



Market Insights Q3 2023



General Market Insight	2
Analog	16
Batteries	18
Connectivity	20
Discrete	23
Electromechanical	27
High-End	30
Interconnect	31
Lighting Solutions and Opto	33
Memory	35
Passives	37
Disclaimer	40



General Market Insight

Semiconductor Industry Market Growth



Global

- Global semiconductor industry sales fell by 11.8% year-over-year to \$43.2 billion, according to The Semiconductor Industry Association (SIA). However, In July, there was a 2.3% increase compared to June 2023, showing steady month-to-month growth. SIA President and CEO John Neuffer expressed optimism, noting that the year-to-year decrease in July was the smallest gap of the year so far. Region-wise sales varied, with the Americas and Europe seeing gains, while China and Asia Pacific faced declines. Notable semiconductor ETFs and companies in the industry include VanEck Semiconductor ETF, Intel, Micron Technology, and Qualcomm.
- The global semiconductor market is experiencing some growth, driven by advances in memory devices integrated into end-user devices, high prices of NAND flash chips and DRAM, and the increasing use of smartphones and smart gadgets in telecommunications and industrial sectors. The Asia Pacific region dominates the market due to growing demand for consumer electronics, industrial modernization, and urbanization. The market is expected to reach \$1,299.6 billion by 2032, with a CAGR of 8.0%, according to DataHorizon Research.
- Canals' recent data reveals that the global PC market showed a positive trend in Q3 2023. Although PC shipments were down 7% YoY at 65.6 million units, they saw an 8% increase compared to Q2 2023, marking the industry's smallest annual decline in over a year. Notebook shipments decreased by 6% to 52.1 million units, while desktop shipments were down 8% at 13.5 million units. This suggests a recovering market with improving inventory levels and demand.
- Global Semiconductor foundries offered 10-15% price discounts or other favourable terms for those who are willing to increase their order volumes. Most of the Manufacturing companies explored ways on how to cope up with the current economy in Semiconductor market. Companies like UMC and Samsung offered 10-15% price discounts or other favourable terms for those who are willing to increase their order volumes.
- The global Printed Electronics Market size was USD 8.66 Billion in 2021 and is expected to register a revenue CAGR of 22.3% during the forecast period (2022-2030), according to latest analysis by Emergen Research. Increasing applications of printed electronics in medical devices is a major factor driving market revenue growth. Printed electronics have aided in manufacturing of high-performance, cost-effective, and flexible medical devices such as smart sensors, displays, smart labels, smart Personal Protective Equipment (PPE), and others.
- The semiconductor foundry market is projected to experience substantial growth, reaching \$231.5 billion by 2032, with a CAGR of 8.1% from 2023 driven by increased demand for cutting-edge semiconductor manufacturing services and emerging technologies like AI and 5G. Pioneering advancements in node size, such as 7/5nm, are enhancing chip performance and enabling a wide range of applications, particularly in consumer electronics. The market is segmented by node size, application, and region, with North America leading in revenue contribution. Key players in the industry, including Globalfoundries, Intel, and TSMC, are expanding and innovating to meet the growing demand for semiconductor foundry services.



General Market Insight

Regional



- The government of Singapore continues to promote ways to boost the semiconductor sector to secure more talent amidst global chip shortage and semiconductor market challenges. The year-on-year attractiveness score of Semiconductor manufacturing sector in Singapore grew from 39.2% in 2022 to 49.3%. The local survey with 2,573 respondents was conducted by Randstad Singapore, a recruitment agency in SG. The government of Singapore continues to promote ways to boost the semiconductor sector to secure more talent amidst global chip shortage and semiconductor market challenges.
- Taiwanese companies continue to hold largest wafer manufacturing capacity, followed by South Korea. Four Taiwan companies – TSMC, UMC, Vanguard, and Powership – collectively held a global foundry market share of 69% in the first quarter of 2023. Taiwan companies lead by TSMC, account for most of the global capacity, especially for leading-edge technology at the smallest process nodes and on 300-mm wafers. At the <10 process node, Taiwan holds the largest manufacturing capacity at 63% and South Korea at 37%. TSMC and South Korea's Samsung are the only companies globally that are mass producing 5nm or less. Taiwan holds a concentration of both capacity and know-how. In 2022, the country was the second-largest destination for semiconductor investment further boosting its leading position in manufacturing.
- India's Semiconductor Industry Set to Create 1.2 Million Jobs as it Grows. India is aiming to become a semiconductor manufacturing hub, and this endeavour is expected to generate demand for approximately 1.2 million jobs throughout the sector, according to Jaya Jagadish, Country Head of AMD India and Chairperson of the Semicon Talent Building Committee (TBC). The talent requirements span various roles, including engineers, operators, technicians, and more. In particular, the chip design sector alone necessitates 275,000 professionals, ranging from undergraduates to postdoctoral. India's wealth of engineering graduates provides a unique advantage, although efforts are underway to bridge skill gaps and enhance job readiness through initiatives such as curriculum changes in engineering colleges, driven by recommendations from the TBC.
- Vietnam Eyes Semiconductor Industry Growth, Aims to Join Global Supply Chain. Vietnam is striving to become a significant player in the global semiconductor industry, with the U.S. supporting its growth efforts. The U.S.-Vietnam Comprehensive Strategic Partnership highlights Vietnam's potential in the semiconductor sector, with a focus on developing human resources and receiving initial funding. Despite significant growth in chip imports, experts note that Vietnam's role currently centres on assembly, testing, and packaging, representing a small segment of the semiconductor supply chain.
- Semiconductor industry leaders collaborate with the UK government to shape the future of the sector, aiming to achieve growth, supply chain resilience, and national security through the Semiconductor Advisory Panel's inaugural meeting at Imperial College London, in alignment with the National Semiconductor Strategy. The panel includes experts from companies like Arm, IQE, and Pragmatic and will provide insights on supporting semiconductor companies, fostering skills, improving access to funding, and enhancing international cooperation, with a vision for a thriving UK semiconductor ecosystem.
- The European chip market showed growth in May, indicating Europe's role in leading the global market out of recession, with the continent being the only one to exhibit annual growth among five geographic regions, according to the Semiconductor Industry Association (SIA) report, which also suggests signs of a potential market rebound in the second half of the year despite continuing market sluggishness compared to 2022.



General Market Insight

Semiconductor Industry

- India and Thailand Compete for Chip Manufacturing Investment for Spot on Asia's Chipmaking Map. India and Thailand are contending to attract semiconductor manufacturers seeking relocation due to the global chip shortage. India's "Make in India" initiative offers incentives like financial subsidies and tax breaks, while Thailand leverages its electronics industry presence, skilled workforce, and infrastructure. Both nations vie to establish themselves in the competitive Asian chipmaking landscape, aiming to diversify supply chains and become key players in semiconductor manufacturing. This competition underscores the growing significance of the chip industry in the region and the race to secure a foothold on Asia's chipmaking map.
- US Extends Chip Equipment Import Waiver for China-Based Firms. The United States government has granted an extension of a waiver to enable mainland China-based Taiwanese and South Korean companies to import chip-making equipment for another year, starting in October. This decision, reported by Nikkei, aligns with US Commerce Secretary Gina Raimondo's forthcoming trip to China and the recent removal of 27 Chinese firms from the US Commerce Department's unverified list, receiving positive feedback from Beijing.- In July, Chinese officials successfully negotiated with US Treasury Secretary Janet Yellen to reduce investment restrictions on China's high-tech sectors. During Raimondo's visit, Beijing intends to request the cancellation of additional tariffs imposed on Chinese steel and aluminium products, as part of efforts to promote mutually beneficial Sino-US economic relations.
- Trade tensions between the U.S. and China have centred on critical areas like semiconductor chips, crucial for smartphones, electric vehicles, and AI. Recent developments in the semiconductor industry, including China's ban on Micron Technology products and Nvidia's market dominance, impact Singapore's semiconductor stocks. While Asia Pacific and the Americas face a challenging 2023 due to inflation and consumer spending declines, a strong rebound is expected in 2024, especially in the memory segment. Local semiconductor firms in Singapore, such as UMS Holdings, Venture Corporation, AEM Holdings, and Grand Venture Technology, have varying degrees of exposure to the semiconductor industry, with implications related to geographic and industry factors. While a higher exposure to semiconductors can offer growth opportunities, it also comes with increased geopolitical risks associated with the chip war.
- China Develops Breakthrough Technique for Gallium-Based Semiconductors. Researchers at Zhejiang University in China have unveiled a novel method for the more efficient and cost-effective production of gallium oxide, a promising alternative to silicon in semiconductor manufacturing, as reported by the South China Morning Post. This discovery gains significance in light of the ban on gallium exports to China. While silicon has long dominated the semiconductor industry, the emergence of compounds like gallium oxide signals a new direction in semiconductor technology.
- Synopsys has introduced a range of automotive-grade interface and foundation IP designed for TSMC's 5nm N5A process technology, enabling chip designers to develop reliable and high-performance software-defined vehicle systems, meeting automotive standards and ISO 26262 for safety-critical SoCs and featuring logic libraries, embedded memories, and more.
- China Set to Launch \$40 Billion State Fund to Boost Chip Industry. China is gearing up to introduce a new state-backed investment fund, with the goal of raising approximately \$40 billion to support its semiconductor sector. This initiative, led by the China Integrated Circuit Industry Investment Fund, surpasses previous funds from 2014 and 2019, emphasizing the country's determination to compete with the U.S. and other global rivals in the semiconductor industry. A significant portion of the fund will be allocated to chip manufacturing equipment, aligning with President Xi Jinping's vision of achieving semiconductor self-sufficiency. The move comes in response to export control measures imposed by the U.S. and its allies, restricting China's access to advanced chipmaking technology.



