



Sample Deliverable

# GLOBAL ELECTRONICS COMMODITY INTELLIGENCE

Q3 2025

JULY – SEPTEMBER

# Executive Summary

## Welcome to the Q3 2025 edition of the Commodity Intelligence Report

### *Supplier Sentiment turns positive with a pickup in demand, short term due to tariff volatility, with early indicators of a more widespread increase.*

Supplier sentiment is generally more positive, reflecting modest demand increases. This uptick may be partly driven by global tariff uncertainty and delayed implementations, which are prompting cautious optimism across the business environment.

With the backdrop of normalized inventories, the electronics ecosystem is willing to absorb slightly more inventory to buffer from the complete execution of tariffs, specifically between the US and China. We are seeing more suppliers reporting neutral to favorable book-to-bill ratios. Most factories are still operating below maximum capacity, and for semiconductor companies, wafer starts remain muted. Lead times have remained stable through the current transition of business levels. However, any unplanned spike in demand will likely result in extended lead times.

The only product family running tight is DRAMs, specifically for DDR4, as suppliers migrate production to DDR5 and HBM for data center applications. Additionally, high-performance fiber transceivers supporting the data center infrastructure are in short supply due to supply issues of specialized components, such as lasers, lenses, and other subassemblies.

In general, global suppliers have continued to execute their respective China +1 strategies to help mitigate any potential disruptions resulting from US-China trade tensions. This has driven more business to Vietnam, Malasia, Thailand and India with all companies reviewing multiple supply chain scenarios in respond to changing tariff dynamics. Indigenous Chinese suppliers are experiencing above-average growth, as Chinese OEMs drive their 'China for China' models, favoring China-based suppliers.

Prices remain stable, with some suppliers becoming more aggressive in their efforts to grow or maintain market share. However, rising raw material costs—particularly for copper, gold, and certain rare earth minerals—are driving price increases for commodities such as connectors, select PCBs, and circuit protection devices as suppliers respond to higher input expenses.

## Executive Summary (continued)

Additional key trends covered in this report:

- The datacenter business supporting AI applications continues to be highly robust, with hyperscalers committing hundreds of billions of dollars to capital expenditures over the next few years.
- The EV business in China continues to be a bright spot; however, with the aggressive vehicle pricing we are experiencing, it is projected to drive some consolidation of the Chinese EV OEMs.
- China +1 and associated tariff mitigation strategies by suppliers increase some risk of supply disruptions and potentially longer lead times. More OEMs are shifting manufacturing operations outside of China, including a preference for components with a non-China country of origin (COO).
- As suppliers are driven to “localize” supply chains due to pressures from the US, China, and the EU trade tensions, the result could fragment supply chains, raise production costs for multinationals, and affect chip availability and prices globally.

We recommend working closely with your respective Jabil commodity managers to help mitigate supply chain risk and take advantage of new suppliers looking to fill the void for legacy product families.

If you have any questions or require additional support, please contact the commodity management team or me directly.



**Graham Scott**  
VP Global Direct Procurement

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# Market Status Summary, 1 of 5

COMMODITY	SUB COMMODITY	SUPPLY				MARKET DYNAMICS				PRICE			
		Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26
RESISTOR	GENERAL												
RESISTOR	AUTOMOTIVE												
CIRCUIT PROTECTION	*												
FREQUENCY	*												
CAPACITOR-CERAMIC	GENERAL												
CAPACITOR-CERAMIC	AUTOMOTIVE												
CAPACITOR-NON CERAMIC	*												
CAPACITOR-NON CERAMIC	TANTALUM												
CAPACITOR-NON CERAMIC	FILM												
CAPACITOR-NON CERAMIC	ELECTROLYTIC												
FILTER	*												
INDUCTOR	*												
TRANSFORMER	*												

Sample

Legend	Supply	Market Dynamics	Price
Yellow	Constrained	Churn/ Consolidation	Flat
Red	Allocation	Exit Market	Increase
Green	No Constraints	Stable	Decrease

# Market Status Summary, 2 of 5

COMMODITY	SUB COMMODITY	SUPPLY				MARKET DYNAMICS				PRICE			
		Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26
MEMNONVOL	NOR (PARALLEL)												
MEMNONVOL	NOR (SPI)												
MEMNONVOL	NAND (SLC)												
MEMNONVOL	NAND (TLC)												
MEMNONVOL	NAND (MLC)												
MEMNONVOL	NAND (3D NAND)												
MEMNONVOL	EEPROM												
MEMNONVOL	SD CARD												
MEMNONVOL	USB												
MEMNONVOL	MICRO SD CARD												
MEMNONVOL	CF CARD												
MEMNONVOL	EMMC												
MEMNONVOL	UFS												
MEMVOL	SRAM - Asynchronous												
MEMVOL	SRAM - Synchronous												
MEMVOL	SDRAM												
MEMVOL	DDR1												
MEMVOL	DDR2												
MEMVOL	DDR3												
MEMVOL	DDR4												
MEMVOL	LP DDR3,4												
MEMVOL	LP DDR1,2												
MEMVOL	DDR4												
MEMVOL	RDIMM/UDIMM/SODIMM												
MEMVOL	DDR3												
MEMVOL	RDIMM/UDIMM/SODIMM												
MEMVOL	DDR1,2 RDIMM/UDIMM/SODIMM												
MEMVOL	MCP/HMC/POP												

Sample

Legend	Supply	Market Dynamics	Price
Yellow	Constrained	Churn/ Consolidation	Flat
Red	Allocation	Exit Market	Increase
Green	No Constraints	Stable	Decrease

# Market Status Summary, 3 of 5

COMMODITY	SUB COMMODITY	SUPPLY				MARKET DYNAMICS				PRICE			
		Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26
SENSOR	*												
SENSOR	MEMS												
SENSOR	TEMPERATURE												
SENSOR	PRESSURE												
SENSOR	MAGNETIC												
SENSOR	IMAGE												
SENSOR	OPTICAL												
SOLID STATE DRIVES	*												
SOLID STATE DRIVES	PCIe/NVMe												
SOLID STATE DRIVES	SAS												
SOLID STATE DRIVES	SATA												
SOLID STATE DRIVES	PCIe/NVMe												
SOLID STATE DRIVES	SAS												
SOLID STATE DRIVES	SATA												
TIMING IC	*												
TIMING IC	CLOCK BUFFERS & DISTRIBUTORS												
TIMING IC	CLOCK GENERATORS & RTC												
TIMING IC	SUB-TIMING IC												
TIMING IC	TIMER												

Sample

Legend	Supply	Market Dynamics	Price
Yellow	Constrained	Churn/ Consolidation	Flat
Red	Allocation	Exit Market	Increase
Green	No Constraints	Stable	Decrease

