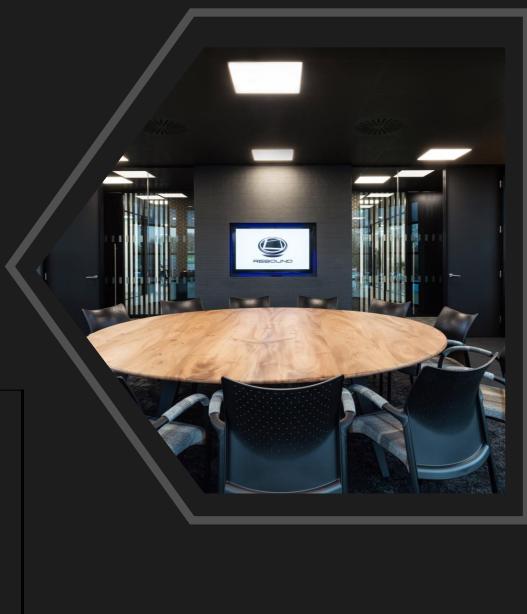


Market Insight Q4 2021



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General Market Insight

- The 1GB edition of the Raspberry Pi 4 was discontinued in February of last year, and the 2GB product was moved to its signature price of \$35. However, due to ongoing supply chain challenges which is expected to continue through much of 2022, the 2GB Raspberry Pi 4 is temporarily moves back to \$45.
- According to the US- based Semiconductor Equipment Materials International (SEMI), global silicon wafer shipments are expected to rise strongly through 2024, with wafer area increasing 13.9% year-over-year in 2021 to a record high of approximately 14,000 millions of square inches (MSI).
- The French government has announced a plan for technology development to 2030. The strategy contains ten
 objectives to strengthen the IT economy, including €6 billion for the semiconductor industry, according to
 reports. The goal of France 2030 is to increase semiconductor production, smart farming, electric vehicles, and
 small nuclear reactor development.
- The Department of Trade and Industry encouraged Malaysian companies to invest more in the Philippines
 after five of them infused \$1.66 billion worth of capital in the Philippines from 2018 to 2020. According to
 Lopez, Malaysia was the Philippines' sixth largest source of foreign direct investment in the first half of 2021.
 Despite the pandemic, Malaysian businesses are eager to engage in or grow their operations in the Philippines.
- As Beijing strives for global domination in chip manufacturing, China's semiconductor industry is facing a growing talent shortage. The shortfall of talent in the country's semiconductor industry doubled in 2019 to about 300,000 from 150,000 in 2015, according to a report published this year by the China Institute for Educational Finance Research at Peking University.
- Alibaba unveils self-developed chip as part of China's campaign for technological self-reliance. Developed by Alibaba's in-house semiconductor unit Pingtouge, the chip, named Yitian 710, is based on architecture from UK-based ARM. As the most powerful ARM-based server chip, its performance exceeds the industry benchmark by 2%, the company said. However, the chip will not be commercially available as it will be mainly used for in-house business, and the mass deployment of Yitian might take three to five years, according to the source.
- According to a government study released, South Korea's automotive exports dropped by double digits due to a continuing scarcity of semiconductors used in automobiles.
- The disruption of global supply networks caused by the pandemic has hastened China's manufacturing
 migration. Other Asian countries, particularly South Korea and Vietnam, stand to benefit from this trend and
 should encourage reshoring and relocation. The returning firms represent a diverse group of industries from
 electronics to jewelry to automobiles and most of them are relocating from China.



- In November 2021, the Global Semiconductor sales totalled \$49.7 billion, up 23.5 percent over November 2020's total of \$40.2 billion and 1.5 percent higher than October 2021's total of \$49.0 billion. The cumulative annual total of semiconductors sold through November 2021 reached 1.05 trillion, the greatest annual volume ever recorded in the industry.
- As it announced a 65 % increase in second-quarter earnings, China's Lenovo Group, the world's largest
 producer of personal computers, indicated that a global chip shortage would linger throughout the first half
 of next year.
- AT&S has begun work on its Southeast Asia expansion. AT&S, an Austrian printed circuit board and IC substrates maker, has announced its plans to invest in a new IC substrates facility in Kulim Hi-Tech Park, Kedah in Malaysia.
- Taiwan Semiconductor Manufacturing Company (TSMC), has revealed intentions to develop a new factory in Japan, a move that analysts believe would aid Japan's weakening chipmaking sector and strengthen its economic security. The new plant is slated to begin operation in 2024.
- In the face of China's economic rise, Japan and the US announced an initiative to facilitate regular discussions on trade matters that are important to both countries. According to officials from both countries, the first round of discussions under the US-Japan Partnership on Trade would take place early next year, with the primary topics of attention being "third country concerns" and collaboration in building a rulesbased economic order in the Indo-Pacific region.
- Google has suggested the US government's National Institute of Standards and Technology develop standards for some silicon, in hopes of improving the semiconductor supply chain. Google's opinion emerged in a submission to the Department of Commerce in response to the Biden administration's 100-Day Supply Chain Review of semiconductors and advanced packaging. According to Google, increased chiplet standardization would allow designers to use dies made by a variety of foundries, hence promoting competitiveness and diversity.
- South Korea will invest 20 billion won (\$16.9 million) next year in developing local industries for materials, parts and equipment for chips, future cars, as well as bio products and nanotechnologies.



- The Japanese government welcomed Taiwan Semiconductor Manufacturing Co (2330.TW) (TSMC)'s announcement that it would establish a \$7 billion chip facility in Japan alongside Sony Group (6758.T). Sony has announced that it will invest \$500 million in the facility.
- Commerce Secretary Gina Raimondo encouraged the House of Representatives to pass legislation supporting U.S. semiconductor chip production as soon as possible to avoid future supply disruptions and lower the country's dependence on parts from China.
- European Semiconductor distribution sales sets new records. In both Semiconductors and IP&E (Interconnect, Passive, and Electromechanical) components, the slow start into 2021 has been totally replaced by a double-digit rally. According to DMASS members, semiconductor distribution revenue increased by 31.8 percent to EUR 2.46 billion in Q3, while IP&E distribution sales increased by 44.7 percent to EUR 1.13 billion. For the time, DMASS members reported a 35.6 percent increase in revenue to EUR 3.6 billion.
- Apple Inc. (AAPL.O) became the first firm to reach a stock market value of \$3 trillion, before closing the day a
 hair below that level, as investors bet the iPhone manufacturer would continue to release best-selling goods
 while exploring new sectors like driverless cars and virtual reality.
- Oppo, a Chinese smartphone maker, presented its first self-developed chip on Tuesday, joining the ranks of
 foreign competitors like Apple Inc and domestic rivals like Huawei Technologies Co in having more
 influence over their own semiconductor design. The chip—MariSilicon X—is a neural processing unit, or
 NPU, which can assist in enhancing images by leveraging the power of artificial intelligence. It's part of
 Oppo's larger effort to refine its technological expertise as the global smartphone industry becomes more
 competitive.
- Tesla overcomes supply chain issues with record-breaking Q4 deliveries. Tesla's October-December deliveries were up over 30% year-over-year and nearly 70% higher than the previous quarter's record deliveries. CEO Elon Musk said in October last year that Tesla will be able to maintain an annual growth rate of more than 50% for quite a while. Tesla, which designs some chips in-house unlike most automakers, also reprogrammed software to use less scarce chips.