General Market Insight

Passive Commodities

Ceramic Capacitors

- **Supply** - Factory utilization across most of the supply base is at 60%, with potential growth challenges if demand suddenly surges. Japanese automakers are at 80-90% utilization, while US ones are close to 100%, but Taiwanese suppliers are just above 50%. Specialty automotive MLCCs with specific features are in short supply, but general-grade MLCCs are abundant. Backlogs are decreasing, distribution inventory is declining cautiously, and lead times are shortened by 1-2 weeks. Managing supply chain dynamics remains critical to avoid future shortages.
- **Market Dynamics** - Suppliers are expanding production into Asian countries and diversifying product offerings for automotive, industrial, and 5G applications. While the UK and US automotive markets have faced inventory challenges, a recovery is expected by year-end. Mobile phone demand is slow, with a slight uptick expected as new models launch, but not significantly impactful. Major suppliers plan annual capacity growth of around 10%, with automotive MLCC manufacturers emphasizing 15% to 30% growth, while general capacitors grow more modestly at 5%. To ensure consistent supply, aligning technology needs with supplier strategies is crucial.
- **Price** - Intense competition exists among Taiwanese suppliers in the general MLCC market, while in the automotive MLCC segment, Korean and Taiwanese suppliers are challenging Japanese and US counterparts by improving lead times, supply flexibility, and pricing. Prices for high-reliability niche products with palladium remain high and are trending upward. To gain market share due to low factory utilization, manufacturers are offering more competitive pricing. Demand for large case sizes remains stable, resulting in generally steady to slightly higher pricing, but some manufacturers are shifting towards larger case sizes due to lower utilization rates, offering slight cost-reduction opportunities for certain common values.

Tantalum Capacitors

- **Supply** - Tantalum MnO₂ demand has decreased across various case sizes with 60% utilization, while large case sizes for industrial and automotive applications have longer lead times (14-16 weeks), and small case sizes for consumer/ICT have shorter lead times (12 weeks), with suppliers accommodating demand fluctuations, and commodity book-to-bill ratios are favourable (MnO₂ at 0.7, Polymer at 0.6), offering increased demand flexibility.
- **Market Dynamics** - Manufacturers are discontinuing investment in MnO₂ and shifting focus to expanding tantalum polymer production to meet market demand, with companies like AVX, Vishay, and Kemet increasing capacity and adopting new technologies, such as multilayer box-type aluminium polymer and hybrid caps, which are affecting tantalum polymer market share.
- **Price** - Tantalum MnO₂ costs are challenging, leading suppliers to shift focus away from it, while tantalum polymer may see some cost reductions due to capacity expansions, but legacy products like wet tantalum and military series will continue to increase in price due to limited economic scale.

Magnetics

- **Supply** - Suppliers experience lower capacity utilization (around 70%) due to weakening demand and high finished goods inventory, leading to shorter lead times thanks to increased capacity and raw material availability, while scarcity of specialty automotive parts is gradually decreasing among some suppliers.
- **Market Dynamics** - The merger of Pulse Electronics brands is progressing under sub-brands, and there's a notable capacity expansion trend in Southeast Asian countries due to the US-China trade conflict, while rising costs in southern China are leading to new start-ups and facility expansions in western and central China.
- **Price** - Despite a sluggish market, prices have held steady due to logistics challenges and reduced demand, with suppliers focusing on depleting high inventory at original cost levels. SMD inductor and filter suppliers are making minor adjustments, while larger legacy SMD inductors and filters have stabilized. Raw material costs have eased from recent peaks but remain higher than 2020 levels, and EU-based suppliers maintain stability due to elevated energy costs.



General Market Insight

Circuit Protection

- **Supply** - Lead times are stable for most circuit protection products, but some have longer lead times: fuses (16-24 weeks), SMT fuses (24 weeks), resettable fuses (22 weeks), Varistors (24 weeks), and gas discharge tube (GDT) due to supply issues related to the Russian-Ukraine war. Littelfuse is expanding capacity to meet high demand, while circuit breakers have varying lead times from 8 weeks to a year, with some suppliers like Fuji, Altech, Siemens, and Eaton experiencing longer lead times.
- **Market Dynamics** - Littelfuse acquired Carling Technologies and Hartland Controls, while Bourns acquired Keko-Varicon, expanding their product offerings in switches, circuit breakers, and overvoltage protection components.
- **Price** - Pricing is stable for most product families, except for circuit breakers and gas discharge tubes (GDTs), which are experiencing increases due to elevated raw materials and logistics costs; furthermore, the conflict between Russia and Ukraine is impacting neon gas prices, which could lead to further GDT price increases if the war intensifies.

Resistors

- **Supply** - Automotive-grade parts will likely face capacity constraints, supply allocation, and extended lead times in 2023, particularly for thin film resistors from Vishay, Panasonic, and Susumu. KOA thin film resistors will remain on allocation, but allocation has been removed for thick film resistors, with 15-week lead times. Demand surge in major markets like automotive and industrial has worsened supply constraints. General-grade resistor supply has improved, but inventory pressure may lead to a temporary trend of inventory dumping, which is expected to slow in the second half of 2023 and return to normal by the first half of 2024.
- **Market Dynamics** - Vishay faces increased competition in resistors, while Japanese suppliers de-emphasize standard products, and Taiwanese manufacturers gain automotive approvals due to undersupply. Demand for smaller resistors grows due to consumer demand for compact electronic devices, despite technical challenges.
- **Price** - Automotive-grade parts are experiencing price increases due to capacity constraints, rising raw material costs, and logistics and labour expenses, with Chinese and Japanese substrate makers raising prices significantly. General-grade thick film pricing remains stable, with some suppliers reducing costs for new business, but others are not adjusting prices due to lower output, leading to increased manufacturing costs. Distributors are still inclined to dump inventory, causing downward price trends for general-grade resistors.

Passive Commodities

Analog Power/ Signal Chain

- **Supply** – Lead times remained flat to improved in most of the companies
- **Market Dynamics** – Market growth is supported by increasing demand and adoption of industrial automation, electrification in automotive, and renewable energy.
- **Pricing** – Expected to be flat or slightly reduced due to oversupply, excess inventory,, and weakening demand.

Standard Logic

- **Supply** - Orders are decreasing, prices are stabilizing, and supply is improving, with lead times for standard logic at 6-12 weeks; the semiconductor market is shifting to a healthier supply landscape, driven by softening demand in consumer electronics, and foundry utilization is declining. New capacity is expected to come online in 2023 from TI and Nexperia, while Onsemi plans to transfer its standard logic portfolio and consolidate backend manufacturing sites for most of its logic portfolio.



