineering validation cycles take time; completing this work before a shortage deepens will give you faster access to alternative supply when needed.

Market Note: The DIODES shortage is structural, not temporary. Customers who act on these considerations now are more likely to secure stable supply through 2026 and into 2027.

6. Outlook – Not a Short-term Spike

The DIODES shortage is expected to persist through at least late 2026:

- Nexperia crisis unresolved (as of May 2026).
- AI server demand continuing to grow at >22% CAGR through 2026 – 2027.
- 8-inch wafer capacity expansion requires 18 – 24 months.

No single supplier can solve the current shortage. Proactive multi- sourcing, early qualification of alternatives, engagement of independent distributors, and safety stock are the only resilient strategies to maintain production continuity.

Independent distributors with global sourcing networks can locate cross- regional excess inventory and provide authenticated components when authorised channels cannot fulfil orders.

For urgent requirements, spot market assistance, or the complete alternative part number cross-reference list (all product categories), please contact Briocean via email at marketing@briocean.com or visit www.briocean.com

Disclaimer: The information in this report is for general informational purposes only. Lead times and pricing are subject to change without notice. Customers should verify all specifications with official datasheets before procurement.