Allegro Microsystems

- All series have a lead time of 40-81 weeks or more, and capacity is still extremely tight, with no signs of improvement.
- 10% average price increase starting January 01, 2022

AMD

• AMD's \$35 billion acquisition of Xilinx is now scheduled to be completed in 2022.

Analog Devices

• 12-16% price increase across all MSOP series, followed by another price increase in January 2022.

BOSCH

• Bosch confirmed to spend €400 million at its Dresden, Reutlingen and Penang factories. Bosch, being the world's largest automotive supplier has announced that it will take advantage of the catastrophic superconductor supply crisis to increase chip manufacturing at its German and Malaysian facilities.

Broadcom

- BCMxxxx having a 52 weeks or longer lead time. Due to shortage of wafer, mainly for 40nm or older technology, lead time is over 12 months.
- Broadcom announced price increases ranging from 21% to 40% on orders placed from October 15th, depending on the series.
- PEX series lead times are now 68 weeks while the BCM6xxx and BCM8xxx LT stretched to 2022.



Cypress

• FRAM, ex-Ramtron, FM24xxx/FM25xxx series, has a lead time of 30-55 weeks or more, with an unstable price.

Hirose

• Metal resources such as Phosphor Bronze, Brass, and Corson Alloys are tough to come by for Hirose. This aggravates the recent situation as connectors require these specific metals to function.

Infineon

- The BSSxxx BSCxxx / BTSxxx / BSZxxx series (MOSFET) has a lead time of 34-52 weeks or above with no improvement. INF backlog all delayed to Q2 2022 with high allocation, and price is also increasing.
- Supply shortages are expected to persist through the end of 2022, according to Infineon's management board.

Intel

- 5-20% price increased which started last Dec. 5, 2021
- Due to raw material shortages and strong demand during the pandemic, as well as increased application in IoT and AI technologies, the Intel/Altera 10M xxx series pricing has risen significantly.
- The Altera Enpirion series (Enxxx) will have its last time buy on March 18, 2022, with a lead time of 22-50 weeks or above at this time.

Kemet

• The T49 series tantalum capacitor has a lead time of 22-24 weeks, with prices increasing. Lead time subjected to different cap size. Size A & C will need 4 months from the date of confirmation, while Sizes B, D, and X will take 7 months or more from the date of confirmation. Due to a shortage of wafers, the delivery timeline for all Dallas parts has been extended to 60 weeks.



Littelfuse

• With no supply production from its Philippines facility, Littelfuse's usual lead time now is 48 to 50 weeks. PGB/SP series fuses are all made in the Philippines, and costs are likely to rise by 20-30% owing to limited production capacity and raw material shortages.

Marvell

• On November 1, 2021, Marvell implemented a 23 % pricing increase that will apply to all shipments made after that date.

Maxim Integrated

• Maxim, which is now a part of Analog Devices Inc., is expected to raise prices across the board by 16%.

Microchip

• The ex Atmel MCU, ATTiny series, has a lead time of 50 weeks or more, and the ex Atmel series, EEPROM, has a lead time of 45 52 weeks, with scheduled orders continuing to push out, whilst the general Microchip series has a lead time of 26 68 weeks, and spot buy prices are continuing to increase.

Micron

Micron is considering constructing a new memory plant in the United States, but it will require state and federal subsidies to offset costs that are greater than those of its Asian factories. Micron's chief commercial officer, Sumit Sadana, told Reuters that memory chips account for around 30% of the worldwide semiconductor market, but only 2% is manufactured in the United States. According to Sadana, Micron plans to spend up to US\$12 billion in capital expenditures and US\$3 billion on research and development next year, and up to US\$150 billion over the next decade.

NXP

- NXP is projected to raise prices by 20% at the end of Q4. Following its earlier stoppage due to COVID 19, the NXP facility in Malaysia is said to have reopened at full capacity.
- NXP is canceling orders for the MPC and LPC MCU series without notice.
- Automotive parts have a 52 weeks lead time.

Rebound Electronics

- The FS32K and MCIMX series have already been extensively allocated, and the shutdown is projected to aggravate the situation for these two series, which have been severely limited for months. The cost of the MCIM series is predicted to increase by 15%.
- Affected series: MKExxxx , MKLxxxx , MCIMxxx , TJAxxx , industrial application MCUs; MPXxxx pressure sensors, S9S08xxx, MCIMX6xxx, LPC177xxx, LPC24xxx, MCU 32BIT ARM CORTEX

Onsemi

- Market price for its rectifiers (BASxxx series) is volatile and on allocation. Price is also increasing with a lead time of 65 weeks or above.
- On Semiconductor (Onsemi) has completed its acquisition of silicon carbide producer, GT Advanced Technologies (GTAT). The acquisition will enhance Onsemi's ability to secure and grow supply of SiC.
- Due to unstable manufacturing capacity, Onsemi is unable to meet demand across several series, forcing customers to turn to Sony for parts. Sony's production line, on the other hand, is fully booked through 2022.
- Onsemi series is seeing a possible of 40% price increase on existing and backlogged components in Q4. The reduced capacity in Vietnam, as well as plant closures in Malaysia, has resulted in lead times of 70 weeks or more, which has contributed to price increases.
- Lead time for Onsemi MOSFETs are said to be stretching to 77 weeks.

Phoenix Contact

• Phoenix has announced to have an 8% price increase starting January 01, 2021. Some distributors also advised to order any stock at old price before the end of the year.



Qualcomm

- Qualcomm is expected to increase prices by 40%
- CSR8670/8675 have quick price increases of 5-15%. CSRxx series contract pricing has doubled with customers forecasted to receive 30-50% in 2022.

Realtek

• Realtek's RTL8211 and RTL83 series are in short supply due to a lack of wafers and reduced stock allocation.

Renesas

• Majority of Renesas Electronics' products, as well as its newly acquired Dialog products, will see a price increase beginning January 1, 2022.

Silicon Laboratories

• Silicon Laboratories increased prices on all its product lines, including existing backlog, which began last November 28, 2021, due to an industry wide capacity crisis and widespread inflation across almost all industries.

SK Hynix

 SK hynix Inc., South Korea's second largest chipmaker, announced on Friday that it has agreed to acquire Key Foundry, a local chip contract manufacturer for 575.68 billion won (US\$492 million), as part of efforts to enhance its presence in the non memory sector.



Skyworks

• Skyworks, which acquired Silicon Labs in Q3 2021, is raising prices on all open orders by 30%, backlog orders will be affected.