General Market Insight

Standard Logic

- **Market Dynamics** - Wafer demand in 2023 may stay flat or slightly decline, while capacity is set to grow by around 7%. The automotive segment will play a larger role in semiconductor growth due to increasing electrification and rising semiconductor content per vehicle. Despite declining demand in PC and smartphone sectors, there isn't expected to be an industry-wide oversupply, as demand in automotive, industrial, and medical sectors remains strong. Additionally, new logic suppliers like SG Micro and Wuxi ICORE are entering the market with competitive pricing.
- **Price** - Consumer component orders, demand, and prices are declining, while automotive and industrial materials remain stable. Suppliers are open to price reviews to gain market share amid softening demand, with TI and Nexperia adopting aggressive pricing strategies. Microchip has implemented a price increase, and potential push-outs and cancellations in some end markets should be monitored to avoid problems if demand rebounds.

Discrete

- **Supply** – On the average most suppliers are carrying 3-5 months of inventory.
- **Price** – Overall, price remains largely stable in the whole year for most of the suppliers.

Optoelectronics

- **Supply** – Supply has normalized for most product categories like optocouplers, IR devices, and optical sensors, except for solid-state relays (SSRs) from Japanese manufacturers. Demand comes from automotive, industrial, and renewable energy sectors with lead times returning to 12 weeks for Asian manufacturers and up to 30 weeks for US and Japanese manufacturers. LED suppliers are discontinuing legacy products, and customers are advised to collaborate in qualifying Jabil preferred suppliers to manage supply risks, especially in growth sectors like energy, EV transformation, healthcare, and enterprise infrastructure, while push-out activities continue due to declining lead times, and customers remain cautious with inventory.
- **Market dynamics** - Top-tier optoelectronics suppliers prioritize the automotive and EV markets with new product launches, while Asian-based suppliers diversify to stay competitive, but smaller non-automotive manufacturers may face challenges if the economy doesn't recover as expected.
- **Price** - Prices are stable across all product types in Q3'2023, with most suppliers maintaining existing pricing levels despite material cost increases

Volatile Memory: DRAM

- **Supply** – DDR4: Some constraints; DDR3: Few constraints with some available production options; Legacy (SDRAM, DDR1,2): Stable.
- **Price** – Decrease in pricing.

Volatile Memory: SRAM

- **Supply** – Asynchronous and Synchronous: Stable
- **Price** – Asynchronous and Synchronous: Stable

Non-Volatile Memory: NAND Flash

- **Supply** – Planar NAND and 3D NAND Flash: Some Constraints
- **Price** – Planar NAND and 3D NAND Flash: Some Constraints

Non-Volatile Memory: NAND Flash

- **Supply** – Low-Mid Density NOR and High-Density NOR: Some Constraints
- **Price** – Planar NAND and 3D NAND Flash: Flat / Decrease



General Market Insight

Non-Volatile Memory: EEPROM

- Supply and Pricing for EEPROM are stable.

Solid State Drives

- Supply for this commodity is stable to few constraints while the price is decreasing for the 2nd half of 2023.

Sensors

- Supply is flat while there are moderate increase in pricing.

Interconnect Commodities

Connectors

- **Supply** - Most suppliers operate at 80% capacity utilization, with weak demand in general but strong demand in the automotive and industrial sectors; they aim to reduce inventory levels due to push-outs and cancellations, and key suppliers' book-to-bill ratios remain low at around 0.7-0.9:1, with no sign of supply constraints and improving overall lead times.
- **Market Dynamics** – The supply base is stable, with no supplier exits, as connector suppliers expand capacity in the automotive (EV) and IT datacom markets while investing in new locations like the Philippines, India, Mexico, and Poland as part of the China+1 strategy.
- **Price** - Pricing remains generally flat in the second half of 2023, with stable metal prices except for high gold costs affecting gold-plated parts; overall manufacturing costs are still impacted by inflation, and some price increases are observed for low-margin and legacy products like headers, receptacles, D-Sub, non-high-speed I/O (USD2.0), and labour-intensive RJ45 MagJacks.

Relay

- **Supply** - Supplier factory utilization is at 80%, but EV-related relays are under allocation, with a book-to-bill ratio below 1 overall; certain relay technologies in TE and Panasonic are also under allocation, while demand is expected to grow in EV and renewable energy sectors, but remain soft in home appliances, instrumentation, and capital equipment.
- **Market Dynamics** - The relay market has experienced growth driven by automotive, manufacturing, and telecommunications, particularly in the booming EV sector in China, though uncertainty lingers due to geopolitical concerns. Omron plans to introduce new relay products, including small-size latching relays by the end of 2023, a high-power MOSFET relay in 2025, and a high-power DC relay in 2030.
- **Price** - Pricing will likely remain flat to increase, with volatile raw material costs, including palladium, gold, and plastic resin; cost increases are observed from TE, industrial relay suppliers (Eaton, ABB, Schneider), and niche reed relay suppliers (Coto and SanYu Switch) due to material, logistics, and energy costs in Europe, with TE expected to discontinue certain series, potentially leading to more price increases and customer dissatisfaction. Monitoring the situation throughout 2023 is advised.

Switch

- **Supply** - Lead times are stable with ample capacity as switch manufacturers have been investing in production since early 2022; book-to-bill ratios are below 1 with soft bookings, and factory utilization for most suppliers is around 70% or lower.



General Market Insight

Switch

- **Market Dynamics** - The supply base is stable and poised for steady growth, driven by increased demand from the automotive (EV) and IoT markets, with many switch suppliers having expanded production capacity in 2022. Suppliers like TE, Omron, Apem, E-Switch, KnitterSwitch, and Grayhill primarily focus on OEMs, while local tier 2 suppliers in Asia provide low-cost solutions. The switch market is transitioning toward touch panels and other pressure/touch sensing components, and Diptronics is shifting more production from China to Vietnam to reduce geopolitical risks, aiming to make the ratio China (40%) vs. Vietnam (60%).
- **Price** - Pricing is generally stable except for industrial types supported by Eaton, ABB, Schneider, etc., while European-based manufacturers like C&K may see cost increases due to raw materials, logistics, and energy costs, with ongoing monitoring for the second half of 2023.

Battery

- **Supply** - Lead times are stable, averaging 6 to 12 weeks, while battery vendors report utilization rates of 50~70%, with expectations for increased capacity utilization in the second half of 2023.
- **Market Dynamics** - NEV sales and output in China increased by 110% YoY in April; EVE battery is building new factories in Hungary and Malaysia, and Panasonic plans to construct at least two new 4680 battery production facilities in North America by 2030.
- **Price** - Lithium carbonate prices reached approximately CNY 300,000 per ton in late May, driven by a demand rebound for electric vehicle batteries and supply constraints in Australia, and a further price rebound is expected later in the year; battery vendors will absorb raw lithium material price increases to secure more business allocation amid overall demand and economic concerns.

High-end Semiconductors

MCU/MCP/Chipset/ASIC/Prog Logic

- Lead times improved significantly while pricing is expected to remain stable after many price adjustments in the previous year up to the 2nd quarter of 2023.



Analog Devices

- Madison Investors Fund outperformed the S&P 500 in Q2 2023 with an 8.5% return and highlighted Analog Devices, Inc. (NASDAQ: ADI) as a notable stock pick.
- Analog Devices, Inc. (Nasdaq: ADI) announces a €630 million investment in Limerick, Ireland, reshaping the European semiconductor industry and emphasizing innovation and collaboration.

Bourns

- The company released new models of Transformers under HCTSM110103HAL and SM91542AL series last July 2023.
- An array of six SiC SBD models ranging from 600V to 1200V with low forward voltage, high thermal conductivity, and no reverse recovery current are now available, ideal for various applications such as power supplies, inverters, and motor drives.

Broadcom

- Google reaffirms its partnership with Broadcom amid reports of potential in-house AI chip design, signaling no immediate change in their collaboration.
- Broadcom Inc (AVGO) is the top-rated company in the Semiconductors industry with an overall score of 79, having gained 79.35% year-to-date, outperforming 79% of the overall market, while the industry averages a score higher than 47%.
- Broadcom is investing in Spain's semiconductor industry, contributing to a €12.25 billion program funded by the European Union to enhance chip production capacity and address the global chip shortage, positioning Spain for long-term growth and technological independence while fostering Europe's technological competitiveness.
- TSMC is collaborating with Broadcom and Nvidia to develop silicon photonics and co-packaged optics for high-speed computing chips, responding to increased demand for data transmission driven by AI applications, with production set for the second half of the following year.