# Market Status Summary, 4 of 5

COMMODITY	SUB COMMODITY	SUPPLY				MARKET DYNAMICS				PRICE			
		Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26
LOGIC	*												
ANALOG SIGNAL CHAIN	*												
ANALOG SIGNAL CHAIN	INTERFACE												
ANALOG SIGNAL CHAIN	CONVERTER												
ANALOG SIGNAL CHAIN	COMMUNICATION												
ANALOG SIGNAL CHAIN	MULTIMEDIA												
ANALOG POWER	*												
ANALOG POWER	AMPLIFIER												
ANALOG POWER	ANALOG SWITCH												
ANALOG POWER	POWER MANAGEMENT												
DIODE	*												
TRANSISTOR	*												
OPTOELECTRONICS	*												
OPTOELECTRONICS (LED)	LED												

Sample

Legend	Supply	Market Dynamics	Price
Yellow	Constrained	Churn/ Consolidation	Flat
Red	Allocation	Exit Market	Increase
Green	No Constraints	Stable	Decrease

# Market Status Summary, 5 of 5

COMMODITY	SUB COMMODITY	SUPPLY				MARKET DYNAMICS				PRICE			
		Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY25	Q4FY25	Q1FY26	Q2FY26
MICROPROCESSOR	*												
PROG LOGIC	*												
CHIP SET	*												
CONNECTOR	Edge Card Connector												
CONNECTOR	Backplane Connector												
CONNECTOR	I/O High Speed												
CONNECTOR	POWER												
CONNECTOR	PCB - Headers and Receptacles												
CONNECTOR	PCB - FFC - FPC												
CONNECTOR	PCB - Memory Card												
CONNECTOR	I/O (Non-High Speed)												
CONNECTOR	RF												
CONNECTOR	Socket												
CONNECTOR	Terminal												
CONNECTOR	Terminal Block												
CONNECTOR	Battery Connector												
CONNECTOR	Other Connectors												
RELAY	*												
SWITCH	*												
PCB	*												

Sample

Legend	Supply	Market Dynamics	Price
Yellow	Constrained	Churn/ Consolidation	Flat
Red	Allocation	Exit Market	Increase
Green	No Constraints	Stable	Decrease

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# PASSIVE COMMODITIES

## Passive Market Overview

**A surge in demand was observed, particularly following the 90-day tariff pause between the U.S. and China.**

Major manufacturers report an improved book-to-bill ratio compared to the previous quarter.

- A sudden surge in demand has been observed, notably following the announcement of the 90-day tariff pause between the US and China.
- Most passive component manufacturers are experiencing a moderate pickup in demand, as reflected in quoted book-to-bill ratios typically ranging between 1.0-1.05 and 1.2.
- Major demand drivers remain AI applications and the Chinese automotive market.
- The average manufacturer capacity utilization rate is around 80%, with inventory levels stabilizing at 2 to 2.5 months.
- Some manufacturers are raising inventory levels to 3-4 months as a contingency plan for locations prone to natural disasters.

Most major manufacturers are China +1 ready. Recent export controls on rare earth elements have had minimal impact on supply.

- Most major manufacturers initiated a China + 1 strategy a few years ago, and its effectiveness is becoming increasingly evident. This approach has helped build supply chain resilience, particularly amid the ongoing reciprocal tariffs between the world's two largest economies. Supply dependence on China has also decreased significantly, with many companies successfully shifting parts of their manufacturing operations to ASEAN countries such as Vietnam, India, Malaysia, Taiwan, and Thailand.
- Our survey on rare earth element export controls indicates that while MLCCs and certain magnetic commodities contain trace amounts of rare earth elements, the quantities involved are minimal. Given the current inventory buffers and dual-sourcing strategies, there is no known supply risk that impacts the production of these components.

# Ceramic Capacitors

## SUPPLY

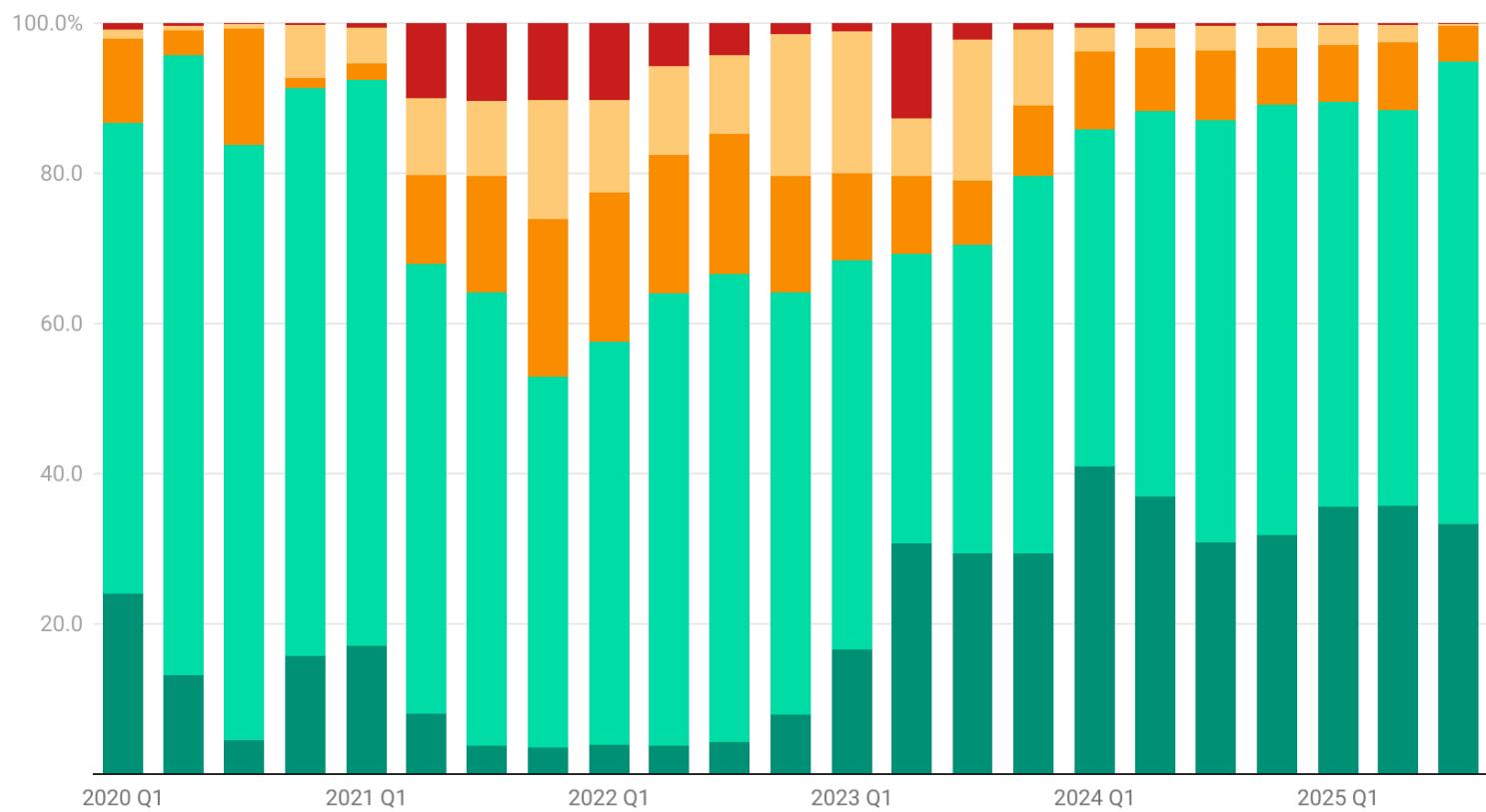
Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
General				
Automotive				