STMicroelectronics

• ST Micro increased prices by 16-30% across all series with lead times stretching up to 70 weeks. Customers are not expected to receive deliveries until Q4 2022 or Q1 2023 on all series. STM32 is particularly impacted.

Taiyo Yuden

• Japanese manufacturer Taiyo Yuden, will invest MYR 680 million (EUR 140 million) to expand its multilayer ceramic capacitors manufacturing facility in Kuching, Malaysia as the company is looking to increase its production capacity in the ASEAN region.

TE Connectivity

Price increase by 5% to 10% on its products. Orders placed on or after December 20, 2021, will reflect the new prices.
 For those customers with agreement-priced purchase orders as of July 5th, 2021, with original schedule commit dates after July 5th will be adjusted to the new pricing.

Texas Instruments

- Texas Instruments has a lead time of more than 70 weeks for all series parts.
- Dallas based Texas Instruments has announced plans to develop up to four new semiconductor chip manufacturing units in Sherman, with a total investment of 30 billion According to the company, construction on the first two fabrication units will begin in 2022 while production of TI's 300-millimeter wafers would begin in 2025.



Toshiba

• Toshiba is focusing production on automotive parts and prioritizing customers in Japan as some factories are only operating 3-4 days per week due to China's government mandated power cuts which affects the manufacturing.

Traco Power

• 5-6% average price increase beginning December 01, 2021

TSMC

• According to the CEO of Semiconductor Manufacturing Co (TSMC), building on a new fab in Japan will begin next year, with mass production beginning in 2024.

Vishay

• The lead time for SFHxxx series, opto coupler components is 43-70 weeks or longer. Certain components have reached the 99-week mark.

Xilinx

- On November 8, 2021, Xilinx increased prices on all existing and future orders, all quotes, and all shipments across all its product lines. Prices for their products will go up as follows:
 - 10% increase on all Versal [™]Series.
 - 20% increase on all other products
- Xilinx is holding all Spartan 6 shipments and will allocate them, including a stock, which started last October 1, 2021. The Spartan 6 series is currently facing substantial production issues, hence SP6 has been delayed until January 4, 2025. According to source, approximately 30% of total orders will be supported by Xilinx against SP6 now.
- Due to restricted production capacity, the XC6 series' lead time has been extended to 72 weeks. Some delivery dates have been reported as far out as 2024.



	ANALOG	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
	Amplifiers & Comparators	\rightarrow	÷	26+
ard	Analog Interface	\rightarrow	÷	26+
Standard	Power Management	\rightarrow	÷	26+
	Converters	\rightarrow	÷	26+

	MP	PU/MCU	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
MPU					26+
		- 8 Bit & Lower			26+
	MCU	16 Bit			26+
		32 Bit & Higher			26+
DSP					26+

PROGRAMMABLE LOGIC	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
			26+
STANDARD LOGIC	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
Timing Products			26+
Interface			26+
Connectivity			26+
Standard Logic	\rightarrow	\rightarrow	26+

POWER	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
FET		\rightarrow	26++
IGBT		\rightarrow	26+
Rectifier			26++
Other Power			26++



PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
		26++
		26++
	÷	26++
\checkmark	÷	26+
		9-16
		16+
	↑ ↑ ↓ ↑	$ \begin{array}{ccc} \uparrow & \uparrow \\ \uparrow & \uparrow \\ \uparrow & \rightarrow \\ \downarrow & \rightarrow \\ \uparrow & \uparrow \\ \downarrow & \uparrow \\ \uparrow & \uparrow \\ \downarrow & \uparrow \\ \uparrow & \uparrow \\ \downarrow & \downarrow \\ \downarrow \\ \downarrow & \downarrow \\ \downarrow \\ \downarrow & \downarrow \\ \downarrow \\$

SENSORS	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
	\rightarrow	\rightarrow	26+

ОРТО	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
LEDs (Low Power)	→	\rightarrow	9-16
LEDs (Mid Power)	→	÷	9-16
LEDs (High Power)	÷	\rightarrow	9-16
Couplers			26++
Fibre-Optic			26+
Infrared			26+
Other Opto			26+

DISCRETE	PRICING TREND	LEAD TIME TREND	LEAD TIME (WEEKS)
Small Signal		\rightarrow	26+
RF		\rightarrow	26+



\leftrightarrow	Stable			
7	Increasing			
Ľ	Decreasing			
SMA	Selective Market Adjustment			
EOL	End-of-Life			





Analog

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
AMS	Analog	10-40	\leftrightarrow	SMA	
возсн	Sensors	32-54	7	\leftrightarrow	
DIODES	Multi- Source Analog/Power	16-38	A	7	
DIODES	Switching Regulators	16-38	7	7	
FTDI Chip	Interface	20-42	7	7	
	Sensors	20-54	7	7	
Infineon	Switching Regulators	22-54+	7	7	
	Analog and Power for Automotive (CAN/LIN/Smart FET)	48-54	7	7	
	Signal Chain Amplifiers	12-22	7	7	
Maxim Integrated	Interface	18-26	7	7	Some lead times are out to 18+ weeks
	Switching Regulators	8-30	7	7	
Maxlinear	Interface	12-22	A	7	
Melexis	Sensors	18-54	7	7	
	Signal Chain (Amplifiers and Data Converters)	32-42	7	7	
Microchip	Timing	22	7	7	
	Switching Regulators	18-54	7	7	
MPS	Switching Regulators	52-60	7	7	



MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
	Sensors	18-54	л	\leftrightarrow	
NXP	Interface	38-54	я	7	
	Analog and Power for Automotive (CAN/LIN/Smart FET)	48-54	7	7	
Omron	Sensors	52	7	7	
	Sensors	20-54	7	7	
	Signal Chain (Amplifiers and Data Converters)	38-44	7	7	
ON Semiconductor	Timing	22-26	7	7	
	Multi- Source Analog/Power	16-38	я	7	
	Switching Regulators	16-38	я	7	
Panasonic	Sensors	18-28	7	\leftrightarrow	
ЗРЕАК	Signal Chain (Amplifiers and Data Converters)	16-20	\leftrightarrow	\leftrightarrow	
	Signal Chain (Amplifiers and Data Converters)	42-52	7	7	
Renesas	Timing	52	7	7	
	Interface	42-52	7	7	
	Switching Regulators	42-52	7	7	
ROHM	Sensors	18-42	7	\leftrightarrow	
	Switching Regulators	32	7	\leftrightarrow	
	Sensors	28-36	7	7	
	Signal Chain (Amplifiers and Data Converters)	38-46	7	7	
ST Microelectronics	Multi- Source Analog/Power	14-26	я	7	
	Switching Regulators	14-28	7	7	
	Analog and Power for Automotive (CAN/LIN/Smart FET)	42-54	7	7	
TE Sensor Solutions	Sensors	18-32	\leftrightarrow	\leftrightarrow	
Vishay	Sensors	18-26	7	\leftrightarrow	