Diodes Inc.

- Diodes Inc (DIOD) ranks high in the Semiconductors industry with a rating of 74, surpassing 74% of industry stocks, and has an overall rating of 60, placing it ahead of 60% of all stocks, with Semiconductors ranked 45th out of 148 industries.
- Diodes Inc has launched automotive-compliant 1200V silicon carbide MOSFETs, DMWSH120H90SM4Q and DMWSH120H28SM4Q, catering to the growing demand for SiC solutions in electric and hybrid-electric vehicle (EV/HEV) subsystems, with enhanced efficiency and power density.

Infineon

- Infineon and Infypower partnered to expand presence in new energy vehicle charger market.
- The company heads the European research project for sustainability of Electronics Industry.
- Infineon's new Xensiv SP49 was launched Sept 13 designed for intelligent tyre function for pressure monitoring sensor.
- Infineon Technologies has acquired 3db Access AG, a Zurich-based startup specializing in secured low-power ultra-wideband (UWB) technology, enhancing Infineon's portfolio for secured smart access, precise localization, and sensing in IoT, automotive, and other applications.



Intel

- The company will unleash a chip called “Arrow lake” next year to cater the newest laptop chips that handles generative AI.
- Intel has been hit with hug USD 400M fine from European Union in a longstanding antitrust case.
- Intel plans to make its programmable solutions group (PSG) a separate business unit and eventually conduct an IPO, with PSG operating independently from January 1, 2024; Sandra Rivera will lead PSG as CEO, emphasizing Intel's strategy to unlock more value for stakeholders and focus on core business.

Kyocera

- Kyocera plans to build a new Centre of Development at Shiga Yasu Campus in Japan. New centre will consolidate production engineering and development functions.
- The company has released the new 9296-11X Series STRIPT™ vertical poke-home through-board contacts for 12–18AWG wire.
- Kyocera DuoForce 3 is built with Snapdragon 7 Gen 1 SoC and an OLED screen.

Lattice

- Lattice Semiconductor has been recognized as a 2023 Top Workplace in Oregon and Southwest Washington, reflecting its commitment to fostering a thriving employee culture.
- Lattice Semiconductor (LSCC) has experienced significant institutional demand, reflected in rising stock prices and increased trading volumes over the past year.

Micron

- Micron Breaks Ground on \$2.75 Billion Semiconductor Plant in Gujarat, India.
- The company launched memory expansion module portfolio to accelerate CXL 2.0 Adoption.
- Micron claims that the company delivers the fastest, high-capacity HBM to advance generative AI innovation.

Molex

- The company announced that the luxury automaker, BMW, chose its Volfinity Cell Contacting System (CCS) for its next-generation Evs class.

Murata

- Murata Manufacturing Vietnam has finished building a new production facility in Da Nang, Vietnam, aimed at meeting the increasing demand for inductor coils in the automotive and electronic device sectors.
- Murata Manufacturing has completed a new plant in Thailand, investing tens of billions of yen, with plans to produce multilayer ceramic capacitors (MLCCs) to meet future demand, particularly in smartphones and electric vehicles, as it anticipates long-term growth in capacitors despite a recent earnings slump due to a shrinking phone market.
- Murata will showcase its latest electronic innovations at CEATEC 2023, including products for environmental monitoring, renewable energy, health and well-being, and technologies for digital advancements and smart cities.



Nexperia

- Nexperia plans to cut 100 jobs at its Newport wafer fab due to little activity surrounding its compelled sale, which resulted from national security concerns, while delays in the judicial review process and the potential sale's uncertainty contribute to the decision.
- Nexperia has received an impressive ESG Risk Rating of 18.7 from Morningstar Sustainalytics, placing it among the top 11% of companies in the semiconductor design and manufacturing subindustry and highlighting its commitment to sustainability and responsible business practices.
- Nexperia to see annual revenue top US\$10 billion by 2030

NXP

- NXP's first 5-nanometer automotive-grade chip, manufactured by Taiwan Semiconductor Manufacturing Co (TSMC), within 1.5 years, responding to the surging demand for improved computing and energy efficiency in connected vehicles.
- The company is exploring potential incentives from the city of Austin as it contemplates additional investment in the area.
- NXP in Germany Embraces IPCEI ME/CT Funding to Expand Research and Development

Onsemi

- On Semiconductor announced that its Hyperlux Image Sensor Family drivers.
- ON Semiconductor Corp has predicted third-quarter revenue that surpasses market expectations due to strong demand in the automotive sector, offsetting the semiconductor industry's broader weaknesses.

Panasonic

- Panasonic commercializes the AI-equipped Servo system, the first in the industry, reducing human operation time by 90%.
- The company develops image recognition AI that can estimate image uncertainty.

Rapidus

- Rapidus, which was established in August 2022 with the support of eight major Japanese companies: Denso, Kioxia, MUFG Bank, NEC, NTT, SoftBank, Sony, and Toyota held a groundbreaking ceremony for 2nm chip fab at Chitose City, Hokkaido.

Renesas

- Renesas extends AIoT leadership by creating interfaces between its reality AI Tools and its e2 studio integrated development environment.
- The company asked Cadence for ChipGPT-Like AI-powered Semiconductor Design.
- Renesas offers Sequans Communications S.A to purchase all outstanding ordinary shares.
- The company and Inventec have agreed to partner in designing automotive-grade gateway solutions for the rapidly-growing EV market.

Samsung

- Samsung is set to supply HBM3 to Nvidia in October.
- The company has unveiled its groundbreaking Quantum Dot OLED (QD-OLED) TV technology, positioned to revolutionize the display industry.
- Samsung was tagged as the "Stable giant" amidst semiconductor market challenges.



Siemens

- Siemens and Monta, the EV charging platform provider have partnered to facilitate expansion of charging infrastructure across Europe.
- The company will help the Lishen Battery's technology centre by allowing them to use its Opcenter software from the Xcelerator portfolio.
- Siemens and DMG MORI, a Japanese manufacturer of machine tools introduce industry-defining digital twin for machine tool processing.

ST Microelectronics

- ST Microelectronics Collaborates with Sindcon to Enhance Smart Metering in Jakarta with LoRaWAN Technology.
- The company released STM32H5 sw for Microsoft Azure IoT Hub.
- ST have partnered with Würth Elektronik to jointly develop a power tool. The Design, which efficiently drives a low-voltage brushless DC motor is ideal for handheld power tool applications

Toshiba

- Toshiba to go private as \$13.5 billion buyout offer from JIP succeeds.
- The company expanded its line-up of TCTH0xxxE series that detects temperature rises in electronic equipment.

Texas Instruments

- Texas Instruments' third and largest 300-mm wafer fab in Richardson achieves high-level LEED certification under version 4.
- The company's 2nd quarter financial results shows confidence in 300mm wafer strategic focus.
- TI's price reduction is still felt by the suppliers of analog chips in China. Prompting them to cut into diverse applications to avoid price competition.

Vishay

- Vishay expanded its discrete semiconductor offerings by introducing three new infrared (IR) sensor modules, TSMP95000, TSMP96000, and TSMP98000.
- New Vishay Semiconductor manufacturing plant opens in Durango in August 2023 to cater Automotive Industry.
- The company has unveiled new 6 A, 20 A and 25 A microBRICK synchronous buck regulator modules designed to deliver increased power density and efficiency for point of load (POL) converters.
- Vishay introduced a new reflective optical sensor for consumer, mobility, industrial, and computer applications. The tiny device features sensing distance to 15mm and low power consumption.