- All manufacturers currently report book-to-bill ratios above 1, with a select few quoting higher ratios between 1.2 and 1.3. This indicates a modest quarter-over-quarter improvement in order momentum across the sector.
- Most Tier 1 manufacturers have utilization rates between 85% and 90%, reflecting a slight increase compared to the previous period. Tier 2 manufacturers, which primarily handle lower-tech components, also saw an increase in utilization from around 60% to approximately 70%
- High-end AI-related components have limited flexibility for short-notice orders, as major suppliers have observed an uptick in demand and forecasts for the second half of 2025. Sufficient lead time is essential to ensure order fulfillment.
- Supply for legacy components, such as larger case sizes, may face tightening as certain suppliers reallocate capacity to support higher-margin segments like AI and automotive applications
- Lead times for most manufacturers remain broadly stable; however, suppliers emphasize that orders must align with the stated lead times. Notably, some Chinese and Taiwanese manufacturers, operating at lower utilization rates, offer greater flexibility.
- Components used in defense, military, and aerospace applications continue to face supply constraints, leaving limited room for order adjustments.
- Manufacturers are proactively building inventory buffers to hedge against market uncertainties and better absorb potential sudden demand surges.

# Ceramic Capacitors (continued)

## Ceramic Capacitors: Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



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# Ceramic Capacitors (continued)

## MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
General				
Automotive				

- The current U.S. tariff situation and weakening downstream demand are creating significant risks for the MLCC market in the second half of 2025. While the 90-day grace period on reciprocal tariffs has offered temporary relief, persistent uncertainty has disrupted supply-demand dynamics in the first half of the year. This raises concerns that the typical seasonal boost in the latter half of 2025 may not materialize as expected.
- While macroeconomic uncertainties and trade policy issues present challenges, sectors such as AI infrastructure and automotive electronics are expected to drive demand for MLCCs through the remainder of 2025.
- We have identified a growing trend among US-based OEMs to shift their manufacturing operations outside of China, coupled with a preference for components with a non-China country of origin (COO). As a result, manufacturers are actively assessing and evaluating alternative locations to optimize their China+1 strategies.

# Ceramic Capacitors (continued)

## PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
General			Sample	
Automotive				

- While cost reduction efforts have generally slowed from most manufacturers, some are adopting alternative strategies based on their corporate direction or target market segments. As a result, maintaining multiple approved vendor listings (AVLs) is strongly recommended to ensure continued price competitiveness.
- Demand for automotive-grade aluminum capacitors has remained stable. However, a notable shift is expected as the shift from standard Cylindrical Type 2025 towards the more advanced Cylindrical Type 2025A continues. This progression, due to the higher content of capacitors per Cylindrical Type 2025A, has led to increased demand. Other sectors have begun to offer similar types of capacitors in the market.
- Japanese Electronics manufacturers' average capacity utilization is approximately 80%. Lead times for aluminum capacitors have improved significantly. Japanese manufacturers are currently quoting lead times of 8-12 weeks, while Taiwanese and Chinese manufacturers are quoting improved lead times of 8-10 weeks.
- The supply situation for aluminum capacitors used in automotive and telecommunications has dramatically improved. Lead times for these types of capacitors are now quoted between 10-12 weeks. Capacity utilization has increased to 80%.

# Tantalum Capacitors

## SUPPLY

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Tantalum			Sample	

- Demand for Mn02 Tantalum is expected to be sluggish for the rest of 2025. Overall capacity utilization is approximately 60%, with an average Book-to-Bill ratio of 0.8:1.

- Demand for aluminum oxide capacitors has continued to decline, with a notable shift in market share from Asian to European manufacturers due to the higher cost of aluminum per kg. However, the Industrial, Consumer Goods, and Computer sectors have begun to show modest signs of recovery in demand.
- Demand for electrolytic capacitors, average capacity utilization is approximately 80%. Lead times for aluminum capacitors have improved significantly, while ceramic and film capacitors are seeing improved lead times of 8-12 weeks.
- The market situation for hybrid capacitors, used in automotive and telecommunications has dramatically improved. Lead times for these hybrid capacitors are now quoted between 16-24 weeks. Capacity utilization has increased to 80%.

# Tantalum Capacitors (continued)

## Non-Ceramic Capacitors: Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



Created with Datawrapper

# Tantalum Capacitors (continued)

## MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Tantalum				

- MnO<sub>2</sub> capacitors are classified as legacy products, and the demand continues to shrink; no further investment is planned for capacity and development. The shift away from these products is due to advancements in both MLCC and polymer capacitor technology

- For the first time in 2025, the market for tantalum capacitors has shown a positive growth. This is due to the shift away from MnO<sub>2</sub> capacitors to tantalum capacitors. The shift is driven by the high cost of MnO<sub>2</sub> capacitors per unit. Additionally, the demand for tantalum capacitors is increasing, which is driving the market for tantalum capacitors. The market for tantalum capacitors is expected to grow by 5-10% in the next 12 months.
- The market situation for tantalum capacitors is currently stable. The market for tantalum capacitors has shown a positive growth. The market for tantalum capacitors is expected to grow by 5-10% in the next 12 months. Capacity utilization has increased to 80%.

# Tantalum Capacitors (continued)

## PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Tantalum	Yellow	Dark Grey	Dark Grey	Dark Grey

- Global demand for tantalum capacitors is increasing, particularly in the automotive and consumer electronics sectors. Prices are expected to rise in the coming quarters.
- Supply chain disruptions, including geopolitical events and trade tensions, are contributing to price volatility. Lead times for delivery are currently around 8-12 weeks.
- The market is shifting towards higher capacity tantalum capacitors, which are more cost-effective. The demand for these capacitors is projected to grow by 8-10%.

