Electronic Components Sector

Component Data Deposition: METI production statistics (electronic components, semiconductors) for July 2026: ABF substrates remain buoyant, Si-MOSFETs also strong

Japan Equity Research

Technology - Electronic Components

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METI released July 2026 production statistics on September 14. In July, domestic production value (USD basis) for electronic components was slightly below seasonality but remained solid. Semiconductor production results were mixed, with some product categories exceeding seasonal trends and others falling short of them. In electronic components, MLCC production value remained roughly flat based on METI statistics, suggesting a continued divergence from MLCC export value based on Ministry of Finance (MoF) trade statistics. However, we see no need to be overly concerned at this time as MoF data confirmed exports continue to trend upward. Among passive components, the recovery trend for aluminum electrolytic capacitors continued, and production of connectors appears to have improved slightly. Production of rigid module substrates (including ABF substrate/FC-BGA) continued to grow strongly; this looks positive for Ibiden. Four companies—Ibiden, TDK, and Rohm along with one MLCC name, either Murata Manufacturing or Taiyo Yuden—remain our top picks in the electronic components sector.

- **Our view:** Although electronic components domestic production value was slightly below seasonality in July, the overall result was solid. MLCCs remain on recovery trend in terms of volume, but production value is almost flat (USD basis) and there is still little sense of a clear recovery based on METI statistics. However, there is a significant divergence from MoF trade statistics, and we place greater emphasis on the trade data. Rigid module substrate (including ABF substrates/FC-BGA) production value remains on an upward trend. In semiconductors, results versus seasonality vary depending on the product category. Among discrete devices, production value (USD basis) is weak for diodes, silicon transistors, and IGBTs but notably strong for Si-MOSFET. Si-MOSFET production is rising gradually, although the trend line fluctuates on a month-to-month basis. Memory growth YoY remains very high, both in terms of production value and average unit price.
- **Electronic components:** In July 2026, domestic production value for electronic components (USD basis) was as follows: passive components -9% YoY and +4% MoM, mechanical components -2% and -1%, electronic substrates +19% and +6%, and electronic circuit mounting boards +9% and +1%. Overall domestic production value (USD basis) was firm in July, although it was slightly below seasonality. Passive components were slightly below seasonality, and the trend line remained stagnant. MLCC production volume increased, but production value (USD basis) was about in line with seasonality, and the trend line appears to remain flat. Aluminum electrolytic capacitors were roughly in line with the seasonal trend in July; production value continues to recover gradually. Inductors remained about flat, with no notable changes. On the other hand, overall production of resistors and crystal devices remained on a gradual recovery trend. Although connector production value (USD basis) was below seasonality, it appears to be gradually improving. Electronic substrates continue to grow, and rigid module substrates (including ABF substrates and FC-BGA) continue to grow strongly.

See page 13 for analyst certification and important disclosures, including non-US analyst disclosures.

- **Semiconductors:** Domestic production value growth YoY in July 2026 (USD basis) was as follows: discrete semiconductors -15% YoY and -1% MoM, MCUs -27% and -1%, logic ICs +3% and +4%, and memory +408% and +16%. In July, the direction of momentum versus seasonality seemed to vary depending on the product category. Production of discrete semiconductors was about in line with seasonality overall, with production of Si-MOSFETs significantly higher and production of other products lower. Logic ICs were above seasonality, while MCUs were slightly lower. Memory production value (USD basis) kept growing strongly, climbing 408% YoY and 16% MoM. The average unit price (USD basis) for memory increased 404% YoY and 2% MoM in July 2026.



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Figure 1: Electronic Components: Summary of METI current production statistics (July 2026)

Production volume	mn units/m2	YoY	MoM
Passive components	151,582.1	18.8%	5.5%
Registers	12,702.9	5.2%	-2.7%
Capacitors	123,956.4	24.3%	6.9%
Aluminum electrolytic capacitors	908.1	4.2%	-0.7%
Ceramic capacitors	122,928.4	24.5%	7.0%
Other capacitors	119.9	8.6%	-0.5%
Transformers	1.0	45.3%	-0.3%
Inductors	13,112.0	-5.5%	0.7%
Functional components	1,809.9	-7.2%	5.1%
Quartz crystals	376.9	16.2%	-2.6%
Filters	1,033.7	-8.0%	10.1%
Multiple Components	399.3	-20.4%	0.6%
Mechanical Components	2,959.4	-3.3%	0.8%
Switches	753.4	7.9%	-1.6%
Connectors	2,166.1	-6.6%	1.7%
PWB connectors	1,011.1	-13.2%	-2.7%
Other connectors	1,155.0	0.1%	5.9%
Electronic circuit boards	812.7	0.2%	2.7%
Rigid PWB	617.2	-2.2%	1.2%
Flexible PWB	145.5	5.3%	14.5%
Module boards	50.0	20.1%	-7.7%
Rigid Module boards	23.9	18.9%	17.3%
Electronic circuit jisso boards	1,453.6	6.9%	3.4%
Printed wiring jisso boards	1,059.3	10.7%	4.0%
Module jisso boards	394.3	-2.2%	1.8%

Production value	JPY mn	YoY	MoM
Passive components	144,651	0.5%	4.7%
Registers	11,642	1.9%	-7.0%
Capacitors	101,813	3.8%	6.7%
Aluminum electrolytic capacitors	18,344	8.2%	1.3%
Ceramic capacitors	76,325	2.2%	8.9%
Other capacitors	7,144	10.3%	-0.3%
Transformers	1,072	59.3%	-2.0%
Inductors	9,538	3.9%	6.1%
Functional components	20,586	-16.0%	1.8%
Quartz crystals	5,813	11.4%	2.4%
Filters	6,625	-9.9%	4.4%
Multiple Components	8,148	-31.7%	-0.5%
Mechanical Components	38,423	8.5%	-0.1%
Switches	4,652	7.2%	-7.4%
Connectors	31,415	8.7%	0.9%
PWB connectors	19,741	4.7%	0.3%
Other connectors	11,674	16.2%	2.0%
Electronic circuit boards	74,385	31.1%	6.7%
Rigid PWB	39,921	14.2%	6.9%
Flexible PWB	2,733	-1.7%	-1.6%
Module boards	31,731	66.9%	7.2%
Rigid Module boards	31,301	68.1%	7.6%
Electronic circuit jisso boards	34,757	20.6%	1.7%
Printed wiring jisso boards	17,935	16.1%	5.8%
Module jisso boards	16,822	25.7%	-2.4%

Production value	$ mn	YoY	MoM
Passive components	891.5	-8.9%	3.7%
Registers	71.7	-7.6%	-7.8%
Capacitors	627.5	-5.9%	5.8%
Aluminum electrolytic capacitors	113.1	-1.9%	0.4%
Ceramic capacitors	470.4	-7.4%	7.9%
Other capacitors	44.0	0.0%	-1.2%
Transformers	6.6	44.4%	-2.9%
Inductors	58.8	-5.8%	5.2%
Functional components	126.9	-23.8%	0.9%
Quartz crystals	35.8	1.0%	1.5%
Filters	40.8	-18.3%	3.5%
Multiple Components	50.2	-38.1%	-1.4%
Mechanical Components	236.8	-1.7%	-1.0%
Switches	28.7	-2.8%	-8.2%
Connectors	193.6	-1.4%	0.0%
PWB connectors	121.7	-5.0%	-0.6%
Other connectors	71.9	5.3%	1.1%
Electronic circuit boards	458.4	18.9%	5.8%
Rigid PWB	246.0	3.6%	6.0%
Flexible PWB	16.8	-10.8%	-2.5%
Module boards	195.6	51.3%	6.3%
Rigid Module boards	192.9	52.4%	6.7%
Electronic circuit jisso boards	214.2	9.3%	0.8%
Printed wiring jisso boards	110.5	5.3%	4.9%
Module jisso boards	103.7	14.0%	-3.3%

Source: METI, J.P. Morgan.