ANALOG		PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
Standard	Amplifiers & Comparators	→	→	22-26
	Analog Interface	→	→	28+
	Power Management	→	→	28+
	Converters	→	→	28+
Standard Analog Total		→	→	28+
Advanced		↑	→	28+

MOS MICROLOGIC		PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
MPU		↑	↓	22-28
MCU	8 Bit & Lower	↑	↓	22-28
	16 Bit	↑	↓	22-28
	32 Bit & Higher	↑	↓	22-28
MCU Total		→	↓	22-28
Automotive MCU		→	→	28+
DSP		→	↓	22-28

PROGRAMMABLE LOGIC	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
	↑	→	28

STANDARD LOGIC	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
Timing Products	↑	↓	8-14+
Interface	↑	↓	8-14+
Connectivity	↑	↓	8-14+
Standard Logic	→	↓	50+

POWER	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
FET	→	→	54
IGBT	→	→	54
Rectifier	→	→	22+
Other Power	→	→	54



MEMORY	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
Flash	NOR →	↓	18+
	NAND ↓	→	12-18
eMMC	↓	↓	12-18
EEPROM	→	→	28+
DRAM	↓	↓	18+
SRAM	→	→	12-18
Solid State Drives	↓	→	12-18

SENSORS	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
	→	→	28+

OPTO	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
LEDs (Low Power)	→	→	12-18
LEDs (Mid Power)	→	→	12-18
LEDs (High Power)	→	→	18+
Couplers	→	→	18+
Fibre-Optic	→	→	18+
Infrared	→	→	18+
Other Opto	→	→	18+

DISCRETE	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
Small Signal	→	→	18+
RF	→	→	54



↔	Stable
↗	Increasing
↘	Decreasing
SMA	Selective Market Adjustment
EOL	End-of-Life

click on a category below:

Analog	High-End
Battery	Interconnect
Connectivity	Opto / Lighting
Discrete	Memory
Electromechanical	Passives

Analog

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
ams	Sensors	18-26	↔	SMA	
Bosch Sensortec	Sensors	8-14	↔	↔	
Diodes Incorporated	Multi- Source Analog/Power	32-42	↔	↔	
	Switching Regulators	28-48	↔	↔	
FTDI Chip	Interface	28-42	↘	↔	
Infineon	Sensors	20-54	↔	↗	
	Switching Regulators	42-54	↔	↔	
	Analog and Power for Automotive (CAN/LIN/Smart FET)	48-54	↔	↔	
Maxlinear	Interface	21-38	↘	↔	
Melexis	Sensors	14-38	↘	↔	
	Signal Chain (Amplifiers and Data Converters)	32-42	↔	↔	
Microchip	Timing	32-42	↔	↔	
	Switching Regulators	42-52	↔	↗	
Monolithic Power Systems	Switching Regulators	48-52	↘	↔	
NXP	Sensors	18-54	↔	↔	
	Interface	28-32	↘	↔	
	Analog and Power for Automotive (CAN/LIN/Smart FET)	48-54	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
Onsemi	Sensors	20-54	↔	SMA	
	Signal Chain (Amplifiers and Data Converters)	28-44	↔	↔	
	Timing	38-44	↔	↔	
	Multi- Source Analog/Power	38-44	↔	↔	
	Switching Regulators	38-52	↔	↗	
Panasonic	Sensors	18-28	↗	↔	
Pericom Saronix-eCera	Timing	22-28	↔	↔	
Power Integrations	Switching Regulators	18-20	↔	↔	
Renesas	Signal Chain (Amplifiers and Data Converters)	38-42	↔	↔	
	Timing	52	↔	↔	
	Interface	38-42	↔	↔	
	Switching Regulators	38-42	↙	↗	
ROHM	Sensors	26-54	↗	↗	
	Switching Regulators	52	↔	↔	
ST Microelectronics	Sensors	14-20	↙	↔	
	Signal Chain (Amplifiers and Data Converters)	22-38	↙	↔	
	Multi- Source Analog/Power	42-52	↔	↔	
	Switching Regulators	42-52	↔	↔	
	Analog and Power for Automotive (CAN/LIN/Smart FET)	42-54	↔	↔	
TE Sensor Solutions	Sensors	18-54	↗	↗	
Vishay	Sensors	26-54	↗	↔	



Batteries

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
Alium Batteries	Lithium Ion	22--24	↔	↔	
	Alkaline	12-14	↔	↔	
Energizer	Lithium Metal	16-18	↔	↔	
	Silver Oxide	10-12	↔	↗	
GP Batteries	Alkaline	16-18	↔	↔	
	Lithium Metal	20-22	↔	↔	
	Lithium Ion	18-20	↔	↔	
	Nickle Metal Hydride	12-14	↔	↔	
	Lead Acid	10-12	↔	↔	
	Carbon Zinc	10-12	↔	↔	
Panasonic	Alkaline	12-14	↔	↔	
	Lithium Metal	18-20	↔	↔	
	Nickle Metal Hydride	10-12	↔	↔	
	Carbon Zinc	10-12	↔	↔	
Rayovac	Alkaline	10-12	↔	↔	
	Lithium Metal	12-14	↔	↔	
	Nickle Metal Hydride	10-12	↔	↗	
	Carbon Zinc	10-12	↔	↗	
	Lithium Metal	18-20	↔	↔	
Renata Batteries	Lithium Ion	22-24	↔	↔	
	Nickle Metal Hydride	12-14	↔	↗	
	Silver Oxide	10-12	↔	↔	
	Carbon Zinc	10-12	↔	↗	



Batteries

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
Tadiran Batteries	Lithium Metal	14-16	↔	↔	
	Alkaline	12-14	↔	↔	
VARTA	Lithium Metal	20-26	↔	↗	
	Lithium Ion	34-40	↔	↔	
	Nickle Metal Hydride	12-14	↔	↗	



Connectivity

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
AMS	RFID	30-32	↗	↔	
	802.15.4/Zigbee Modules	28-34	↗	↔	
CEL	Small Signal, Schottky Diodes, PIN Diodes, Bipolar Transistors, FETs/PHEMTs, Amplifiers, Mixers & Modulators, VCOs, SS Bipolar Transistors, Wideband Transistors	32	↗	↗	
	Bluetooth Modules	28-38	↙	↔	
Infineon + Cypress	Small Signal, Schottky Diodes, PIN Diodes, Bipolar Transistors, FETs/PHEMTs, Amplifiers, Mixers and Modulators, VCOs, SS Bipolar Transistors, Wideband Transistors	28- 54	↗	↗	Cypress is now Infineon
Fibocom	Cellular Modules	18-22	↔	↔	
Kyocera AVX	Antennas	10-12	↔	↔	
	Wi-Fi Modules	28-54	↔	↔	
Laird Connectivity	Antennas	18-22	↗	↔	
	LoRa	~32-54	↗	↔	
	Cellular Modules	8-12	↔	↔	
Linx Technologies	Antennas	12-14	↗	↔	
	Transceivers/Receivers	12-14	↗	↔	
Melexis	Transceivers/Receivers	18	↔	↔	
	RFID	16-18	↔	↔	
	Wi-Fi Modules	18 -28	↙	↔	
Microchip	Bluetooth Modules	14-28	↔	↔	
	Transceivers/Receivers	20-22	↔	↗	
	LoRa	34	↗	↔	
MultiTech	Cellular Modules	18-22	↔	↔	
	LoRa	~22	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Murata	Wi-Fi Modules	28-52	↔	↔	
	Bluetooth Modules	28-52	↔	↔	
	Small Signal, Schottky Diodes, PIN Diodes, Bipolar Transistors, FETs/PHEMTs, Amplifiers, Mixers and Modulators, VCOs, SS Bipolar Transistors, Wideband Transistors	14-22	↔	↔	
	LoRa	54	↔	↔	
Nearson	Antennas	18	↔	↔	
NXP	Multi-Protocol/Chip Solutions	54-58	↙	↗	
	Transceivers/Receivers	26	↔	↗	
	RFID	22-42	↔	↗	Parts on allocation
	High Power IC's	54	↗	↗	
Onsemi	Small Signal, Schottky Diodes, PIN Diodes, Bipolar Transistors, FETs/PHEMTs, Amplifiers, Mixers and Modulators, VCOs, SS Bipolar Transistors, Wideband Transistors	28-54	↗	↗	
	Bluetooth Modules	18-32	↔	↔	
Panasonic	Bluetooth Modules	42-44	↔	↔	
	RFID	16-18	↔	↔	
Pulse Electronics	Antennas	10-12	↔	↔	
Semtech	Transceivers/Receivers	38	↗	↗	
	LoRa	18-54	↔	↔	
Sierra Wireless	Multi-Protocol/Chip Solutions	42-48	↙	↔	
	Cellular Modules	32-42	↙	↔	Intel based radios are at 52 weeks
Silex Technology	Wi-Fi Modules	30-54	↔	↔	
ST Microelectronics	Bluetooth Modules	14-18	↙	↔	
	Transceivers/Receivers	54	↗	↗	Capacity constraints on Spirit Radio
	RFID	32-42	↔	↔	ST25R39xx on allocation
	GPS	42-54	↔	↔	
	High Power IC's	54	↔	↔	
	LoRa	18	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Synapse Wireless	802.15.4/Zigbee Modules	20-22	↗	↔	
Taoglas	Antennas	22-24	↗	↔	
TDK	Small Signal, Schottky Diodes, PIN Diodes, Bipolar Transistors, FETs/PHEMTs, Amplifiers, Mixers and Modulators, VCOs, SS Bipolar Transistors, Wideband Transistors	14-22	↔	↔	
Thales	Cellular Modules	20-22	↗	↔	
	Bluetooth Modules	14-28	↔	↔	
U-Blox	Cellular Modules	14-28	↘	↔	Parts are on allocation, lead time is 26+
	GPS	14-28	↘	↔	Parts are on allocation and increasing in cost
	WiFi Modules	14-28	↔	↔	