Batteries

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
	Alkaline	12-14	\leftrightarrow	\leftrightarrow	
Energizer	Lithium Metal	16-18	\leftrightarrow	\leftrightarrow	
	Silver Oxide	10-12	\leftrightarrow	\leftrightarrow	
	Alkaline	16-18	\leftrightarrow	\leftrightarrow	
	Lithium Metal	20-22	\leftrightarrow	\leftrightarrow	
GP Batteries	Lithium Ion	18-20	\leftrightarrow	\leftrightarrow	
	Nickle Metal Hydride	12-14	\leftrightarrow	\leftrightarrow	
	Lead Acid	10-12	\leftrightarrow	\leftrightarrow	
	Carbon Zinc	10-12	\leftrightarrow	\leftrightarrow	
	Alkaline	12-14	\leftrightarrow	\leftrightarrow	
	Lithium Metal	26-28	\leftrightarrow	\leftrightarrow	
Panasonic	Nickle Metal Hydride	10-12	\leftrightarrow	\leftrightarrow	
	Lead Acid	14-16	\leftrightarrow	7	
	Carbon Zinc	10-12	\leftrightarrow	\leftrightarrow	
	Lithium Metal	18-20	\leftrightarrow	7	
	Lithium Ion	20-22	\leftrightarrow	7	
Renata Batteries	Nickle Metal Hydride	12-14	\leftrightarrow	\leftrightarrow	
	Silver Oxide	10-12	\leftrightarrow	\leftrightarrow	
	Carbon Zinc	10-12	\leftrightarrow	\leftrightarrow	
	Alkaline	12-14	\leftrightarrow	\leftrightarrow	
VADTA	Lithium Metal	20-26	\leftrightarrow	7	
VARTA	Lithium Ion	34-40	7	7	
	Nickle Metal Hydride	12-14	\leftrightarrow	\leftrightarrow	



Connectivity

MANUFACTURER	PRODUCT	LEAD TIME (WEEKS)	TREND	PRICING	COMMENTS
AMS	RFID	30-32	7	\leftrightarrow	
AVX	Antennas	10-12	\leftrightarrow	\leftrightarrow	
	802.15.4/Zigbee Modules	28-34	Я	7	
CEL	Small Signal, Schottky Diodes, PIN Diodes,Bipolar Transistors,FETs/PHEMTs,Amplifiers,Mixers & Modulators, VCOs, SS Bipolar Transistors,Wideband Transistors	20-22	\leftrightarrow	\leftrightarrow	
Cypress	Bluetooth Modules	28-32	7	7	Cypress is now Infineon
Laird Connectivity	Wi-Fi Modules	38-42	л	7	
Land Connectivity	Antennas	18-22	я	7	
	Cellular Modules	8-12	\leftrightarrow	\leftrightarrow	
Linx Technologies	Antennas	12-14	я	7	
	Transceivers/Receivers	8-14	я	7	
Melexis	Transceivers/Receivers	18	\leftrightarrow	\leftrightarrow	
IVIEIEXIS	RFID	16-18	\leftrightarrow	\leftrightarrow	
	Wi-Fi Modules	26-28	я	7	
Microchip	Bluetooth Modules	26-28	ק	7	
	Transceivers/Receivers	20-22	\leftrightarrow	7	
NA	Wi-Fi Modules	54-66	я	7	
Murata	Bluetooth Modules	54-66	Л	7	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	Multi-Protocol/Chip Solutions	54	7	7	
NXP	Transceivers/Receivers	26	\leftrightarrow	7	
	RFID	28-54	7	7	Parts on allocation
	High Power IC's	54	7	7	
ON Semiconductor	Bluetooth Modules	18-32	7	7	
Democratic	Bluetooth Modules	42	7	7	
Panasonic	RFID	16-18	\leftrightarrow	\leftrightarrow	
Pulse Electronics	Antennas	10-12	\leftrightarrow	\leftrightarrow	
Semtech	Transceivers/Receivers	38	7	7	
Sierra Wireless	Multi-Protocol/Chip Solutions	32-42	7	\leftrightarrow	
	Cellular Modules	32-42	7	7	Intel based radios are at 52 weeks
Silex Technology	Wi-Fi Modules	26-30	7	7	
	Bluetooth Modules	32-42	7	7	
ST Microelectronics	Transceivers/Receivers	54	7	7	
	RFID	22-28	7	7	
Taoglas	Antennas	22-24	7	7	
	Bluetooth Modules	28-54	7	7	
U-Blox	Cellular Modules	28-54	7	7	Parts are on allocation
	GPS	28-32	7		Increased in pricing on some GPS modules