Figure 2: Semiconductors: Summary of METI current production statistics (July 2026)

Production volume	mn units	YoY	MoM
Discrete Semiconductors	952.3	10.5%	11.5%
Diodes and Rectifiers	660.2	14.1%	14.7%
Si-Transistors	116.4	1.1%	5.7%
Si MOSFET	160.7	8.7%	5.3%
IGBT	15.0	-26.0%	-4.8%
MCU	43.7	-37.3%	-5.4%
Logic IC	192.9	29.2%	9.1%
Memory	54.3	0.8%	13.2%

Production value	JPY mn	YoY	MoM
Discrete Semiconductors	38,401	-6.6%	0.1%
Diodes and Rectifiers	3,927	-21.9%	-1.5%
Si-Transistors	1,592	-36.0%	-10.6%
Si MOSFET	7,507	21.2%	20.7%
IGBT	25,375	-7.3%	-3.9%
MCU	6,303	-19.7%	0.0%
Logic IC	16,683	13.2%	4.5%
Memory	233,376	459.8%	16.9%

Production value	$ mn	YoY	MoM
Discrete Semiconductors	236.7	-15.3%	-0.8%
Diodes and Rectifiers	24.2	-29.2%	-2.3%
Si-Transistors	9.8	-42.0%	-11.4%
Si MOSFET	46.3	9.9%	19.6%
IGBT	156.4	-16.0%	-4.7%
MCU	38.8	-27.2%	-0.8%
Logic IC	102.8	2.6%	3.6%
Memory	1,438.3	407.6%	15.9%

Source: METI, J.P. Morgan.

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Figure 3: Electronic components sector: Valuation summary

Ticker	Company	Share Price (JPY)	Price Target (JPY)	Return	Rating	Market Capitalization (JPY mn)	P/E FY26E (x)	P/E FY27E (x)	P/E FY28E (x)	EPS FY26E (x)	EPS FY27E (x)	EPS FY28E (x)	EV/EBITDA FY26E (x)	EV/EBITDA FY27E (x)	EV/EBITDA FY28E (x)	P/B FY26E (x)	P/B FY27E (x)	P/B FY28E (x)
6981	Murata Mfg.	7,167	13,700	91.2%	OW	14,068,834	34.29	21.97	14.52	209	326	494	20.37	13.60	9.42	4.55	3.95	3.47
6976	Taiyo Yuden	8,714	18,100	107.7%	OW	1,198,740	39.93	19.60	12.80	218	445	681	13.99	9.61	7.12	3.01	2.66	2.24
6762	TDK	2,817	4,500	59.8%	OW	5,474,881	18.80	16.09	13.32	150	175	211	8.68	7.15	5.95	2.25	2.06	1.87
6971	Kyocera	3,520	3,900	10.8%	N	4,995,235	30.84	27.43	24.54	114	128	143	18.25	15.84	13.84	1.39	1.46	1.53
6963	Rohm	4,437	8,000	80.3%	OW	1,791,483	35.38	25.97	20.79	125	171	213	21.84	17.81	12.90	2.34	2.22	1.98
6996	Nichicon	2,505	4,100	63.7%	OW	175,350	16.41	13.64	11.88	153	184	211	7.32	6.19	5.36	1.33	1.22	1.12
6997	Nippon Chemi-con	2,604	3,700	42.1%	OW	72,893	14.96	10.29	7.58	174	253	344	8.61	6.98	5.60	1.28	1.12	0.97
6594	Nidec	2,655	1,800	-32.2%	UW	3,166,271	15.07	13.15	-	176	202	-	6.45	5.45	-	1.49	1.34	-
6479	MinebeaMitsumi	3,387	5,500	62.4%	OW	1,446,522	14.87	12.66	11.15	228	268	304	11.42	9.87	8.57	1.41	1.30	1.19
4062	Ibiden	19,140	28,500	48.9%	OW	5,427,553	70.44	52.58	39.11	272	364	489	30.72	24.50	19.82	8.61	7.50	6.37
6806	Hirose Elec	23,980	33,300	38.9%	OW	828,040	19.03	15.11	13.29	1,260	1,587	1,805	9.08	7.94	7.16	1.84	1.75	1.66
6807	JAE	2,478	2,100	-15.3%	UW	174,210	26.65	19.59	14.97	93	126	166	5.68	4.88	4.23	1.13	1.10	1.06
6770	AlpsAlpine	2,226	2,480	11.4%	N	463,135	15.59	13.88	12.41	143	160	179	4.62	4.19	3.91	0.94	0.90	0.86
5334	Niterra	7,161	13,300	85.7%	OW	1,426,813	12.49	10.76	9.78	574	666	732	10.28	8.76	7.76	1.68	1.53	1.40
6727	Wacom	821	1,300	58.3%	OW	110,835	11.27	10.79	10.33	73	76	79	5.09	4.11	3.16	2.19	1.73	1.42
7915	NISSHA	1,171	1,460	24.7%	N	56,227	16.65	11.90	8.37	70	98	140	5.62	4.97	4.11	0.48	0.47	0.45
Simple Average		-	-	46.1%	-	2,554,814	24.54	18.46	14.99	252	327	413	11.75	9.49	7.93	2.24	2.02	1.84