Discrete

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Diodes Inc.	Low Voltage MOSFETS	20-56	↙	SMA	
	TVS Diodes	10-16	↙	↔	
	Bridge Rectifiers	10-32	↔	↔	
	Schottky Diodes	16-38	↙	↔	
	Rectifiers	10-32	↔	↔	
	Switching Diodes	14-54	↔	↔	
	Small Signal MOSFETS	22-32	↔	↔	
	Zener Diodes	16-38	↙	↔	
	Bipolar Transistors	16-32	↙	↔	
	Digital Transistors	16-38	↙	↔	
	General Purpose Transistors	16-38	↙	↔	
	Logic	10-12	↔	↔	
EATON	ESD	18-22	↔	↔	
	Fuses	16-22	↔	SMA	
	Clips and Holders	14-18	↔	↔	
Everlight	Optocoupler Components	32	↙	↔	
Fairchild (ON Semiconductor)	IGBTs	42-54	↔	↔	
	Bridge Rectifiers	36-54	↔	↔	
	Rectifiers	52-58	↙	↔	
	Optocoupler Components	20-32	↔	↔	
Infineon	Low Voltage MOSFETS	20-50	↙	↔	
	High Voltage MOSFETS	42-58	↙	↔	
	IGBTs	42-52	↔	↔	
	Wide Bandgap Mosfets	44-54	↔	↔	
	Digital Transistors	14-54	↔	↔	
	General Purpose Transistors	14-54	↔	↔	
	Mil-Aero Transistors	20-48	↔	↗	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Isocom Components	Optocoupler Components	4-6	↔	↔	
	High Voltage MOSFETS	52-56	↔	↔	
IXYS	IGBTs	52-56	↔	↔	
Keystone	Clips and Holders	16-20	↔	SMA	
Kyocera	Varistors	22-24	↔	↔	
Lite-On	Optocoupler Components	22-24	↙	↔	
	ESD	14-18	↔	↔	
	Diode Arrays	14-20	↔	SMA	
	Varistors	18-24	↙	↔	
	Wide Bandgap Mosfets	44-54	↔	↔	
Littelfuse	Fuses	16-22	↔	SMA	
	PTC Fuses	14-18	↔	↔	
	Clips and Holders	16-22	↔	↔	
	Thyristors/Triacs	18-32	↔	↔	
	TVS Diodes	10-16	↙	SMA	
	Sensors	18-32	↔	SMA	
	Low Voltage MOSFETS	16-22	↙	SMA	
	High Voltage MOSFETS	18-26	↔	SMA	
Micro Commercial Components	ESD	18-22	↔	↔	
	TVS Diodes	10-16	↔	↔	
	Schottky Diodes	12-22	↔	↔	
	Switching Diodes	12-22	↔	↔	
	Small Signal Mosfets	14-22	↔	↔	
	Zener Diodes	14-28	↔	↔	
	Bipolar Transistors	10-16	↔	↔	
	General Purpose Transistors	10-16	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Microchip	High Voltage Mosfets	44-54	↔	↔	
	Wide BandGap Mosfets	26-38	↙	↔	
Microsemi	High Voltage MOSFETS	44-54	↔	↔	
	IGBTs	44-54	↔	↔	
	Mil-Aero Diodes	28-54	↔	↗	
	Mil-Aero Transistors	34-62	↔	↗	
Nexperia	Low Voltage MOSFETS	18-54	↙	↔	
	ESD	8-20	↔	↔	
	Schottky Diodes	6-22	↙	↔	
	Switching Diodes	10-52	↙	↔	
	Small Signal MOSFETS	12-28	↙	↔	
	Zener Diodes	6-22	↙	↔	
	Bipolar Transistors	6-22	↙	↔	
	Digital Transistors	6-22	↙	↔	
	General Purpose Transistors	6-22	↙	↔	
	Logic	8-10	↔	↔	
ON Semiconductor	Low Voltage MOSFETS	28-54	↙	↔	
	High Voltage MOSFETS	38-54	↙	↗	
	ESD	18-42	↔	↔	
	Wide Bandgap Mosfets	44-54	↔	↔	
	Schottky Diodes	14-68	↙	↔	
	Rectifiers	26-34	↙	↔	
	Switching Diodes	14-48	↔	SMA	
	Small Signal MOSFETS	32-52	↔	↔	
	Zener Diodes	14-48	↙	SMA	
	Bipolar Transistors	14-42	↙	SMA	
	Digital Transistors	14-42	↙	SMA	
General Purpose Transistors	14-48	↔	SMA		
	Logic	16-22	↙	↔	
ProTek Devices	Diode Arrays	16-20	↗	↗	
Renesas	Optocoupler Components	54	↔	SMA	
ROHM	High Voltage MOSFETS	28-42	↙	SMA	
	Wide Bandgap Mosfets	44-54	↔	SMA	
	Schottky Diodes	15-32	↔	↔	
	Switching Diodes	15-32	↔	↔	
	Digital Transistors	15-32	↙	↔	
	General Purpose Transistors	15-32	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Schurter	Fuses	22-42	↔	↗	
	Clips and Holders	22-32	↗	↗	
Semtech	Diode Arrays	22-24	↔	↔	
	Low Voltage MOSFETS	52-56	↔	↔	
	High Voltage MOSFETS	42-54	↙	↔	
	IGBTs	50-54	↔	↔	
	ESD	32-48	↙	↔	
ST Microelectronics	Wide Bandgap Mosfets	44-54	↔	↔	
	Thyristors/Triacs	18-20	↔	↔	
	TVS Diodes	32-42	↔	↔	
	Rectifiers	16-32	↔	↔	
	Bipolar Transistors	42-54	↔	↔	
TDK EPCOS	Varistors	18-32	↙	↔	
TE Connectivity	PTC Fuses	14-18	↔	↔	
	Low Voltage MOSFETS	18-54	↙	SMA	
	High Voltage MOSFETS	18-54	↙	↔	
	TVS Diodes	10-16	↙	↔	
Vishay	Bridge Rectifiers	22-42	↙	SMA	
	Rectifiers	14-18	↔	SMA	
	Zener Diodes	20-62	↙	↔	
	Optocoupler Components	12-42	↙	↔	