Product Type	Pricing Outlook	Key Factors Influencing Pricing
Tantalum MnO <sub>2</sub>	Sample	
Wet Tantalum & Military Series	Sample	
Tantalum Polymer	Sample	

# Electrolytic/Film Capacitors

## SUPPLY

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Film				
Electrolytic				

- Demand for aluminum capacitors has softened in the automotive sector in Europe and the US, but we continue to see strong EV demand in China, driven by ongoing technology advancements in autonomous driving and AI. The industrial, renewable energy, and consumer sectors continue to lag in demand.

- The market situation for aluminum capacitors has improved, with demand in Europe and the US showing signs of recovery. The industrial, renewable energy, and consumer sectors have begun to show modest signs of recovery in demand.
- In the aluminum electrolytic capacitor market, demand has been relatively flat. Lead times for aluminum capacitors have improved significantly, with European and Chinese manufacturers seeing improved lead times of 8-12 weeks.
- The market situation for film capacitors has improved, with demand in Europe and the US showing signs of recovery. Lead times for these high-voltage capacitors are now around between 14-18 weeks. Capacity utilization has increased to 80%.

## Electrolytic/Film Capacitors (continued)

# MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Film				
Electrolytic				

- Several manufacturers are strategically expanding their facilities to accommodate the potential growth of Hybrid capacitors. They are making significant investments to capture market share and drive innovation. Panasonic remains the market leader in terms of technology and is in the process of migrating 40% of its capacity from Japan to Malaysia, with completion expected by 2030.

# Electrolytic/Film Capacitors (continued)

## PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Film	Yellow	Grey	Grey	Grey
Electrolytic	Green	Grey	Grey	Grey

- Aluminum and film capacitor pricing is expected to remain flat or see minor reductions in Q3 2025, despite inflated raw material costs, including aluminum foil, copper, and rising electricity and operational costs.

- Electrolytic capacitor pricing is expected to remain flat or see minor reductions in Q3 2025, despite inflated raw material costs, including aluminum foil, copper, and rising electricity and operational costs. The higher cost of aluminum per EUR thousand, the historical, financial, strategic and operational factors have begun to allow modest signs of recovery in demand.
- Electrolytic capacitor manufacturers average capacity utilization is approximately 80%. Lead times for standard capacitors are approximately 10-12 weeks, while European and Chinese manufacturers are seeing improved lead times of 8-10 weeks.
- The capacity utilization for film capacitor manufacturers is approximately 80%. Lead times for these manufacturers have significantly improved. Lead times for these manufacturers are now around 10 weeks. Capacity utilization has improved to 80%.

## Magnetics (Includes Inductor, Filter and Transformer)

### SUPPLY

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Filter	Green	Grey	Grey	Grey
Inductor	Green	Grey	Grey	Grey
Transformer	Green	Grey	Grey	Grey

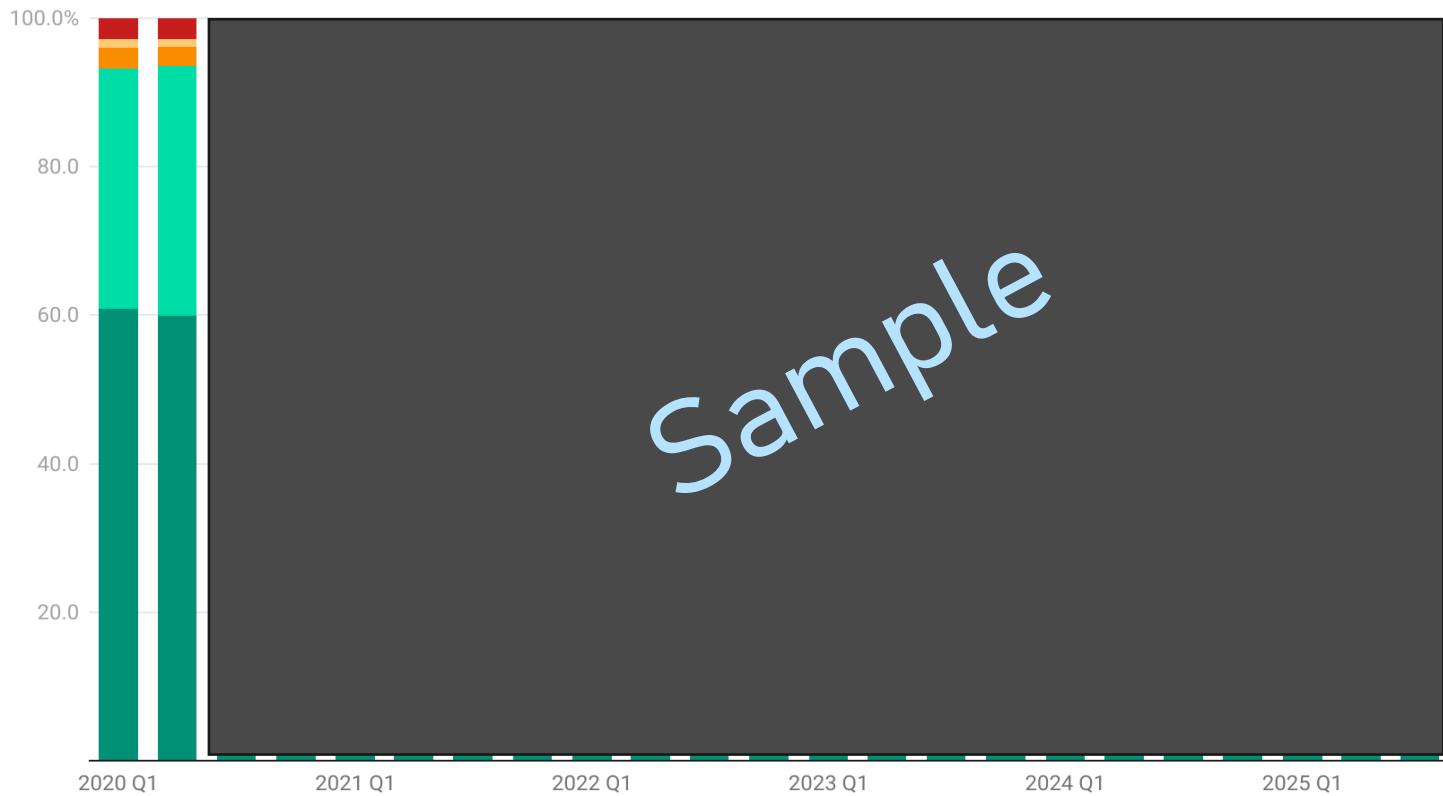
- Capacity utilization among most suppliers remains in the 70–85% range, indicating a stable production environment.