Ticker	Company	Share Price (JPY)	Price Target (JPY)	Return	Rating	Market Capitalization (JPY mn)	ROE FY26E	ROE FY27E	ROE FY28E	DPS FY26E (JPY)	DPS FY27E (JPY)	DPS FY28E (JPY)	Dividend Yield FY26E	Dividend Yield FY27E	Dividend Yield FY28E	Dividend Payout Ratio FY26E	Dividend Payout Ratio FY27E	Dividend Payout Ratio FY28E
6981	Murata Mfg.	7,167	13,700	91.2%	OW	14,068,834	13.5%	19.3%	25.3%	70.0	85.0	100.0	1.0%	1.2%	1.4%	33.5%	26.1%	20.3%
6976	Taiyo Yuden	8,714	18,100	107.7%	OW	1,198,740	8.4%	15.7%	20.7%	95.0	105.0	125.0	1.1%	1.2%	1.4%	43.5%	23.6%	18.4%
6762	TDK	2,817	4,500	59.8%	OW	5,474,881	12.5%	13.4%	14.7%	50.0	60.0	70.0	1.8%	2.1%	2.5%	33.4%	34.3%	33.1%
6971	Kyocera	3,520	3,900	10.8%	N	4,995,235	4.4%	5.2%	6.1%	56.0	56.0	56.0	1.6%	1.6%	1.6%	49.1%	43.6%	39.0%
6963	Rohm	4,437	8,000	80.3%	OW	1,791,483	7.8%	10.2%	11.5%	50.0	50.0	65.0	1.1%	1.1%	1.5%	39.9%	29.3%	30.5%
6996	Nichicon	2,505	4,100	63.7%	OW	175,350	9.0%	10.3%	10.8%	39.0	41.0	43.0	1.6%	1.6%	1.7%	25.5%	22.3%	20.4%
6997	Nippon Chemi-con	2,604	3,700	42.1%	OW	72,893	8.0%	10.6%	12.7%	25.0	25.0	25.0	1.0%	1.0%	1.0%	14.4%	9.9%	7.3%
6594	Nidec	2,655	1,800	-32.2%	UW	3,166,271	10.3%	10.6%	-	0.0	0.0	-	0.0%	0.0%	-	0.0%	0.0%	-
6479	MinebeaMitsumi	3,387	5,500	62.4%	OW	1,446,522	9.8%	10.7%	11.1%	60.0	62.0	65.0	1.8%	1.8%	1.9%	26.3%	23.2%	21.4%
4062	Ibiden	19,140	28,500	48.9%	OW	5,427,553	13.7%	16.1%	18.6%	35.0	55.0	65.0	0.2%	0.3%	0.3%	12.9%	15.1%	13.3%
6806	Hirose Elec	23,980	33,300	38.9%	OW	828,040	10.0%	11.8%	12.7%	580.0	640.0	680.0	2.4%	2.7%	2.8%	46.0%	40.3%	37.7%
6807	JAE	2,478	2,100	-15.3%	UW	174,210	4.3%	5.7%	7.2%	50.0	60.0	70.0	2.0%	2.4%	2.8%	53.8%	47.4%	42.3%
6770	AlpsAlpine	2,226	2,480	11.4%	N	463,135	6.4%	7.0%	7.5%	64.0	72.0	76.0	2.9%	3.2%	3.4%	44.8%	44.9%	42.4%
5334	Niterra	7,161	13,300	85.7%	OW	1,426,813	14.0%	14.9%	14.9%	220.0	250.0	280.0	3.1%	3.5%	3.9%	38.4%	37.6%	38.3%
6727	Wacom	821	1,300	58.3%	OW	110,835	22.3%	17.9%	15.1%	24.0	24.0	24.0	2.9%	2.9%	2.9%	32.9%	31.5%	30.2%
7915	NISSHA	1,171	1,460	24.7%	N	56,227	2.9%	4.0%	5.5%	50.0	50.0	50.0	4.3%	4.3%	4.3%	71.1%	50.8%	35.7%
Simple Average		-	-	46.1%	-	2,554,814	9.8%	11.5%	13.0%	-	-	-	1.8%	1.9%	2.2%	35.3%	30.0%	28.7%

Ticker	Company	Share Price (JPY)	Price Target (JPY)	Return	Rating	Market Capitalization (JPY mn)	ROIC FY26E	ROIC FY27E	ROIC FY28E	FCF FY26E (JPY mn)	FCF FY27E (JPY mn)	FCF FY28E (JPY mn)	FCF Yield FY26E	FCF Yield FY27E	FCF Yield FY28E	Net Debt FY26E (JPY mn)	Net Debt FY27E (JPY mn)	Net Debt FY28E (JPY mn)
6981	Murata Mfg.	7,167	13,700	91.2%	OW	14,068,834	13.0%	18.9%	25.0%	302,770	504,085	782,706	2.2%	3.6%	5.6%	-468,379	-599,221	-627,458
6976	Taiyo Yuden	8,714	18,100	107.7%	OW	1,198,740	6.7%	12.2%	16.6%	37,821	41,671	90,371	3.2%	3.5%	7.5%	72,194	81,865	52,296
6762	TDK	2,817	4,500	59.8%	OW	5,474,881	10.2%	10.8%	12.0%	151,693	292,267	381,190	2.8%	5.3%	7.0%	-215,511	-317,468	-495,470
6971	Kyocera	3,520	3,900	10.8%	N	4,995,235	2.8%	3.5%	4.4%	37,228	113,868	118,689	0.7%	2.3%	2.4%	-228,990	-251,046	-272,541
6963	Rohm	4,437	8,000	80.3%	OW	1,791,483	5.1%	6.6%	7.8%	36,826	54,914	85,896	2.1%	3.1%	4.8%	11,972	25,631	-126,264
6996	Nichicon	2,505	4,100	63.7%	OW	175,350	6.6%	6.8%	7.3%	9,656	12,157	14,513	5.5%	6.9%	8.3%	-2,337	-5,282	-10,952
6997	Nippon Chemi-con	2,604	3,700	42.1%	OW	72,893	4.9%	6.1%	7.4%	6,034	7,675	9,945	8.3%	10.5%	13.6%	52,585	49,932	46,146
6594	Nidec	2,655	1,800	-32.2%	UW	3,166,271	7.2%	7.6%	-	200,731	229,204	-	6.3%	7.2%	-	141,080	-44,638	-
6479	MinebeaMitsumi	3,387	5,500	62.4%	OW	1,446,522	6.4%	7.4%	7.9%	72,494	97,443	125,943	5.0%	6.7%	8.7%	240,308	174,250	80,330
4062	Ibiden	19,140	28,500	48.9%	OW	5,427,553	10.9%	13.1%	15.4%	-48,888	-95,004	-18,364	-0.9%	-1.8%	-0.3%	64,851	202,152	263,496
6806	Hirose Elec	23,980	33,300	38.9%	OW	828,040	9.2%	10.9%	11.8%	32,062	42,328	49,209	3.9%	5.1%	5.9%	-147,309	-146,797	-148,422
6807	JAE	2,478	2,100	-15.3%	UW	174,210	3.9%	5.1%	6.6%	5,117	8,424	11,457	2.9%	4.8%	6.6%	-4,947	-7,284	-11,348
6770	AlpsAlpine	2,226	2,480	11.4%	N	463,135	5.9%	6.4%	6.8%	10,959	18,386	22,265	2.4%	4.0%	4.8%	-53,801	-50,127	-52,900
5334	Niterra	7,161	13,300	85.7%	OW	1,426,813	10.4%	11.3%	11.7%	106,559	126,650	141,667	7.5%	8.9%	9.9%	-15,975	-76,096	-144,485
6727	Wacom	821	1,300	58.3%	OW	110,835	25.6%	20.2%	16.9%	9,799	10,236	10,693	8.8%	9.2%	9.6%	-26,812	-39,699	-53,147
7915	NISSHA	1,171	1,460	24.7%	N	56,227	2.1%	2.9%	3.8%	5,061	4,663	6,633	9.0%	8.3%	11.8%	26,256	24,223	20,210
Simple Average		-	-	46.1%	-	2,554,814	8.2%	9.4%	10.8%	-	-	-	4.4%	5.5%	7.1%	-	-	-

Source: Company data, J.P. Morgan estimates.
Note: The share prices and market caps are as of the market close on September 14, 2026.