Discrete

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	SiC Diode	22	7	7	
Alpha Power Solutions	SIC MOSFETS	22	7	7	
AVX	Varistors	16-24	\leftrightarrow	7	
CEL	Optocoupler Components	22	\leftrightarrow	\leftrightarrow	
	Low Voltage MOSFETS	44-54	7	7	
	TVS Diodes	34-42	7	\leftrightarrow	
	Bridge Rectifiers	20-42	\leftrightarrow	7	
	Schottky Diodes	18-54	7	7	
	Rectifiers	20-78	\leftrightarrow	7	
Diodes Inc.	Switching Diodes	18-54	7	7	
	Small Signal MOSFETS	18-54	7	7	
	Zener Diodes	18-54	7	7	
	Bipolar Transistors	18-54	7	7	
	Digital Transistors	18-54	7	7	
	General Purpose Transistors	14-54	7	7	
	Logic	20-32	7	7	
	ESD	14-16	7	7	
EATON	Fuses	16-22	7	7	
	Clips and Holders	14-18	\leftrightarrow	7	
Everlight	Optocoupler Components	26	7	7	
	Low Voltage MOSFETS	44-54	7	7	
	High Voltage MOSFETS	28-38	7	7	
	IGBTs	28-54	7	7	
	Bridge Rectifiers	20-36	\leftrightarrow	7	
	Schottky Diodes	18-54	7	7	
Fairchild (ON Semiconductor)	Rectifiers	22-44	\leftrightarrow	7	
	Switching Diodes	10-54	7	7	
	Small Signal MOSFETS	18-54	7	7	
	Zener Diodes	18-54	7	7	
	Bipolar Transistors	22-54	7	7	
	Optocoupler Components	32-52	7	7	
	Low Voltage MOSFETS	16	Я	\leftrightarrow	
Goford Semiconductor	Medium Voltage MOSFETS	16	7	\leftrightarrow	
	High Voltage MOSFETS	20	\leftrightarrow	\leftrightarrow	Not active parts now
Hollyfuse	Fuses	14-16	\leftrightarrow	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	Low Voltage MOSFETS	44-54	\leftrightarrow	7	
	High Voltage MOSFETS	38-54	\leftrightarrow	7	
	IGBTs	42-52	7	7	
Infineon	Wide Bandgap Mosfets	38-52	7	7	
	Digital Transistors	14-54	7	7	
	General Purpose Transistors	14-54	7	7	
	Mil-Aero Transistors	32-52	7	7	
Isocom Components	Optocoupler Components	4-6	\leftrightarrow	SMA	
	High Voltage MOSFETS	32-42	7	7	
IXYS	IGBTs	32-42	7	7	
	Thyristors/Triacs	32-42	7	7	
Keystone	Clips and Holders	12-18	7	SMA	
Lite-On	Optocoupler Components	26-32	7	\leftrightarrow	
	ESD	32-50	7	7	
	Diode Arrays	32-50	7	7	
	Varistors	22-42	7	7	
	Wide Bandgap Mosfets	28-38	7	7	
Littelfuse	Fuses	22-26	7	\leftrightarrow	
	PTC Fuses	32-36	7	SMA	
	Clips and Holders	16-22	\leftrightarrow	\leftrightarrow	
	Thyristors/Triacs	26-42	7	7	
	TVS Diodes	32-48	7	\leftrightarrow	
	Sensors	18-32	7	SMA	
	Schottky Diodes	22-34	7	\leftrightarrow	
Micro Commercial Components	Switching Diodes	22-34	7	\leftrightarrow	
Micro Commercial Components	Zener Diodes	14-34	7	\leftrightarrow	
	General Purpose Transistors	18-42	7	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	High Voltage MOSFETS	32-42	7	7	
Microsemi	IGBTs	42-54	7	7	
Microsemi	Mil-Aero Diodes	34-58	7	\leftrightarrow	
	Mil-Aero Transistors	34-62	7	\leftrightarrow	
	Low Voltage MOSFETS	44-54	\leftrightarrow	7	
	ESD	18-52	7	7	
	Schottky Diodes	18-54	7	7	
	Switching Diodes	18-54	7	SMA	
Nexperia	Small Signal MOSFETS	18-54	7	SMA	
	Zener Diodes	18-54	7	SMA	
	Bipolar Transistors	18-54	7	SMA	
	Digital Transistors	18-54	7	SMA	
	General Purpose Transistors	18-54	7	SMA	
	Logic	42-52	7	\leftrightarrow	
	Low Voltage MOSFETS	44-54	7	7	
	ESD	22-52	7	7	
	Wide Bandgap Mosfets	38-52	7	7	
	Schottky Diodes	18-54	7	7	
	Rectifiers	22-46	\leftrightarrow	7	
ON Consistent durter	Switching Diodes	18-54	7	7	
ON Semiconductor	Small Signal MOSFETS	18-54	7	7	
	Zener Diodes	18-54	7	7	
	Bipolar Transistors	18-54	7	7	
	Digital Transistors	18-54	7	7	
	General Purpose Transistors	18-54	7	7	
	Logic	32-52	7	7	
ProTek Devices	Diode Arrays	14-18	7	7	
Renesas	Optocoupler Components	48	7	7	
	High Voltage MOSFETS	28-32	7	\leftrightarrow	
	Wide Bandgap Mosfets	42-54	7	\leftrightarrow	
	Schottky Diodes	22-54	7	\leftrightarrow	
ROHM	Switching Diodes	22-54	7	\leftrightarrow	
	Digital Transistors	22-54	7	\leftrightarrow	
	General Purpose Transistors	22-54	7	\leftrightarrow	



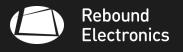
MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Schurter	Fuses	22-42	7	7	
	Clips and Holders	22-32	7	7	
	Diode Arrays	22-24	7	7	
Semtech	Mil-Aero Diodes	42-52	7	\leftrightarrow	
	Low Voltage MOSFETS	44-54	7	7	
	High Voltage MOSFETS	28-38	7	\leftrightarrow	
	IGBTs	38-44	7	7	
	ESD	22-42	7	7	
ST Microelectronics	Wide Bandgap Mosfets	32-38	Ľ	7	
	Thyristors/Triacs	42-54	7	7	
	TVS Diodes	32-42	7	7	
	Rectifiers	50-52	\leftrightarrow	7	
	Bipolar Transistors	22-42	7	7	
	Low Voltage MOSFETS	44-54	7	7	
	ESD	22-52	7	7	
	Wide Bandgap Mosfets	38-52	7	7	
	Schottky Diodes	18-54	7	7	
	Rectifiers	22-46	\leftrightarrow	7	
Taiwan Semiconductor	Switching Diodes	18-54	7	7	
	Small Signal MOSFETS	18-54	7	7	
	Zener Diodes	18-54	7	7	
	Bipolar Transistors	18-54	7	7	
	Digital Transistors	18-54	7	7	
	General Purpose Transistors	18-54	7	7	
	Logic	32-52	7	7	
TDK EPCOS	Varistors	24-30	7	7	
TE Connectivity	PTC Fuses	22-32	7	7	
	Low Voltage MOSFETS	44-54	7	7	
	High Voltage MOSFETS	42-52	7	7	
	TVS Diodes	32-48	7	7	
Vishay	Bridge Rectifiers	28-82	\leftrightarrow	7	
	Rectifiers	38-78	\leftrightarrow	7	
	Zener Diodes	22-42	7	7	
	Optocoupler Components	26-42	7	7	





Electromechanical

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
AVX	Timing	14-16	\leftrightarrow	7	
Aavid	Fans	14-16	7	7	
	Heatsinks	18-26	Я	7	
Abracon	Timing	14-54+	7	SMA	
ADDA	Fans	16-18	\leftrightarrow	7	
Alps Electric	Switches	26-34	7	\leftrightarrow	
American Zettler	Relays	18-54+	7	SMA	
Bivar	Hardware	8-10	\leftrightarrow	\leftrightarrow	
С&к	Switches	14-32	7	\leftrightarrow	
Citizen Finedevice	Timing	14-54	7	7	
COSEL	Power Supplies (AC/DC)	18-32	7	\leftrightarrow	
COSEL	Power Supplies (DC/DC)	18-32	7	\leftrightarrow	
стѕ	Switches	10-12	\leftrightarrow	7	
	Timing	14-20	7	7	
	Power Supplies (AC/DC)	26-54+	7	7	
CUI Inc	Power Supplies (DC/DC)	18-54+	7	7	
	Heatsinks	12-14	\leftrightarrow	\leftrightarrow	
Delta	Fans	42-54	ת	\leftrightarrow	
Diodes Inc	Timing	12-52	R	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
E-Switch	Switches	18-20	л	7	
EPSON Electronics America	Timing	42+	7	7	
Fox	Timing	12-42+	7	7	
Grayhill	Switches	18-20	7	\leftrightarrow	
Неусо	Hardware	8-10	\leftrightarrow	\leftrightarrow	
Hongfa	Relays	18-54+	7	7	
Infineon	Relays	20-24	\leftrightarrow	\leftrightarrow	
IXYS	Relays	12-32	7	\leftrightarrow	
Keystone	Hardware	6-8	\leftrightarrow	7	
Kyocera International	Timing	30	7	\leftrightarrow	
Meanwell	Power Supplies (AC/DC)	20-38	я	\leftrightarrow	
Mornsun	Power Supplies (AC/DC)	14-16	R	7	
	Power Supplies (DC/DC)	6-8	\leftrightarrow	\leftrightarrow	
Murata	Timing	10-12	\leftrightarrow	\leftrightarrow	
Murata Power Solutions	Power Supplies (AC/DC)	28-54	7	7	
	Power Supplies (DC/DC)	14-20	R	7	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Myrra	Power Supplies (AC/DC)	14-16	Я	7	
NKK Switches	Switches	12-20	\leftrightarrow	\leftrightarrow	
NMB	Fans	16-18	7	\leftrightarrow	
Ohmite	Fans	12-14	7	7	
Omron	Switches	14-52	7	\leftrightarrow	
Panasonic	Relays	16-38	\leftrightarrow	\leftrightarrow	
	Switches	12-14	\leftrightarrow	\leftrightarrow	
Qualtek	Fans	16-18	\leftrightarrow	\leftrightarrow	
Raltron	Timing	12-42	\leftrightarrow	\leftrightarrow	
RECOM	Power Supplies (AC/DC)	26-54+	R	\leftrightarrow	
	Power Supplies (DC/DC)	16-38	R	\leftrightarrow	
Schneider Electric	Relays	16-18	\leftrightarrow	\leftrightarrow	
Song Chuan	Relays	26-62	7	\leftrightarrow	
SUNON	Fans	32-44	7	7	
TE Connectivity Sensors	Relays	14-16	\leftrightarrow	\leftrightarrow	
	Switches	12-14	\leftrightarrow	\leftrightarrow	
Vicor	Power Supplies (AC/DC)	28-34	7	7	
	Power Supplies (DC/DC)	28-34	я	7	