- Supplier for automotive and telecoms applications has shown significant capacity utilization with a reported 80% in the past three months. Despite 2025 volume in these sectors being projected due to the high levels of investment per unit, the industrial, consumer, energy and telecoms sectors have begun to show modest signs of recovery in demand.
- Supplier for medical, industrial, energy, telecoms, and automotive sectors have reported a capacity utilization of approximately 80%. Lead times for automotive suppliers have improved significantly, however manufacturers are currently reporting 10-12 week lead times, while telecoms and energy manufacturers are quoting improved lead times of 8-12 weeks.
- The supply situation for filter, inductor, and transformer manufacturers has dramatically improved. Lead times for these three sectors are now quoted between 8-12 weeks. Capacity utilization has increased to 80%.

# Magnetics (continued)

## Inductor: Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



## INDUCTOR

- Global market for automotive-grade aluminum resistors has continued to show a positive trend, with a notable shift in market share towards Chinese manufacturers. This shift is attributed to the significant improvements in lead times and cost efficiency. The Chinese market is currently leading in terms of production per unit, with European and American manufacturers showing a slower recovery from the pandemic. The overall market shows a steady increase in demand for automotive-grade resistors.
- The market for automotive-grade aluminum resistors is currently dominated by Chinese manufacturers, with a significant share of the market. The Chinese market is currently showing a steady increase in demand for automotive-grade resistors. The overall market shows a steady increase in demand for automotive-grade resistors.

# Magnetics (continued)

## Filter: Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



Sample

## FILTER

- Global lead times for automotive-grade aluminum components have increased significantly. The demand for aluminum is relatively stable, but the shift from traditional European and US manufacturers to Chinese suppliers has progressed due to the higher volume of aluminum per unit. Therefore, the European, American, Chinese, and Japanese markets have begun to show modest signs of recovery in demand.
- Aluminum, especially aluminum-based alloys, are currently experiencing a significant increase in price. The price for aluminum components has risen sharply, while European and Chinese manufacturers are quoting improved lead times of 8-12 weeks.

# Magnetics (continued)

## Transformer - Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



## TRANSFORMER

- Global market for automotive-grade aluminum capacitors has increased significantly, with a notable spike in demand in the first half of 2024. This is attributed to the high volume of production per unit. However, the industry faces challenges such as labor scarcity from Japan to other markets, which is driving up costs and lead times.
- In the Americas, the market for automotive-grade aluminum capacitors is showing signs of recovery, with lead times decreasing from 12-18 weeks to 8-12 weeks.

# Magnetics (continued)

## MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Filter				
Inductor				
Transformer				

- Market for automotive-grade aluminum capacitors has remained stable, with a modest shift in demand as the shift from standard aluminum electrolytic capacitors to aluminum foil capacitors due to the higher density of capacitors per unit. However, the reduced aluminum foil usage and higher prices have brought the cost of assembly to a standstill.
- Market for automotive-grade aluminum capacitors has remained stable, with a modest shift in demand as the shift from standard aluminum electrolytic capacitors to aluminum foil capacitors due to the higher density of capacitors per unit. However, the reduced aluminum foil usage and higher prices have brought the cost of assembly to a standstill.

Manufacturers	Trends
Global Manufacturers	
Chinese Manufacturers	
Taiwanese Manufacturers	Sample

# Magnetics (continued)

## PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Filter	Green	Grey	Grey	Grey
Inductor	Green	Grey	Grey	Grey
Transformer	Green	Grey	Grey	Grey

- Pricing trends remain stable across most product categories, despite uncertainties in the global trading environment.
- Demand for automotive-grade aluminum capacitors has increased significantly, with a notable shift in demand from European Union (EU) customers to Chinese suppliers. Price increases due to the higher cost of aluminum per EU customer. The Industrial, Consumer, Energy, and Other sectors have begun to show several signs of recovery in demand.
- Japanese aluminum manufacturers average capacity utilization is approximately 80%. Lead times for aluminum capacitors have improved significantly. Japanese manufacturers are currently quoting 10-12 weeks, while Taiwanese and Chinese manufacturers are quoting improved lead times of 8-10 weeks.
- The supply situation for Inductor manufacturers, used in automotive and consumer applications, has dramatically improved. Lead times for these Inductor capacitors are now quoted between 10-12 weeks. Capacity utilization has increased to 80%.

# Frequency

## SUPPLY

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Frequency	<span style="background-color: #80E6AA; display: inline-block; width: 15px; height: 15px;"></span>	<span style="background-color: #555; display: inline-block; width: 15px; height: 15px;"></span>	<span style="background-color: #555; display: inline-block; width: 15px; height: 15px;"></span>	<span style="background-color: #555; display: inline-block; width: 15px; height: 15px;"></span>

- The market remains soft across most major segments, except for automotive and AI-related applications, which continue to see steady demand. Suppliers are exhibiting signs of caution and uncertainty amid broader macroeconomic challenges, with limited visibility into the timing or pace of any sustained market recovery.

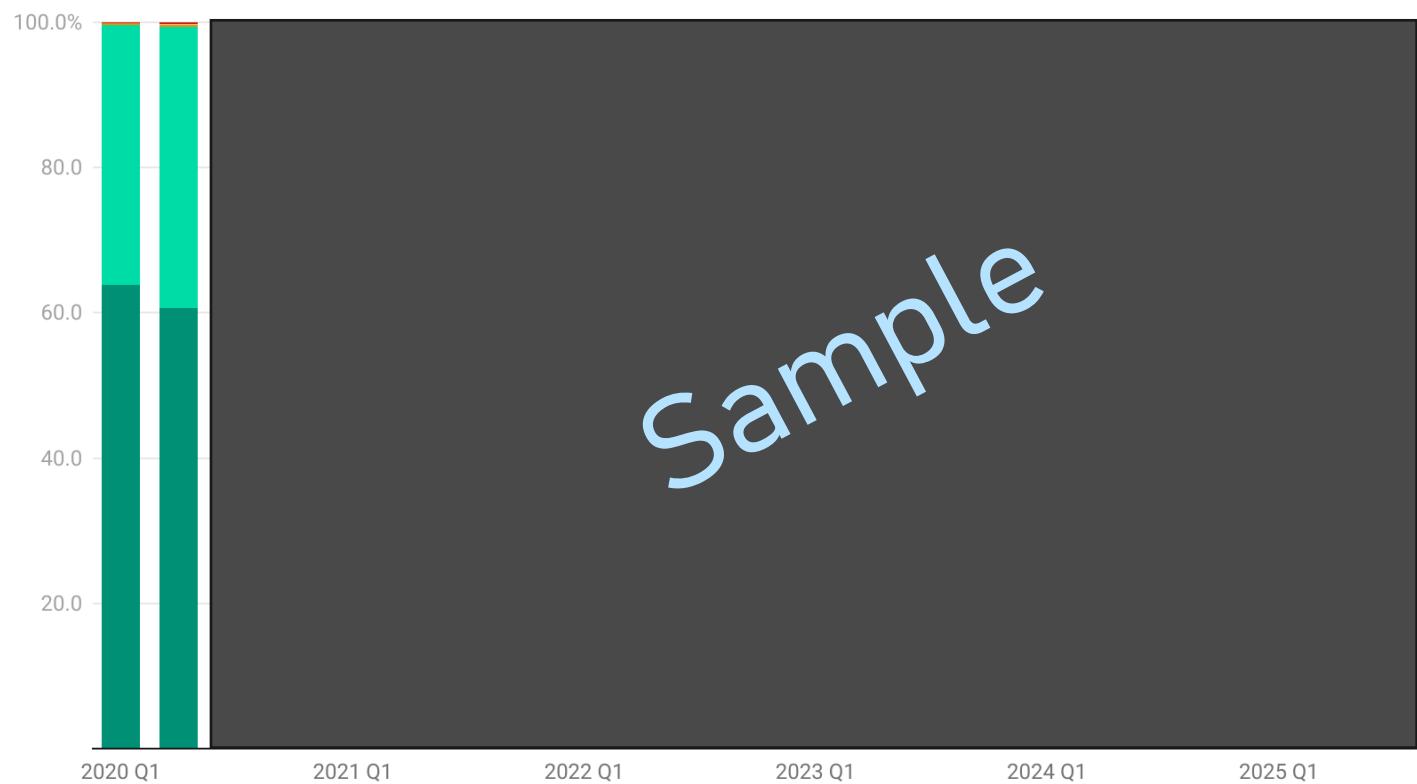
Market sentiment for automotive applications remains positive, with demand for EV components showing resilience. However, a notable shift is expected as the shift from internal combustion engine (ICE) vehicles to electric vehicles (EVs) progresses due to the higher cost of batteries per kWh. Therefore, the industrial, consumer, and automotive sectors have begun to show modest signs of recovery in demand. In the consumer electronics sector, demand for mobile phones, tablets, and laptops is showing signs of recovery, with European and Chinese manufacturers reporting improved sales of 5-10%.