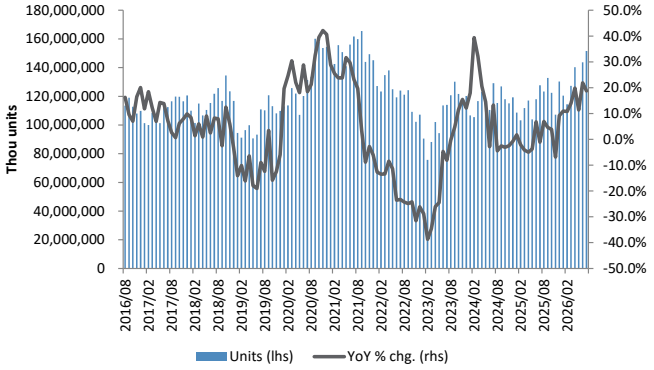
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Electronic Components

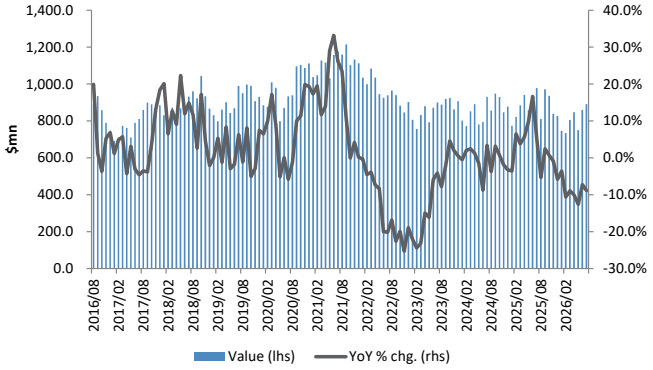
The following figures display trends in domestic production quantity and production value for major electronic components and semiconductors.

Figure 4: Passive Components: Production quantity ('000 units)



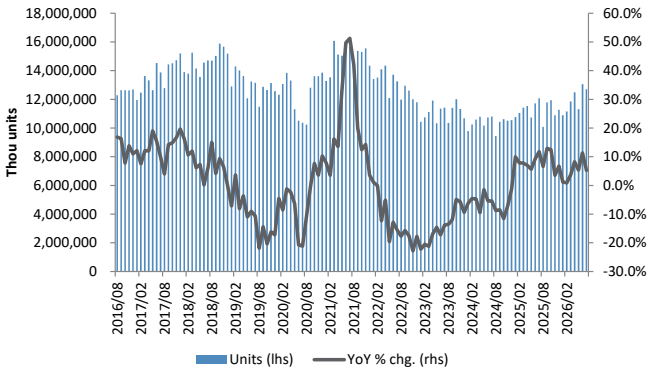
Source: METI, J.P. Morgan.

Figure 5: Passive Components: Production value ($mn)



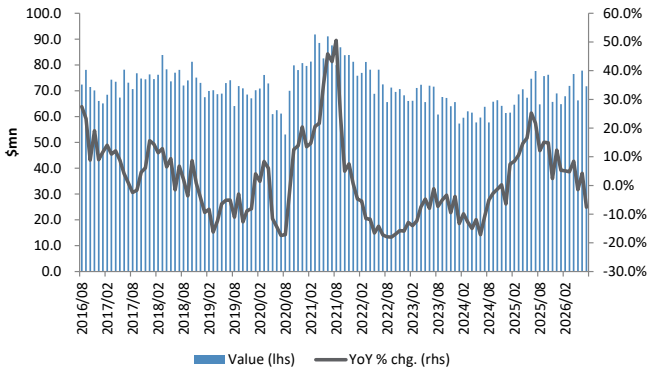
Source: METI, J.P. Morgan.

Figure 6: Resistors: Production quantity ('000 units)



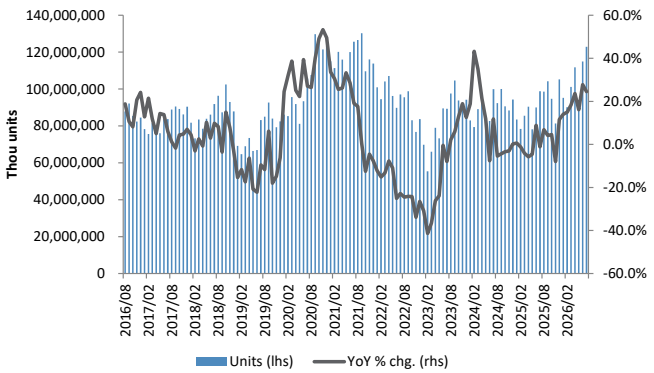
Source: METI, J.P. Morgan.

Figure 7: Resistors: Production value ($mn)



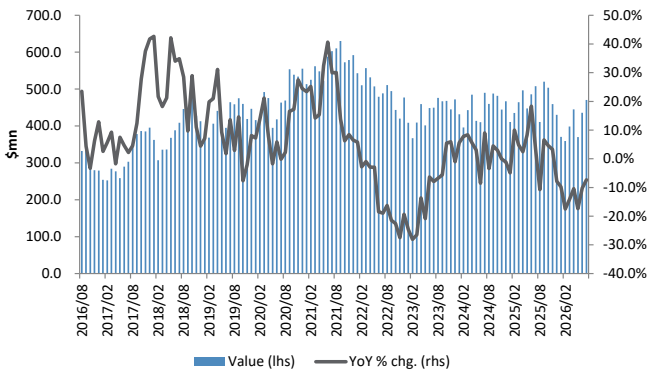
Source: METI, J.P. Morgan.

Figure 8: Ceramic capacitors: Production quantity ('000 units)



Source: METI, J.P. Morgan.

Figure 9: Ceramic capacitors: Production value ($mn)

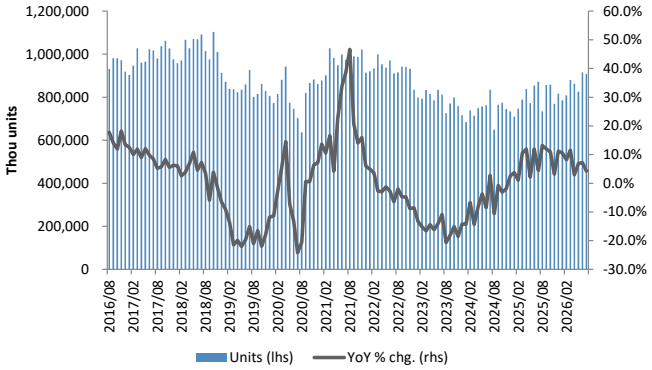


Source: METI, J.P. Morgan.