High-End

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Compulab	SOM	22	7	7	
	8 bit MCU	48	7	\leftrightarrow	
C	32 bit MCU	48	7	\leftrightarrow	
Cypress	USB	34-54	7	7	
	Automotive	32-48	7	\leftrightarrow	
DKE	E-paper Display	52	\leftrightarrow	\leftrightarrow	Major shortages for ICs and substrates
Formerica	Fibre Optic Transceivers	20-22	7	\leftrightarrow	
Infineon	Automotive	Allocation	7	\leftrightarrow	
Lattice Semiconductor	FPGA	36-38	7	7	
	8 bit MCU	54+	7	7	
	32 bit MCU	54+	7	7	
Microchip	PHY/ Ethernet	32-54	7	7	
	USB	32-54	7	7	
	32 bit MPU	32-54	7	7	
Microsemi	FPGA	36-54	7	7	
	PHY/ Ethernet	Allocation	7	7	
	8 bit MCU	Allocation	7	7	
	32 bit MCU	Allocation	7	\leftrightarrow	
NXP	Automotive	Allocation	7	7	
	32 bit MPU	Allocation	7	7	
	Network Processors	Allocation	7	7	
Raystar	LCDs	24-26	7	Я	
	8 bit MCU	42-48	7	7	
Renesas	32 bit MCU	42-48	7	\leftrightarrow	
incircada a	Automotive	48	7	\leftrightarrow	
	32 bit MPU	48	7	7	
Renesas Synergy	32 bit MCU	42-48	7	SMA	
Sharp	LCDs	42-46	7	7	
	8 bit MCU	Allocation	7	7	
	Automotive	Allocation	7	Я	
	32 bit MPU	28	7	7	
ST Microelectronics	STM32F0- 32 bit MCU	Allocation	\leftrightarrow	R	
	STM32F1- 32 bit MCU	Allocation	\leftrightarrow	7	
	STM32L- 32 bit MCU	Allocation	7	7	
Zilog	8 bit MCU	26-42	7	Я	



Interconnect

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Adam Tech	D-Sub Connectors	16-18	я	7	
Adam Tech	PCB Connectors	16-18	я	7	
Altech Corp.	Terminal Blocks & Crimps	8-10	\leftrightarrow	\leftrightarrow	
	D-Sub Connectors	10-12	\leftrightarrow	7	
Amphenol ICC	Data & Telecom	10-12	\leftrightarrow	7	
	PCB Connectors	10-12	\leftrightarrow	7	
	FFC/FPC	10-12	\leftrightarrow	7	
Amphenol Sine System	Circular Connectors	22	я	7	
AVX	Lighting Connectors	12-14	\leftrightarrow	7	
Connfly	PCB Connectors	12-14	\leftrightarrow	\leftrightarrow	
Degson	Terminal Blocks & Crimps	20	\leftrightarrow		Expecting longer lead time due to CNY holidays
EDAC	PCB Connectors	12-16	я	\leftrightarrow	
Greenconn Technology	PCB Connectors	4	\leftrightarrow	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
HALO Electronics	Data & Telecom	18-58	7	Л	
HARTING	PCB Connectors	12-14	7	\leftrightarrow	
	PCB Connectors	28	7	\leftrightarrow	
Hirose Electric	RF Connectors	28	7	\leftrightarrow	
	FFC/FPC	28	7	\leftrightarrow	
JST	PCB Connectors	28-54	7	\leftrightarrow	
	PCB Connectors	6-8	\leftrightarrow	\leftrightarrow	
Mil-Max	IC Sockets	6-8	\leftrightarrow	\leftrightarrow	
Omron	PCB Connectors	16-20	7	\leftrightarrow	
Sullins	PCB Connectors	8-10	\leftrightarrow	\leftrightarrow	
	Automotive Connectors	32-42	7	\leftrightarrow	
	Circular Connectors	30-32	\leftrightarrow	7	
	Relays	38-40	\leftrightarrow	\leftrightarrow	
	D-Sub Connectors	10-12	\leftrightarrow	\leftrightarrow	
TE Connectivity	Data & Telecom	10-12	\leftrightarrow	\leftrightarrow	Price increases effective since July 5 th 2021
	PCB Connectors	18-20	\leftrightarrow	\leftrightarrow	
	RF Connectors	14-16	\leftrightarrow	7	
	IC Sockets	8-10	\leftrightarrow	\leftrightarrow	
	Terminal Blocks & Crimps	16-18	\leftrightarrow	\leftrightarrow	
	Lighting Connectors	10-12	\leftrightarrow	7	
WAGO	Terminal Blocks & Crimps	12	7	7	
WAGO	Lighting Connectors	12	7	7	
WECO	Terminal Blocks & Crimps	14-18	7	\leftrightarrow	