The market situation for tablet computers and PC components, while still challenging, has shown slight improvement. Lead times for these high-value components are now around 10-12 weeks. Capacity utilization has increased to 80%.

# Frequency (continued)

## Frequency: Lead Time Trend

0-12 Weeks 13-25 Weeks 26-35 Weeks 36-52 Weeks 52 Weeks plus



Created with Datawrapper

# Frequency (continued)

## MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Frequency				

- Political tension between the US and China is prompting suppliers to seek manufacturing sites outside of China.

- The market for electronic components continues to expand. The shift from analog to digital components is expected to drive growth. The market for passive components, such as capacitors and resistors, is growing rapidly, with a projected CAGR of 5-7% over the next five years. The market for active components, such as integrated circuits and sensors, is also growing, with a projected CAGR of 4-6% over the next five years.
- The market for hybrid components, such as automotive and telecommunications, has dramatically improved. Lead times for these hybrid components are now around 10-12 weeks. Capacity utilization has increased to 80%.

# Frequency (continued)

## MARKET DYNAMICS (cont.)

- NEL Frequency Controls is now fully integrated into Abracan.

- Demand for automotive-grade aluminum connectors has increased significantly. Demand is driven largely by the shift from hybrid to full electric vehicles (EVs) which has driven higher EV production due to the higher content of connectors per EV. Meanwhile, the Industrial, Residential, Energy and Consumer sectors have begun to show modest signs of recovery in demand.
- Aluminum connectivity manufacturers average capacity utilization is approximately 80%. Lead times for aluminum connectors have improved significantly. European manufacturers are currently quoting 10-12 weeks lead time, while Taiwanese and Chinese manufacturers are quoting improved lead times of 8-12 weeks.
- The supply situation for hybrid connectors has dramatically improved. Lead times for these hybrid connectors are now quoted between 10-12 weeks. Capacity utilization has increased to 80%.

# Frequency (continued)

## Manufacturer Expansion & Relocation Plans

Manufacturer	New/Planned Location(s)	Key Focus/Initiative	Expected Timeline
TXC			
Raltron			
Taitien			
Hosonic			
Siward			
Diodes			
Kyocera			
Murata			

Sample

# Frequency (continued)

## PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Frequency	<span style="background-color: #90EE90; display: inline-block; width: 150px; height: 20px;"></span>	<span style="background-color: #667380; display: inline-block; width: 150px; height: 20px;"></span>	<span style="background-color: #667380; display: inline-block; width: 150px; height: 20px;"></span>	<span style="background-color: #667380; display: inline-block; width: 150px; height: 20px;"></span>

- Prices are trending downwards, particularly for smaller-sized crystals, where cost reductions are becoming increasingly common. Suppliers are adopting more aggressive pricing strategies to preserve or grow their market share amid heightened competitive pressure.

- Demand for automotive-grade aluminum capacitors has increased significantly, with a notable shift in demand from the US to China. In Q4FY25, volumes in China showed strong growth due to the higher content of capacitors per EV. However, the Indian, European, Chinese, and Japanese markets have begun to show mixed signs of recovery in demand.
- Japanese aluminum manufacturers' average capacity utilization is approximately 80%. Lead times for aluminum capacitors have significantly improved. Japanese manufacturers are currently quoting 10-12 weeks, while European and Chinese manufacturers are quoting improved lead times of 8-10 weeks.
- The supply situation for Indium capacitors used in automotive and telecommunications has dramatically improved. Lead times for these Indium capacitors are now quoted between 10-12 weeks. Capacity utilization has increased to 80%.