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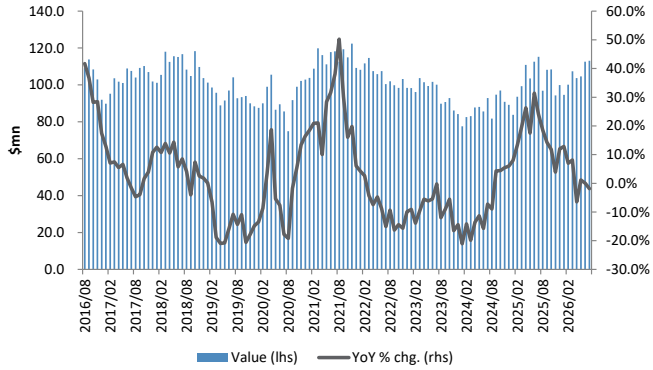
J.P.Morgan

Figure 10: Aluminum electrolytic capacitors: Production quantity ('000 units)



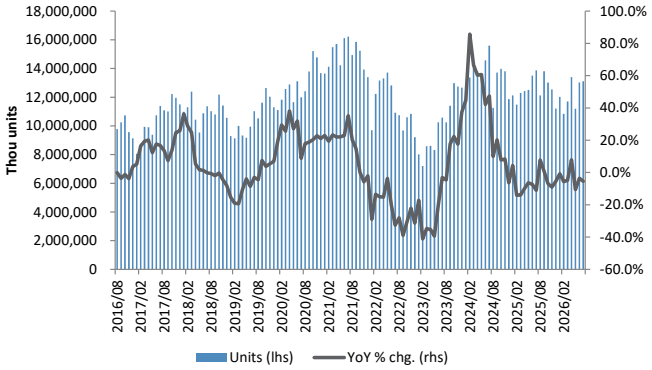
Source: METI, J.P. Morgan.

Figure 11: Aluminum electrolytic capacitors: Production value ($mn)



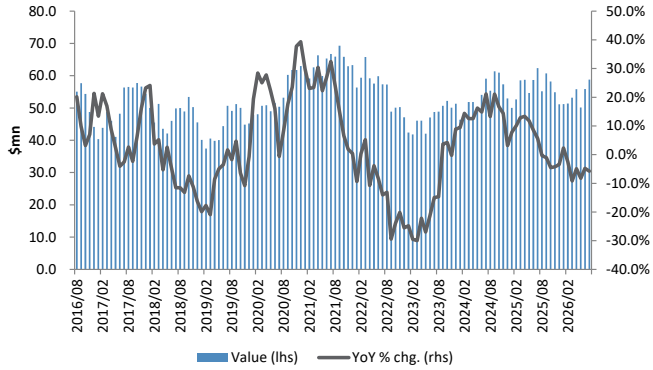
Source: METI, J.P. Morgan.

Figure 12: Inductors: Production quantity ('000 units)



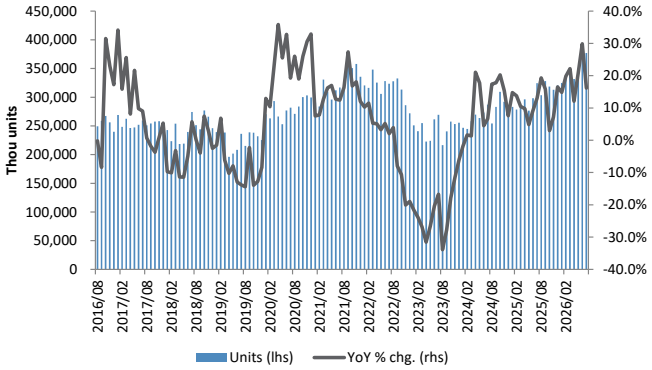
Source: METI, J.P. Morgan.

Figure 13: Inductors: Production value ($mn)



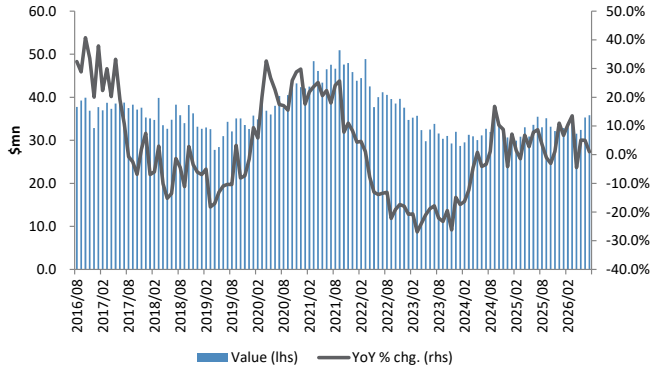
Source: METI, J.P. Morgan.

Figure 14: Quartz crystals: Production quantity ('000 units)



Source: METI, J.P. Morgan.

Figure 15: Quartz crystals: Production value ($mn)

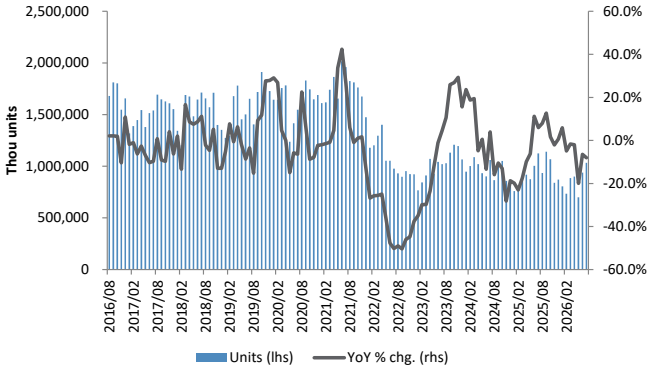


Source: METI, J.P. Morgan.

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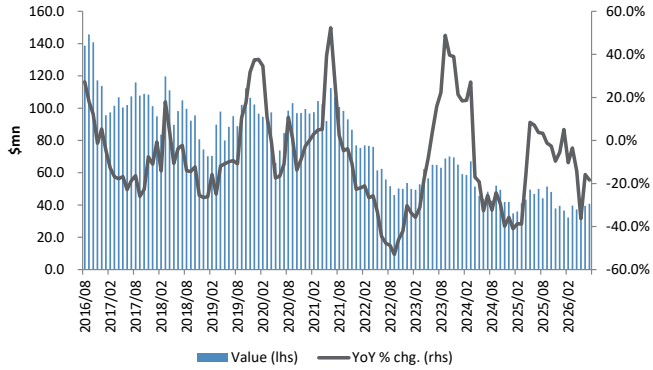
J.P.Morgan

Figure 16: Filters: Production quantity ('000 units)



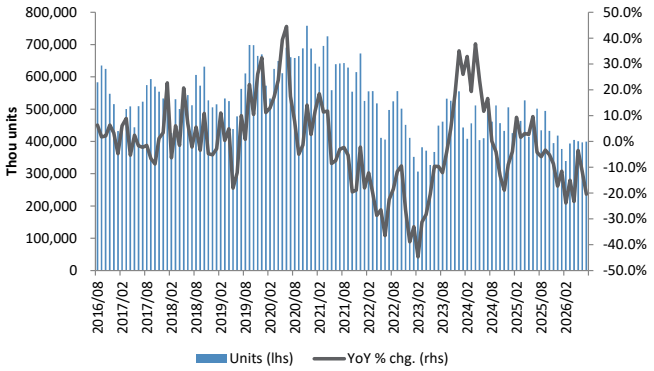
Source: METI, J.P. Morgan.