Electromechanical

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Abracon	Timing	14-54+	↙	SMA	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
ADDA	Fans	22-26	↔	↔	
Alps Electric	Switches	26-34	↗	↔	
American Zettler	Relays	18-54+	↔	↔	
Bivar	Hardware	12-18	↔	↔	
Boyd	Fans	14-16	↗	↗	
	Heatsinks	18-26	↔	↗	
C&K	Switches	14-32	↔	↔	
Churod Electronics	Relays	10-32	↔	↔	
Citizen Finedevice	Timing	14-54	↔	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
COSEL	Power Supplies (AC/DC)	50	↗	↔	
	Power Supplies (DC/DC)	50	↗	↔	
CTS	Switches	10-12	↔	↔	
	Timing	14-54	↗	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
CUI Inc	Power Supplies (AC/DC)	26-54+	↔	↔	
	Power Supplies (DC/DC)	18-54+	↙	↔	
Delta	Heatsinks	12-14	↔	↔	
	Fans	42-54	↗	↗	
Diodes Inc	Timing	12-52	↔	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
E-Switch	Switches	18-20	↔	↔	
ECS Inc.	Timing	16-54+	↙	SMA	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
EPSON Electronics America	Timing	28-42+	↙	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
Essentra Components	Hardware	14-16	↗	↗	
Fox	Timing	12-42+	↔	↗	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
Grayhill	Switches	22-26	↔	↔	
Heyco	Hardware	12-14	↔	↔	
Hongfa	Relays	42-54	↔	SMA	
Infineon	Relays	42-54	↔	↗	
IXYS	Relays	12-32	↔	↔	
Keystone	Hardware	14-16	↔	↗	
Kyocera International	Timing	18-30	↙	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
MEAN WELL	Power Supplies (AC/DC)	22-30	↙	↗	
Microchip	Timing	14-28	↔	↗	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
Murata	Timing	10-12	↔	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
Murata Power Solutions	Power Supplies (AC/DC)	28-54	↗	↗	
	Power Supplies (DC/DC)	22-42	↔	↗	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
NKK Switches	Switches	12-20	↗	↗	
NMB	Fans	40-52	↔	↔	
Ohmite	Fans	12-14	↗	↗	
Orion Fans	Fans	18-20	↔	↔	
Panasonic	Relays	16-32	↔	↗	
	Switches	12-14	↔	↔	
Qualtek	Fans	22-26	↔	↔	
Raltron	Timing	12-42	↔	↔	Tuning Fortks-32.7668KHZ and 40-52+ weeks, TCXO's are on allocation due to AKM fire
RECOM	Power Supplies (AC/DC)	26-74+	↔	↔	
	Power Supplies (DC/DC)	16-38	↗	↔	
Rosenberg	Fans	18-20	↔	↔	
Schneider Electric	Relays	18-20	↔	↔	
Song Chuan	Relays	26-38	↔	↔	
SUNON	Fans	32-44	↔	↔	
TE Connectivity Sensors	Relays	14-16	↔	↔	All stable except the IM ready Series-allocation 52+ weeks
	Switches	12-14	↔	↔	
Vicor	Power Supplies (AC/DC)	28-54	↗	↗	
	Power Supplies (DC/DC)	28-54	↗	↗	
Wakefield Thermal	Heatsinks	12-14	↔	↔	
Wall Industries	Power Supplies (AC/DC)	10-12	↔	↔	
	Power Supplies (DC/DC)	10-12	↔	↔	
ZF Electronics	Switches	20-22	↔	↗	



High-End

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
AZ Displays	LCD's	22-26	↙	↔	
Compulab	SOM	22-28	↔	↔	
Cypress	8 bit MCU	28-54	↔	↔	
	32 bit MCU	12-54	↙	↔	
	USB	44-54	↙	↔	
	Automotive	34-48	↔	↔	
Formerica	Fibre Optic Transceivers	14-18	↙	↔	
Infineon	Automotive	Allocation	↔	↔	
iWave Systems	SOM	28-32	↔	↔	
Lattice Semiconductor	FPGA	30-44	↙	↔	
Microchip	8 bit MCU	28-54+	↙	↔	
	32 bit MCU	28-54+	↙	↔	
	PHY/ Ethernet	28-32	↔	↙	
	USB	44	↙	↔	
	32 bit MPU	32-54	↔	↔	
Microsemi	FPGA	34-44	↙	↔	
NXP	8 bit MCU	28-54	↙	↔	
	32 bit MCU	16-54	↙	↔	
	Automotive	38-54	↔	↔	
	32 bit MPU	20-54	↙	↔	
	Network Processors	20-44	↙	↔	
Renesas RA	32 bit MCU	20	↙	↔	
Renesas	8 bit MCU	20-26	↙	↔	
	32 bit MCU	20	↙	↔	
	Automotive	48	↔	↔	
	32 bit MPU	20-28	↔	↔	
Sharp	LCDs	40	↙	↔	
ST Microelectronics	8 bit MCU	38-54	↙	↔	
	Automotive	42-54	↔	↔	
	32 bit MPU	12-14	↙	↔	
	STM32F0- 32 bit MCU	18-22	↙	↔	
	STM32F1- 32 bit MCU	18-22	↙	↔	
	STM32L- 32 bit MCU	18-22	↙	↔	
	Balance 32 bit MCU	12-14	↙	↔	
STM32F2/F4/F7/H7	22-30	↙	↔		
Zilog	8 bit MCU	26-42	↔	↔	



Interconnect

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Adam Tech	I/O Connectors	18-24	↙	↔	
	PCB Connectors	18-24	↙	↔	
Altech Corp.	Terminal Blocks & Crimps	14	↔	↔	
Amphenol Communications Solutions	D-Sub Connectors	10-12	↔	↔	
	Data & Telecom	10-12	↔	↔	
	PCB Connectors	10-12	↔	↔	
	FFC/FPC	10-12	↔	↔	
Amphenol Sine System	Circular Connectors	10-22	↙	↔	
ASSMAN WSW Components	Data & Telecom	22	↔	↔	
	PCB Connectors	22	↔	↔	
	IC Sockets	22	↔	↔	
Bulgin	Circular Connectors	18-20	↔	↔	
EDAC	PCB Connectors	16-24	↔	↔	
Global Connector Technology	PCB Connectors	10-12	↔	↔	
	FFC/FPC	10-12	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
HALO Electronics	Data & Telecom	10-20	↙	↗	
HARTING	PCB Connectors	12-14	↔	↔	
Hirose Electric	PCB Connectors	18-28	↙	↔	
	RF Connectors	18-28	↙	↔	
	FFC/FPC	18-28	↙	↔	
JST	PCB Connectors	18-46	↙	↔	
Mil-Max	PCB Connectors	6-8	↔	↔	
	IC Sockets	6-8	↔	↔	
Ouipiin	PCB Connectors	16-22	↙	↔	
Sullins	PCB Connectors	8-10	↔	↔	
TE Connectivity	Automotive Connectors	22-30	↙	↗	
	Circular Connectors	18-28	↙	↔	
	Relays	20-26	↙	↔	
	Data & Telecom	8-10	↔	↔	
	PCB Connectors	14-18	↔	↔	
	RF Connectors	14-16	↔	↔	
	IC Sockets	8-10	↔	↔	
	Terminal Blocks & Crimps	18-26	↙	↔	
WAGO	Lighting Connectors	10-12	↔	↔	
	Terminal Blocks & Crimps	16	↔	↔	
	Lighting Connectors	16	↔	↔	
WECO	Terminal Blocks & Crimps	22	↔	↔	