# Circuit Protection

## SUPPLY

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Circuit Protection				

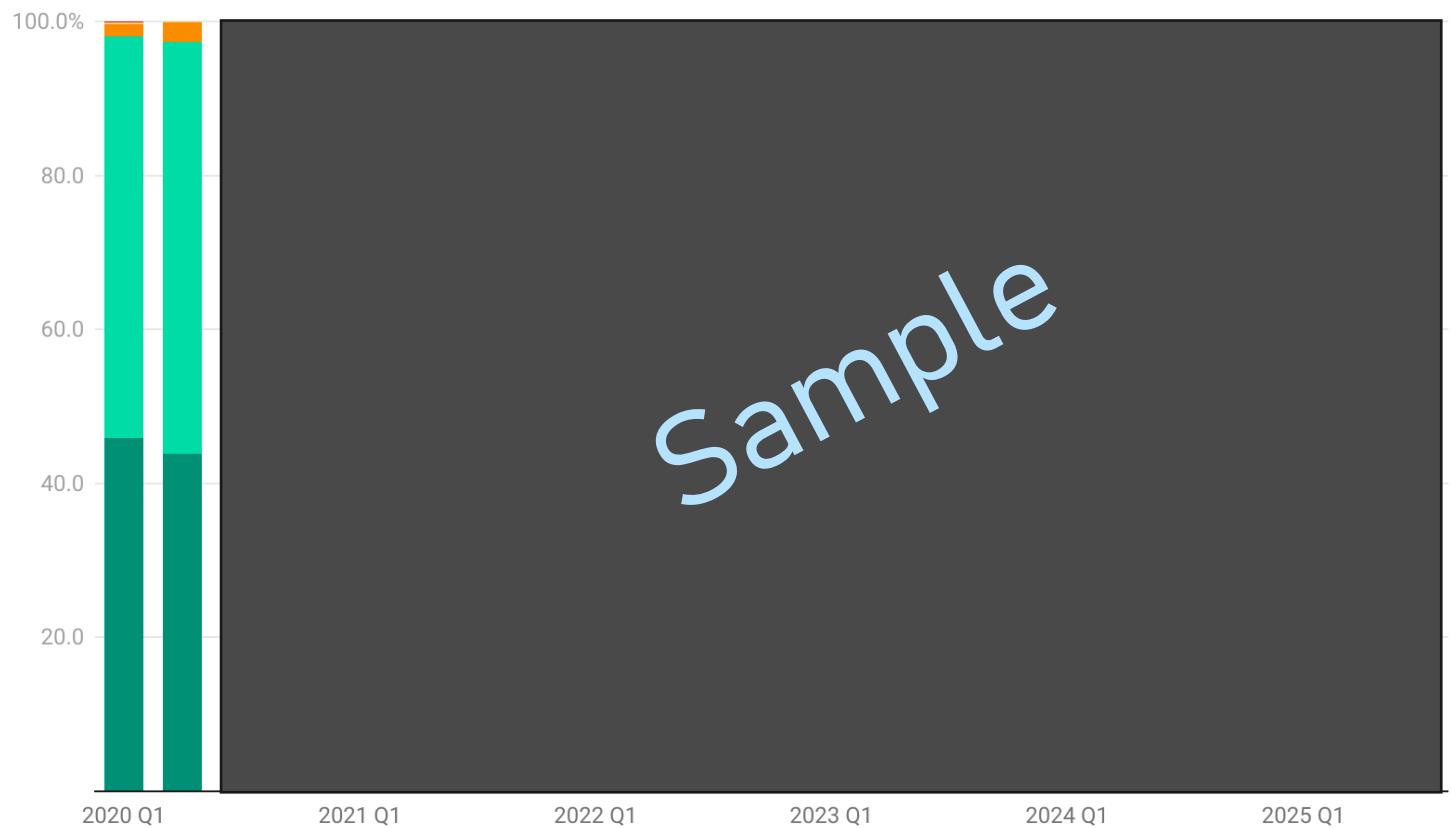
- The general capacity utilization rate ranges from 70% to 80%. However, Circuit-Breaker products demonstrated a 60% utilization, contrasting with Varistor products, which achieved 90% utilization.
- Demand for automotive-grade aluminum capacitors has increased significantly. However, a notable shift is expected as the shift from internal combustion engine (ICE) vehicles to electric vehicles (EVs) progresses due to the higher density of capacitors per EV. Therefore, the Industrial, Household, Energy and Consumer sectors have begun to show modest signs of recovery in demand.
- Japanese aluminum manufacturer average capacity utilization is approximately 70%. Lead times for aluminum capacitors have significantly increased. Japanese manufacturers are currently reporting lead times of 12-18 weeks, while Taiwanese and Chinese manufacturers are quoting improved lead times of 8-12 weeks.
- The supply situation for Indigo capacitors and its aluminum electrolytic manufacturers has dramatically improved. Lead times for these types of capacitors are now quoted between 10-12 weeks. Capacity utilization has increased to 80%.

# Circuit Protection (continued)

## SUPPLY

### Circuit Protection: Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



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# Circuit Protection (continued)

## MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Circuit Protection				

- Circuit protection devices are forecasted to continue growing across a broad spectrum of application segments, including automotive, data center infrastructure, and industrial applications.

- Demand for automotive-grade diode protection has increased with a notable shift in demand as the shift from standard Diodes 2020 continues to electric vehicles. This progression due to the higher volume of connections per EV. However, the Industrial, Residential, Commercial, and Telecom sectors have begun to show similar signs of recovery in demand.
- Diode capacity manufacturers across capacity availability, quality, and delivery are currently operating at 70-80% utilization, with Japanese and Chinese manufacturers are quoting projected utilization of 5-10 weeks.
- The capacity utilization for hybrid diode protection used in automotive and telecommunications has dramatically improved. Lead times for these hybrid connections are now quoted between 10-15 weeks. Capacity utilization has improved to 80%.

# Circuit Protection (continued)

## PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
Circuit Protection				

- Silver and Copper continue to fluctuate amidst the current economic situation.
- Gold reached a new high in April and has oscillated between USD 3,000 and 3,300 per ounce levels.

- Demand for automotive-grade aluminum capacitors has increased significantly. However, a notable shift is expected as the shift from internal combustion engine (ICE) vehicles to electric vehicles (EVs) progresses due to the higher volume of aluminum per EV. Additionally, the Industrial, Residential, Energy and Consumer sectors have begun to show modest signs of recovery in demand.
- Demand for aluminum capacitors, average capacity utilization is approximately 80%. Lead times for aluminum capacitors have improved significantly. Chinese manufacturers are currently operating at 80% capacity utilization, while Taiwanese and Chinese manufacturers are quoting improved lead times of 8-12 weeks.
- The supply situation for Indium capacitors and its substitutes and substitutes has dramatically improved. Lead times for these types of capacitors are now quoted between 10-12 weeks. Capacity utilization has increased to 80%.

# Resistors

## SUPPLY

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
General	Green	Grey	Grey	Grey
Automotive	Green	Grey	Grey	Grey