Figure 17: Filters: Production value ($mn)



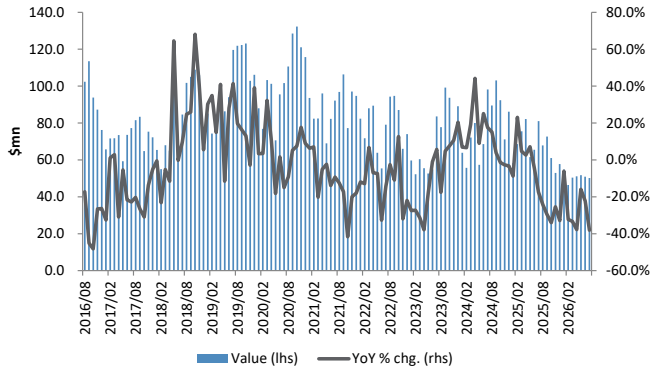
Source: METI, J.P. Morgan.

Figure 18: Multiple components: Production quantity ('000 units)



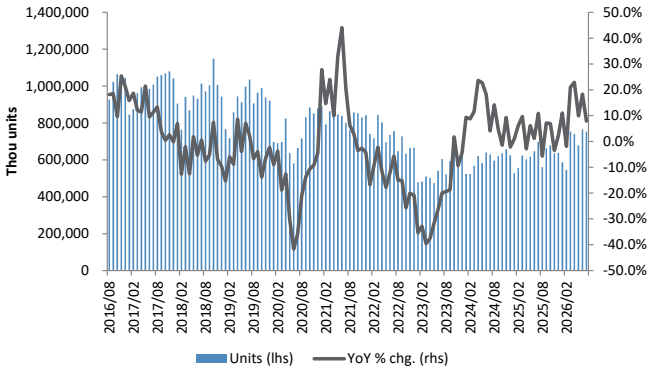
Source: METI, J.P. Morgan.

Figure 19: Multiple components: Production value ($mn)



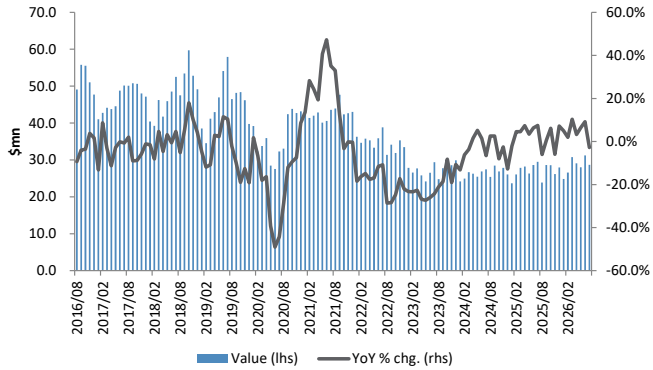
Source: METI, J.P. Morgan.

Figure 20: Switches: Production quantity ('000 units)



Source: METI, J.P. Morgan.

Figure 21: Switches: Production value ($mn)

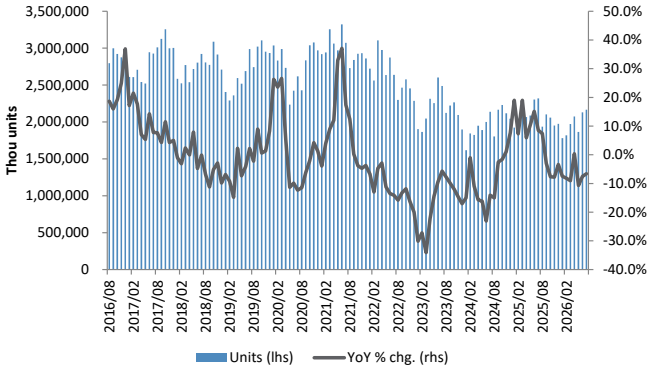


Source: METI, J.P. Morgan.

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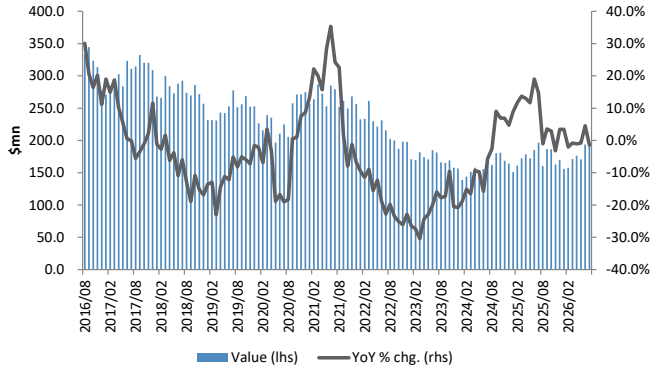
J.P.Morgan

Figure 22: Connectors: Production quantity ('000 units)



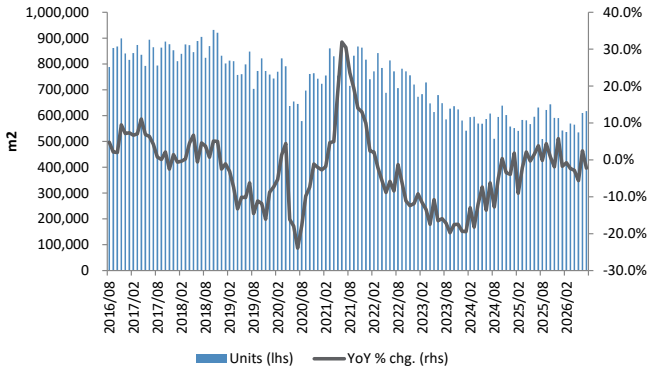
Source: METI, J.P. Morgan.

Figure 23: Connectors: Production value ($mn)



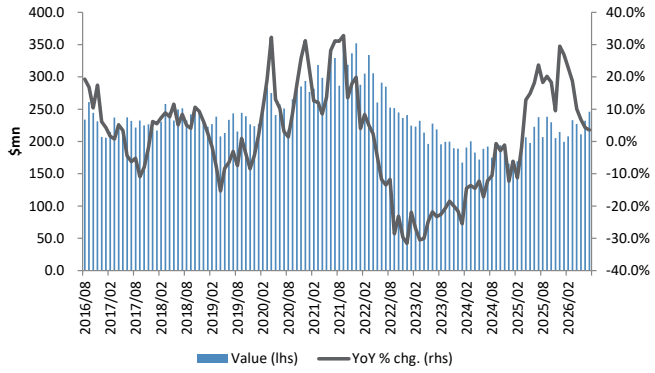
Source: METI, J.P. Morgan.