Lighting Solutions & Opto

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Bridgelux	Chip On Board (CoB)	18-22	↔	↔	
Dialight	Indication LEDs	12-18	↔	↗	
	6V (LED Optics)	12-18	↔	↔	
Everlight	Automotive LEDs (AEC-Q101 Certified)	10-12	↔	↔	
	Infrared Components/ LED	16-18	↔	↔	
	Indication LEDs	16-18	↔	↔	
	UV LEDs	10-12	↔	↔	
Excellence Optoelectronics Inc.	Automotive LEDs (AEC-Q101 Certified)	10-12	↔	↔	
General Luminaire	Standard Light Engines (Level 2 Boards)	16-18	↔	↔	
Inolux	Indication LEDs	8-10	↔	↔	
Kingbright	LED Displays	12-14	↔	↔	
	Indication LEDs	10-12	↔	SMA	
Lite-On	Infrared Components/ LED	16-18	↔	↔	
	LED Displays	16-18	↔	↔	
	Indication LEDs	18-22	↔	↔	
Lumex	LED Displays	18	↔	↔	
	Indication LEDs	10-16	↔	↔	
Lumileds	Illumination High Power LEDs (White)	10-14	↘	SMA	
	Illumination High Power LEDs (Colors)	10-12	↔	SMA	
	Illumination High Power LEDs (White & Colors)	10-12	↔	SMA	
	Horiticultural Mid Power LEDs (White & Colors)	10-12	↔	↔	
	Automotive LEDs (AEC-Q101 Certified)	16-18	↔	↔	
	Chip On Board (CoB)	10-12	↔	↔	
	Standard Light Engines (Level 2 Boards)	20-28	↔	↗	
	Infrared Components/ LED	28	↔	↔	
UV LEDs	14-18	↘	↔		
Meanwell	LED Drivers	12-22	↘	↔	
Murata	Lighting Controls	28-32	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Nichia	Illumination High Power LEDs (White)	8-12	↔	↔	
	Illumination High Power LEDs (Colors)	8-12	↔	↔	
	Illumination High Power LEDs (White & Colors)	10-12	↔	↔	
	Horitcultural Mid Power LEDs (White & Colors)	10-12	↔	↔	
	Chip On Board (CoB)	14-16	↔	↔	
ROHM	Infrared Components/ LED	8-10	↔	↔	
	Indication LEDs	12-14	↔	↔	
Samsung LED	Illumination High Power LEDs (White)	8-10	↔	SMA	
	Illumination High Power LEDs (White & Colors)	10-12	↔	↔	
	Horitcultural Mid Power LEDs (White & Colors)	10-12	↔	↔	
	Chip On Board (CoB)	8-10	↔	↔	
	Standard Light Engines (Level 2 Boards)	10-12	↔	SMA	
Seoul Semiconductor	Illumination High Power LEDs (White)	8-10	↔	↔	
	Illumination High Power LEDs (White & Colors)	8-10	↔	↔	
	Horitcultural Mid Power LEDs (White & Colors)	8-10	↔	SMA	
	Chip On Board (CoB)	10-12	↔	↔	
	Standard Light Engines (Level 2 Boards)	12-14	↔	SMA	
Seoul Viosys	UV LEDs	10-12	↔	↔	
Stanley Electric	LED Displays	14	↔	↔	
	Indication LEDs	12-14	↔	↔	
TE Connectivity	6A (Heat Sinks, LED Holders)	22-52	↔	↔	
TT Electronics- Optek Technology	Infrared Components/ LED	28-46	↔	↗	
VCC	Indication LEDs	14	↔	↗	
Vishay	Infrared Components/ LED	10-22	↙	↔	
	Indication LEDs	10-32	↔	↗	
	UV LEDs	16-18	↔	↔	



Memory

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
ADATA	Memory Modules	8-10	↔	SMA	
	eMMC	8-10	↔	SMA	
	Memory Cards	10-12	↔	SMA	
	Solid State Drives (SSD)	10-14	↔	SMA	
Alliance Memory	PC (Commodity) DRAM	4-22	↔	SMA	
	Mobile RAM	14-18	↔	↔	
	SRAM	10-32	↙	↔	
	NOR Flash	14-22	↔	↔	
	NAND Flash	10-26	↙	↔	
	eMMC	10-14	↔	↔	
Cypress	SRAM	14-54	↙	↔	
	NOR Flash	14-28	↙	↔	
	FRAM & NVSRAM	14-28	↙	↔	
Everspin Technologies	MRAM	14-30	↔	↗	
Greenliant	NOR Flash	10-18	↙	↔	
	eMMC	14-20	↙	↔	
	Memory Cards	10-18	↔	SMA	
	Solid State Drives (SSD)	10-18	↔	SMA	
Kingston	PC (Commodity) DRAM	4-8	↔	SMA	
	Memory Modules	4-8	↔	SMA	
	eMMC	4-8	↔	SMA	
	Memory Cards	4-12	↔	SMA	
	Solid State Drives (SSD)	6-10	↔	SMA	
Macronix	NOR Flash	10-14	↙	SMA	
	NAND Flash	10-14	↔	SMA	
	eMMC	20-28	↔	↗	Parts on allocation, MXIC is not quoting and not taking new orders for the time being



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Microchip	SRAM	48-50	↔	↗	
	NOR Flash	28-54	↔	↔	
	EEPROM	54-102	↔	↔	
	EPROM	14-28	↔	↗	
Onsemi	SRAM	22-42	↔	↔	
	EEPROM	22-42	↙	↔	
Renesas	SRAM	22-24	↙	↔	
	NOR FLASH	20-40	↙	↗	
	DATA FLASH	30-32	↙	↔	
Samsung LED	PC (Commodity) DRAM	54-56	↔	↔	Parts on allocation, Samsung is not quoting and not taking new orders for the time being
	Memory Modules	54-56	↔	SMA	
	eMMC	54-56	↔	↔	
	Solid State Drives (SSD)	54-56	↔	↔	
SkyHigh Memory	SLC NAND Flash	10-14	↙	SMA	
	eMMC	10-14	↔	SMA	
STMicroelectronics	EEPROM	14-28	↙	↔	Now on allocation



Passives

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Apl Delevan	Inductors	18-20	↙	↔	
Cornell Dubilier Electronics	Electrolytic	24-48	↔	↗	
	Capacitor	28-42	↙	↗	
CTS	Resistor Networks	18-42	↗	↗	
Eaton	Capacitors- Supercapacitors	12-22	↙	↗	
	Inductors	22-32	↙	↔	
ELNA	Capacitors- Supercapacitors	32-54+	↔	↔	
HALO Electronics	Inductors	16-18	↙	↔	
Murata	Filters	14-18	↙	↔	
	Inductor / Transformers	14-22	↔	↔	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	12-16	↔	↗	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	12-14	↔	↔	
	Leaded Capacitors- Ceramic	18-20	↔	↔	
	Specialty Capacitors	18-20	↔	↔	
	Surface Mount General Capacitors	16-18	↔	↔	
NIC Components	Electrolytic	24-42	↙	↔	
	Filters	16-22	↔	↔	
	Inductors	16-22	↔	↔	
	Fixed Resistors	14-20	↔	↔	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	20-22	↔	↔	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	18-20	↔	↔	
	Leaded Capacitors- Ceramic	28-30	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Nichicon	Electrolytic	20-30	↙	↔	
	Electrolytic	32-34	↙	↔	
	Capacitors- Polymer Tantalum	18	↔	↔	
Panasonic	Inductors / Transformers	24-30	↔	↔	
	Fixed Resistors	22-54	↙	↔	
	Resistor Networks	20-30	↔	↔	
Paktron Capacitors	Capactors- Film	14-18	↔	↔	
Samsung Electro-Mechanics	Fixed Resistors	46-48	↔	↗	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	16-18	↔	↔	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	16-18	↔	↔	
	Surface Mount General Capacitors-Ceramic *Automotive Upgrade	20-22	↔	↔	
Stackploe Electronics	Fixed Resistors	20-32	↔	↔	
Sumida	Inductors	28-42	↔	↔	
Taiyo Yuden	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	20-22	↔	↔	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	22-24	↔	↔	
	Surface Mount General Capacitors-Ceramic *Automotive Upgrade	22-24	↔	↔	
TDK	Filters	42-58	↗	↗	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	24-26	↔	↔	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	32-42	↔	↔	
	Surface Mount General Capacitors-Ceramic *Automotive Upgrade	22-24	↔	↔	
TDK EPCOS	Capacitors- Film	26-54+	↔	↔	
	Filters	42-58	↗	↗	
	Inductors / Transformers	18-22	↔	↔	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
TT Electronics- BI Technologies	Trimmers & Pots	42-54	↔	↔	
TT Electronics- IRC	Fixed Resistors	22-54	↗	↗	
United Chemi-Con	Electrolytic	24-36	↙	↔	
Viking	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	18-20	↔	↔	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	16-18	↔	↔	
Vishay	Trimmers & Pots	12-28	↗	↗	
	Capacitors- Film	22-32	↔	↗	
	Capacitors- Supercapacitors	16-22	↔	↔	
	Capacitors- Tantalum Molded	20-24	↔	↔	
	Capacitors- Tantalum Conformals	26	↔	↔	
	Capacitors- Polymer Tantalum	22-26	↔	↔	
	Inductors / Transformers	14-22	↔	↔	
	Fixed Resistors	54+	↔	↔	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	22-28	↔	↔	
	Leaded Capacitors- Ceramic	26-32	↙	↔	
WIMA	Specialty Capacitors	42-46	↔	↔	
	Capacitors- Film	14-18	↙	↔	
Würth Elektronik	Inductors / Transformers	28-42	↔	↔	
Yageo	Fixed Resistors	20-22	↔	↔	
	Resistor Networks	22-26	↔	↔	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	18-20	↔	↔	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	20-22	↔	↔	
	Surface Mount General Capacitors- Ceramic *Automotive Upgrade	16-18	↔	↔	

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