Opto/Lighting

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Bridgelux	Chip On Board (CoB)	12-14	\leftrightarrow	\leftrightarrow	
Dialicht	Indication LEDs	14-18	7	\leftrightarrow	
Dialight	6V (LED Optics)	12-18	\leftrightarrow	\leftrightarrow	
	Automotive LEDs (AEC-Q101 Certified)	10-12	\leftrightarrow	\leftrightarrow	
Everlight	Infrared Components/ LED	22-24	7	\leftrightarrow	
Evenight	Indication LEDs	16-18	7	\leftrightarrow	
	UV LEDs	10-12	\leftrightarrow	\leftrightarrow	
Excellence Optoelectronics Inc.	Automotive LEDs (AEC-Q101 Certified)	10-12	\leftrightarrow	\leftrightarrow	
General Luminaire	Standard Light Engines (Level 2 Boards)	16-18	\leftrightarrow	7	
Inolux	Indication LEDs	8-10	\leftrightarrow	\leftrightarrow	
Kingbright	LED Displays	12-14	Ľ	\leftrightarrow	
Kingongin	Indication LEDs	10-12	\leftrightarrow	\leftrightarrow	
	Infrared Components/ LED	14-16	7	\leftrightarrow	
Lite-On	LED Displays	10-12	\leftrightarrow	\leftrightarrow	
	Indication LEDs	18-22	7	\leftrightarrow	
Lumex	LED Displays	18	7	\leftrightarrow	
Lumex	Indication LEDs	10-16	\leftrightarrow	\leftrightarrow	
	Illumination High Power LEDs (White)	20-36	\leftrightarrow	\leftrightarrow	
	Illumination High Power LEDs (Colors)	28-36	\leftrightarrow	\leftrightarrow	
	Illumination High Power LEDs (White & Colors)	14-16	\leftrightarrow	\leftrightarrow	
	Horitcultural Mid Power LEDs (White & Colors)	10-14	\leftrightarrow	\leftrightarrow	
Lumileds	Automotive LEDs (AEC-Q101 Certified)	18-20	7	7	
	Chip On Board (CoB)	20-28	\leftrightarrow	\leftrightarrow	
	Standard Light Engines (Level 2 Boards)	18-36	\leftrightarrow	\leftrightarrow	
	Infrared Components/ LED	28	7	\leftrightarrow	
	UV LEDs	твс	7	\leftrightarrow	
Meanwell	LED Drivers	28-52	\leftrightarrow	\leftrightarrow	
Murata	Lighting Controls	28-32	\leftrightarrow	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	Illumination High Power LEDs (White)	14-16	Ľ	\leftrightarrow	
	Illumination High Power LEDs (Colors)	14-16	Ľ	\leftrightarrow	
Nichia	Illumination High Power LEDs (White & Colors)	16-18	Ľ	\leftrightarrow	
	Horitcultural Mid Power LEDs (White & Colors)	14-16	Ľ	\leftrightarrow	
	Chip On Board (CoB)	14-16	\leftrightarrow	\leftrightarrow	
Raystar	OLEDs	30-40	7	7	
	TFT Displays	40-75	7	7	
конм	Infrared Components/ LED	8-10	\leftrightarrow	\leftrightarrow	
	Indication LEDs	22-48	R	\leftrightarrow	
	Illumination High Power LEDs (White)	14-16	Ľ	\leftrightarrow	
	Illumination High Power LEDs (White & Colors)	10-14	Ľ	\leftrightarrow	
Samsung LED	Horitcultural Mid Power LEDs (White & Colors)	16-18	Ľ	\leftrightarrow	
	Chip On Board (CoB)	14-16	\leftrightarrow	\leftrightarrow	
	Standard Light Engines (Level 2 Boards)	14-16	\leftrightarrow	\leftrightarrow	
	Illumination High Power LEDs (White)	12-14	\leftrightarrow	\leftrightarrow	
	Illumination High Power LEDs (White & Colors)	8-10	\leftrightarrow	\leftrightarrow	
Seoul Semiconductor	Horitcultural Mid Power LEDs (White & Colors)	8-10	\leftrightarrow	SMA	
	Chip On Board (CoB)	10-12	\leftrightarrow	\leftrightarrow	
	Standard Light Engines (Level 2 Boards)	12-14	\leftrightarrow	\leftrightarrow	
Seoul Viosys	UV LEDs	10-12	7	\leftrightarrow	
Stanley Electric	LED Displays	14	\leftrightarrow	\leftrightarrow	
	Indication LEDs	12-14	\leftrightarrow	\leftrightarrow	
SunLed	LED Displays	16	\leftrightarrow	\leftrightarrow	
Team Source	TFT Displays	26-75	7	7	
TE Connectivity	6A (Heat Sinks, LED Holders)	22-52	\leftrightarrow	\leftrightarrow	
TT Electronics- Optek Technology	Infrared Components/ LED	18-22	7	\leftrightarrow	
vcc	Indication LEDs	14	\leftrightarrow	л	
	Infrared Components/ LED	22-54	R	7	
Vishay	Indication LEDs	22-54	R	7	
	UV LEDs	16-18	ק	\leftrightarrow	



Memory

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	Memory Modules	12-14	\leftrightarrow	\leftrightarrow	
ADATA	eMMC	14-18	\leftrightarrow	\leftrightarrow	
	Memory Cards	12-14	\leftrightarrow	\leftrightarrow	
	Solid State Drives (SSD)	10-14	\leftrightarrow	\leftrightarrow	
Adesto Technologies	NOR Flash	20-42	\leftrightarrow	R	
	DATA Flash	42-54	\leftrightarrow	\leftrightarrow	
	PC (Commodity) DRAM	8-22	Ľ	\leftrightarrow	
	Mobile DRAM	28-32	\leftrightarrow	\leftrightarrow	
Alliance Memory	SRAM	16-28	\leftrightarrow	7	
	NOR Flash	18-22	\leftrightarrow	\leftrightarrow	
	NAND Flash	22-54	\leftrightarrow	\leftrightarrow	
	SRAM	14-42	\leftrightarrow	7	
Cypress	NOR Flash	34-54	7	7	
	FRAM & NVSRAM	18-54	7	7	
Everspin Technologies	MRAM	14-30	\leftrightarrow	7	
	NOR Flash	20-30	\leftrightarrow	\leftrightarrow	
Greenliant	eMMC	24-26	\leftrightarrow	\leftrightarrow	
Greenlant	Memory Cards	20-28	7	\leftrightarrow	
	Solid State Drives (SSD)	20-28	\leftrightarrow	\leftrightarrow	
	PC (Commodity) DRAM	8-12	Ľ	SMA	
Kingston	Memory Modules	8-12	\leftrightarrow	\leftrightarrow	
Kingston	eMMC	12-14	Ľ	SMA	
	Memory Cards	8-42	\leftrightarrow	\leftrightarrow	
	Solid State Drives (SSD)	10-14	Ľ	SMA	
	NOR Flash	30-34	Ľ	\leftrightarrow	
Macronix	SLC NAND Flash	30-34	\leftrightarrow	\leftrightarrow	
	eMMC	54-56	7	R	Parts on allocation, MXIC is not quoting and not taking new orders for the time being