Figure 24: Rigid PWBs: Production quantity (square meters)



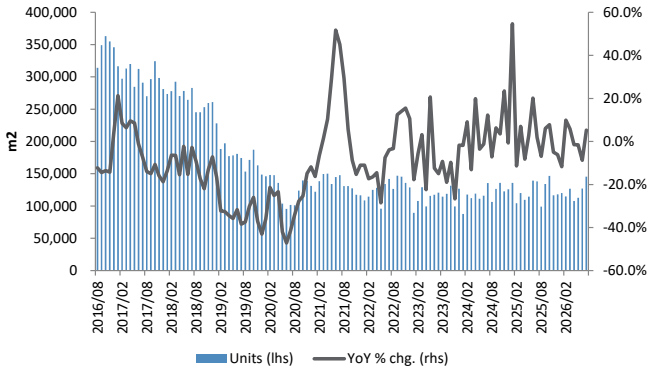
Source: METI, J.P. Morgan.

Figure 25: Rigid PWBs: Production value ($mn)



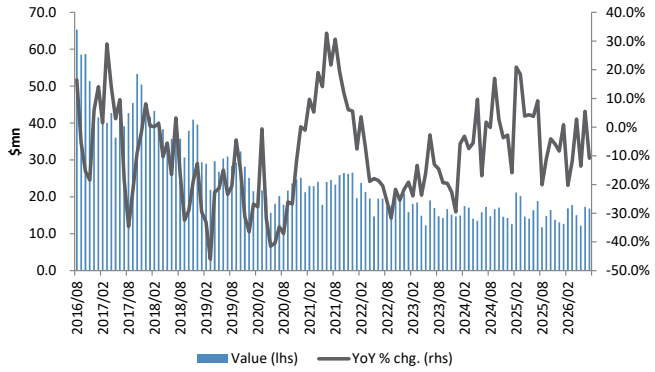
Source: METI, J.P. Morgan.

Figure 26: Flexible PWBs: Production quantity (square meters)



Source: METI, J.P. Morgan.

Figure 27: Flexible PWBs: Production value ($mn)

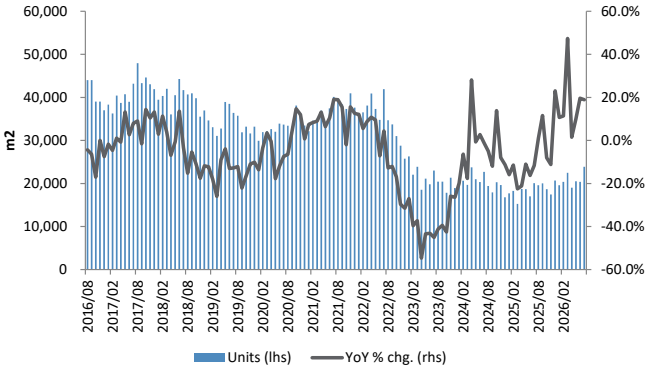


Source: METI, J.P. Morgan.

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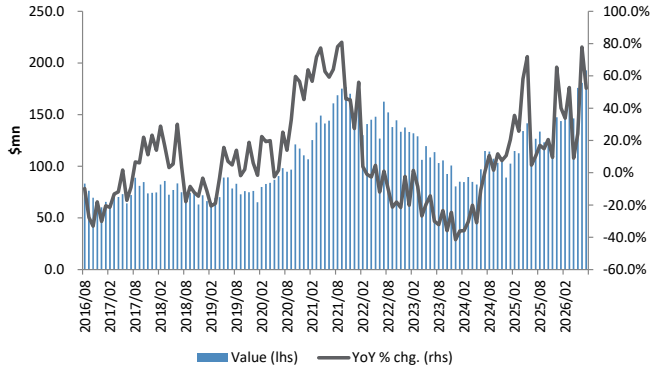
J.P.Morgan

Figure 28: Rigid module boards: Production quantity (square meters)



Source: METI, J.P. Morgan.

Figure 29: Rigid module boards: Production value ($mn)

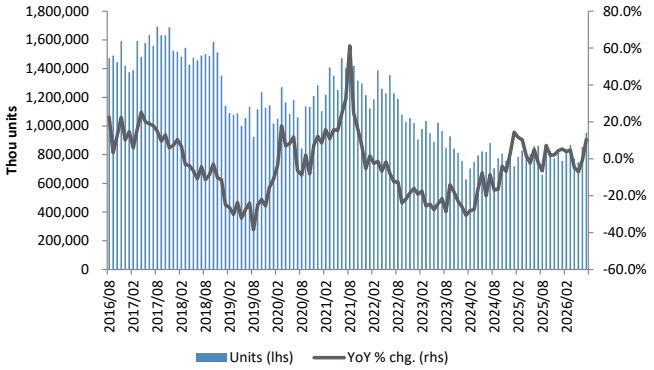


Source: METI, J.P. Morgan.

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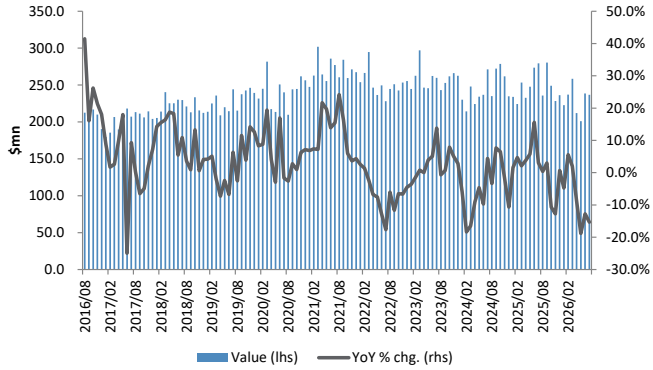
Semiconductors

Figure 30: Discrete semiconductors: Production quantity ('000 units)



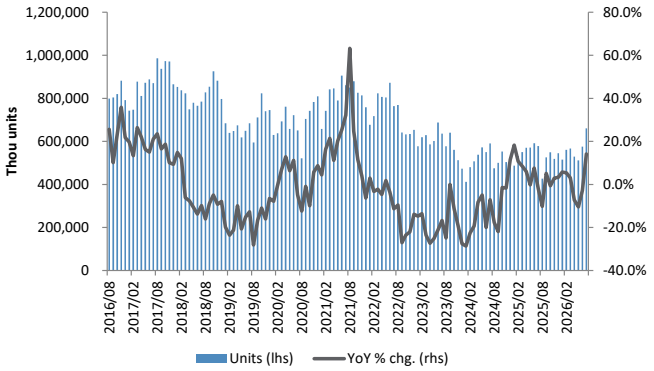
Source: METI, J.P. Morgan.

Figure 31: Discrete semiconductors: Production value ($mn)



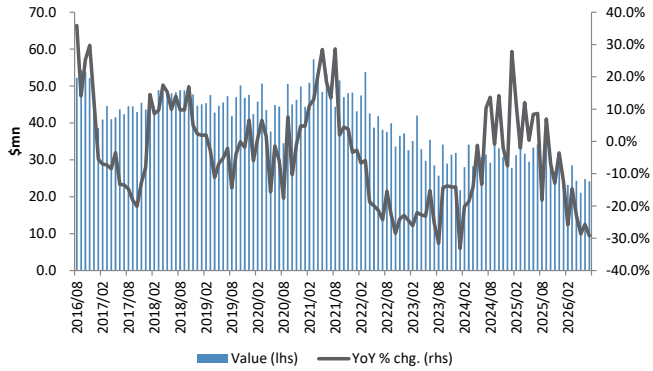
Source: METI, J.P. Morgan.