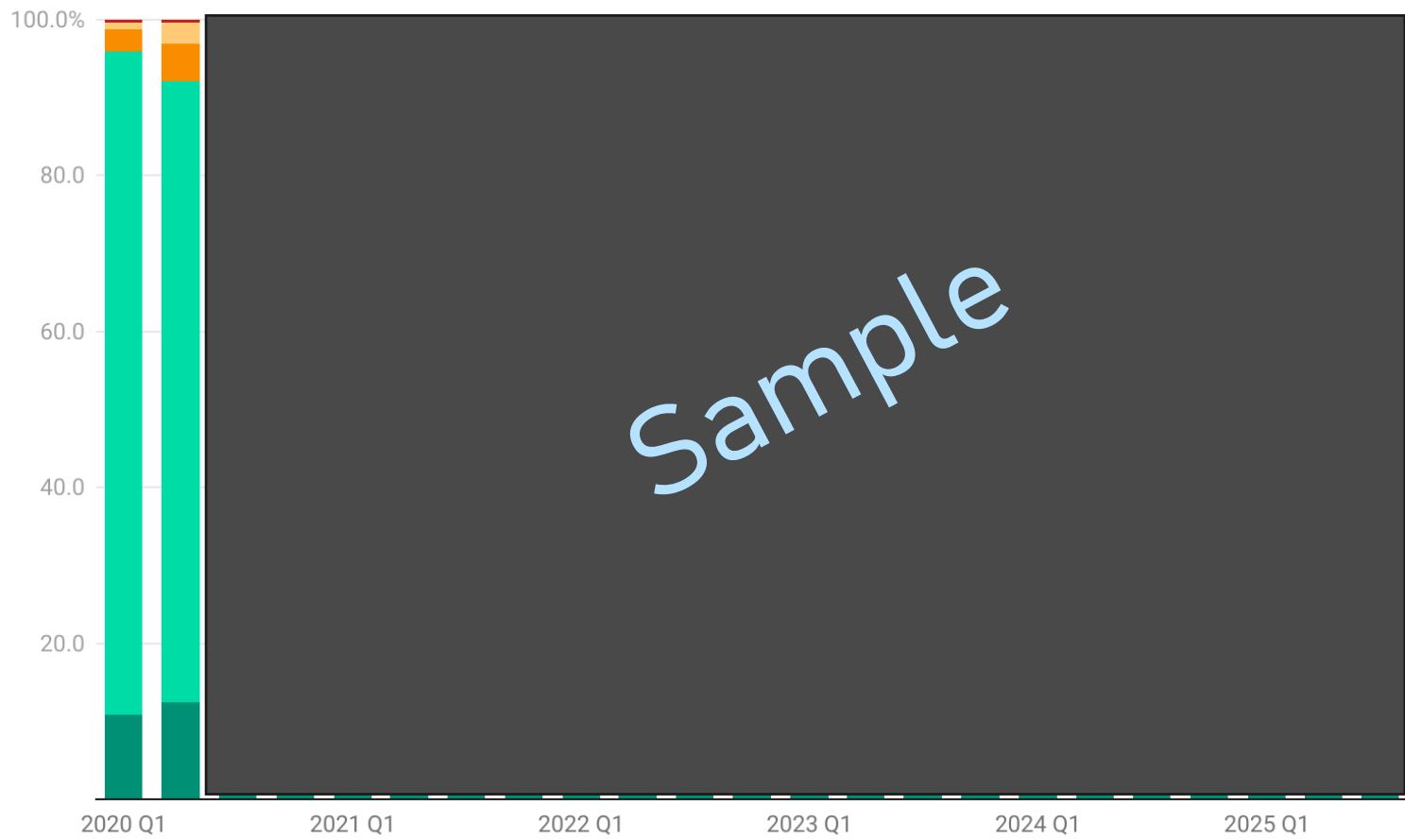
- A modest to gradual market recovery is projected in the second half of 2025, primarily driven by growth in the Artificial Intelligence (AI) and Automotive sectors, particularly from the China EV segment. The fluid U.S. tariff situation has led to a significant rise in demand, and customers aim to capitalize on the temporary pause in reciprocal tariffs.

- The market for automotive-grade aluminum resistors has shown significant growth, particularly in the U.S. market. The shift from standard aluminum resistors to higher-current, higher-power aluminum resistors is driven by the higher current density of resistors per kW of power. The Industrial, Residential, Energy, and Consumer sectors have begun to show initial signs of recovery in demand.
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## Resistors (continued)

### Resistors Lead Time Trend

■ 0-12 Weeks ■ 13-25 Weeks ■ 26-35 Weeks ■ 36-52 Weeks ■ 52 Weeks plus



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# Resistors (continued)

## MARKET DYNAMICS

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
General	Green	Grey	Grey	Grey
Automotive	Green	Grey	Grey	Grey

## RAPID TRANSFORMATION OF TECHNOLOGY IN THE COMPETITIVE LANDSCAPE

- Resistors continue to be a key component in every segment or application. The projected usage is expected to increase steadily to accommodate technological advancements.
- The market for automotive-grade aluminum resistors has shown significant growth, with a notable shift in demand from standard aluminum resistors to higher-value, more complex resistors. This progression is due to the higher density of resistors per unit. Additionally, the Industrial, Household, and Consumer sectors have begun to adopt modern types of resistors in demand.
- Japan's domestic manufacturers, despite being relatively old, have significantly expanded their market share for aluminum resistors. These manufacturers, while Japanese and Chinese manufacturers are currently competing in the market, are showing market share growth of 5-10%.
- The market share for Japanese manufacturers has dramatically increased, with their market share for these types of resistors increasing to 80%.

# Resistors (continued)

## MARKET DYNAMICS (cont.)

### CAPACITY EXPANSION PLANS

- Major resistor manufacturers are making substantial investments in capacity expansion, in anticipation of sustained market growth through to 2030. These investments are precisely focused on thick film, thin film, and current sense products, which are essential to accelerating the development of applications across the AI & Automotive industries. Production output is increasing gradually, with a notable acceleration projected for 2026.

- Several major automotive manufacturers have announced significant capacity expansion plans for resistor production. For example, Bosch has announced a major expansion of its resistor production facility in China, which is expected to be completed by 2026. This expansion is driven by the increasing demand for high-reliability resistors in electric vehicles and other advanced automotive applications.
- Japan's Nippon Pulse has announced a major capacity expansion plan, with a new factory in India expected to be completed by 2026. This expansion is driven by the increasing demand for high-reliability resistors in the Indian automotive industry.
- The major resistor manufacturer, Vishay, has announced a major capacity expansion plan, with a new factory in India expected to be completed by 2026. This expansion is driven by the increasing demand for high-reliability resistors in the Indian automotive industry.

## Resistors (continued)

### PRICE

Commodity	Q3FY25	Q4FY25	Q1FY26	Q2FY26
General				
Automotive				

- Prices for general and automotive-grade resistors have remained flat to slightly decreasing, whereas prices for military-grade products have ranged from flat to increasing.

- Demand for automotive-grade aluminum resistors has remained flat. However, a notable shift is expected as the shift from standard aluminum resistors (2025) continues to focus on more green products due to the higher cost of resistors per kWh. Therefore, the Industrial, Consumer Electronics and Other sectors have begun to offer more types of resistors in their products.
- Japanese Electronics manufacturers average capacity utilization is approximately 80%. Lead times for aluminum resistors have significantly increased. Japanese manufacturers are currently quoting 10-12 weeks lead time, while Taiwanese and Chinese manufacturers are quoting improved lead times of 8-10 weeks.
- The supply situation for Inductor resistors used in automotive and telecommunications has dramatically improved. Lead times for these Inductor resistors are now quoted between 10-12 weeks. Capacity utilization has increased to 90%.

# Thank You

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