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
	SRAM	48-50	л	Л	
	NOR Flash	22-54	7	7	
Microchip	EEPROM	28-54	7	\leftrightarrow	
	EPROM	14-28	\leftrightarrow	\leftrightarrow	
	PC (Commodity) DRAM	54-56	\leftrightarrow	\leftrightarrow	
Micron	Memory Modules	54-56	7	7	
	eMMC	54-56	7	7	
	Solid State Drives (SSD)	54-56	\leftrightarrow	\leftrightarrow	
	SRAM	22-42	7	7	
ON Semiconductor	EEPROM	22-32	7	7	
Renesas	SRAM	22-24	\leftrightarrow	\leftrightarrow	
	PC (Commodity) DRAM	54-56	\leftrightarrow	\leftrightarrow	
Samsung	Memory Modules	54-56	7		Parts on allocation, Samsung is not quoting and not taking new orders for the
Sumsung	eMMC	54-56	7	7	time being
	Solid State Drives (SSD)	54-56	\leftrightarrow	\leftrightarrow	
SkyHigh Memory	SLC NAND Flash	20-22	\leftrightarrow	\leftrightarrow	
	eMMC	20-22	7	7	
STMicroelectronics	EEPROM	54-56	я	7	

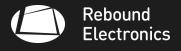


Passives

MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Apl Delevan	Inductors	16-20	\leftrightarrow	\leftrightarrow	
	Capacitors- Supercapacitors	16-18	\leftrightarrow	7	
	Capacitors- Tantalum Molded	30-36	\leftrightarrow	\leftrightarrow	
	Capacitors- Tantalum Conformals	54	\leftrightarrow	\leftrightarrow	
AVX	Capacitors- Polymer Tantalum	22	\leftrightarrow	\leftrightarrow	
AVA	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	22-28	\leftrightarrow	\leftrightarrow	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	26-28	\leftrightarrow	\leftrightarrow	Excludes 1206+ sizes
	Leaded Capacitors- Ceramic	32	\leftrightarrow	\leftrightarrow	
	Specialty Capacitors	32-36	\leftrightarrow	\leftrightarrow	
	Filters- Common Mode Choke	6-8	7	\leftrightarrow	
Coilmaster Electronics	High Frequency Transformer	8-10	7	\leftrightarrow	
Commaster Electronics	Inductors	8-10	7	\leftrightarrow	
	LAN Magnetics Transformer	7-9	7	\leftrightarrow	
	Ferrite Beads	9-10	7	\leftrightarrow	
стѕ	Resistor Networks	18-42	7	7	
Eaton	Capacitors- Supercapacitors	20-30	7	7	
	Inductors	22-32	7	7	
ELNA	Capacitors- Supercapacitors	24-36	7	7	
Faratronic	Capacitors- Film	8-20	\leftrightarrow	\leftrightarrow	
HALO Electronics	Inductors	48-58	7	\leftrightarrow	
	Filters	38-48	7	\leftrightarrow	
	Inductor / Transformers	14-22	7	7	
Murata	Surface Mount General Capacitors- Ceramic (Less than 1 uf) Surface Mount General Capacitors-	26-28	\leftrightarrow	\leftrightarrow	
	Ceramic (Greater than 1 uf)	32-36	\leftrightarrow	\leftrightarrow	Excludes 1206+ sizes
	Leaded Capacitors- Ceramic	22-26	\leftrightarrow	\leftrightarrow	
	Specialty Capacitors	22-28	\leftrightarrow	\leftrightarrow	
	Electrolytic	32-52	7	7	
	Filters	16-22	7	7	
	Inductors	16-22	7	\leftrightarrow	
NIC Components	Fixed Resistors	14-20	7	7	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	24-32	\leftrightarrow	\leftrightarrow	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	32-40	\leftrightarrow	\leftrightarrow	Excludes 1206+ sizes
	Leaded Capacitors- Ceramic	28-30	\leftrightarrow	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
Nichicon	Electrolytic	32-52	7	7	
Nippon Chemi-Con	Electrolytic	40	\leftrightarrow	\leftrightarrow	
	Electrolytic	26-52	7	7	
	Capacitors- Polymer Tantalum	32	7	7	
Panasonic	Inductors / Transformers	24-30	7	\leftrightarrow	
	Fixed Resistors	28-54	7	7	
	Resistor Networks	28-54	7	7	
Pancon Corp Paktron	Capactors- Film	12-14	7	7	
Royal Ohm	Resistor Networks	10-30	7	7	
Samwha Electric	Electrolytic	30-50	7	7	
	Fixed Resistors	48	\leftrightarrow	7	
Samsung Electro-Mechanics	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	26-28	\leftrightarrow	\leftrightarrow	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	26-28	\leftrightarrow	\leftrightarrow	Excludes 1206+ sizes
Stackploe Electronics	Fixed Resistors	20-32	7	7	
Sumida	Inductors	28-42	7	\leftrightarrow	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	32	\leftrightarrow	\leftrightarrow	
Taiyo Yuden	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	32-36	\leftrightarrow	\leftrightarrow	
	Filters	28-42	7	7	
	Inductors	16-32	7	7	
ток	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	22-24	7	\leftrightarrow	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	24-30	7	\leftrightarrow	Excludes 1206+ sizes
TDK EPCOS	Capacitors- Film	26-54+	7	\leftrightarrow	
	Filters	38-48	7	\leftrightarrow	



MANUFACTURER	PRODUCT	LEAD TIME (WKS)	TREND	PRICING	COMMENTS
TT Electronics- BI Technologies	Trimmers & Pots	6-54	7	7	
TT Electronics- IRC	Fixed Resistors	22-54	7	7	
United Chemi-Con	Electrolytic	32-52+	7	7	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	42	\leftrightarrow	\leftrightarrow	
Viking	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	26-30	7	\leftrightarrow	Excluding 1206+ sizes
	Trimmers & Pots	12-20	7	7	
	Capacitors- Film	22-32	7	7	
	Capacitors- Supercapacitors	16-22	A	\leftrightarrow	
	Capacitors- Tantalum Molded	42-52	\leftrightarrow	7	
	Capacitors- Tantalum Conformals	16-18	\leftrightarrow	\leftrightarrow	
Vishay	Capacitors- Polymer Tantalum	22-32	7	\leftrightarrow	
	Inductors / Transformers	14-22	\leftrightarrow	\leftrightarrow	
	Fixed Resistors	32-54	7	7	
	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	22-32	\leftrightarrow	\leftrightarrow	
	Leaded Capacitors- Ceramic	14-18	7	\leftrightarrow	
	Specialty Capacitors	14-16	\leftrightarrow	\leftrightarrow	
WIMA	Capacitors- Film	18-22	R	7	
Wurth Elektronik	Inductors / Transformers	28-42	7	7	
	Fixed Resistors	26-30	7	7	
V	Resistor Networks	26-30	7	7	
Yageo	Surface Mount General Capacitors- Ceramic (Less than 1 uf)	28-32	\leftrightarrow	\leftrightarrow	
	Surface Mount General Capacitors- Ceramic (Greater than 1 uf)	28-32	\leftrightarrow	\leftrightarrow	Excluding 1206+ sizes

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