Figure 32: Diodes and rectifiers: Production quantity ('000 units)



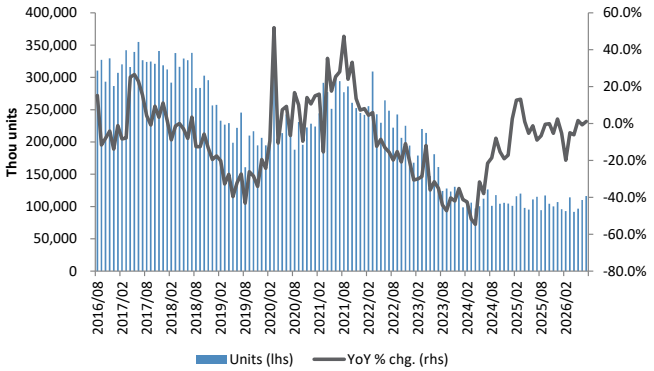
Source: METI, J.P. Morgan.

Figure 33: Diodes and rectifiers: Production value ($mn)



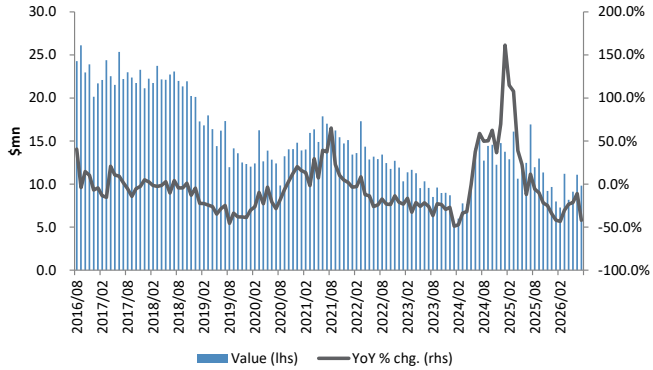
Source: METI, J.P. Morgan.

Figure 34: Si-Transistors: Production quantity ('000 units)



Source: METI, J.P. Morgan.

Figure 35: Si-Transistors: Production value ($mn)

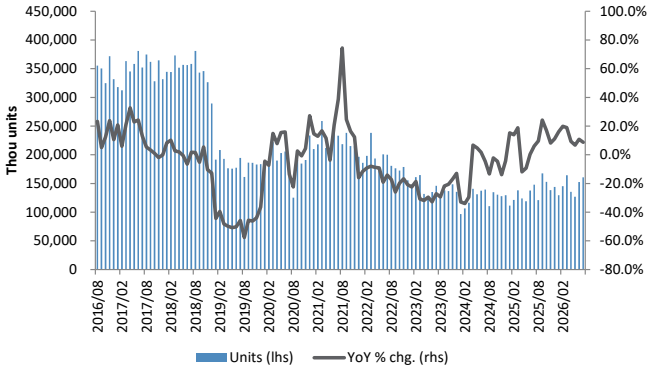


Source: METI, J.P. Morgan.

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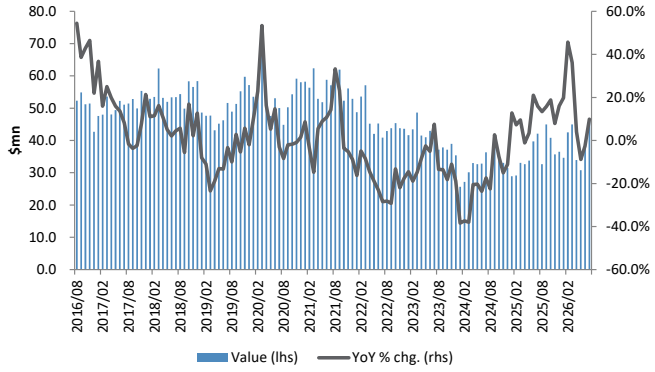
J.P.Morgan

Figure 36: Si-MOSFET: Production quantity ('000 units)



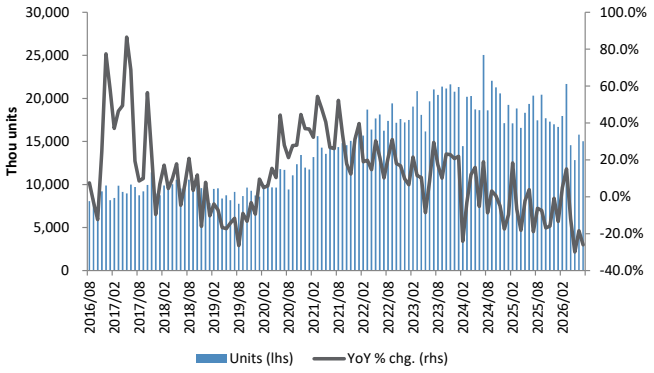
Source: METI, J.P. Morgan.

Figure 37: Si-MOSFET: Production value ($mn)



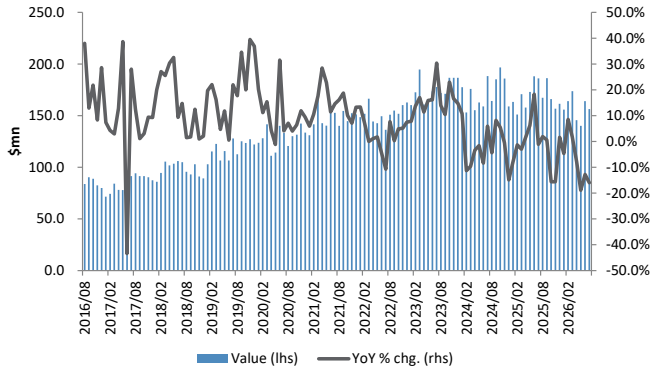
Source: METI, J.P. Morgan.

Figure 38: IGBTs: Production quantity ('000 units)



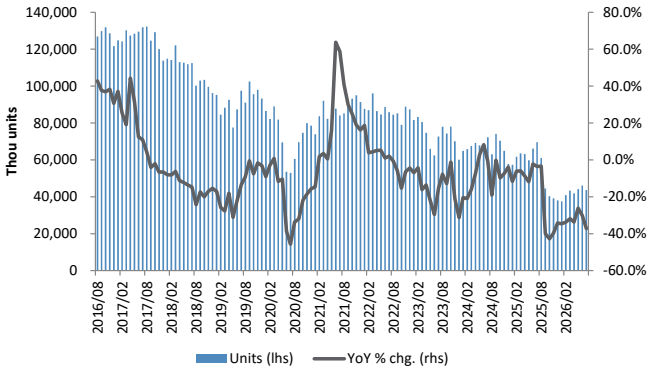
Source: METI, J.P. Morgan.

Figure 39: IGBTs: Production value ($mn)



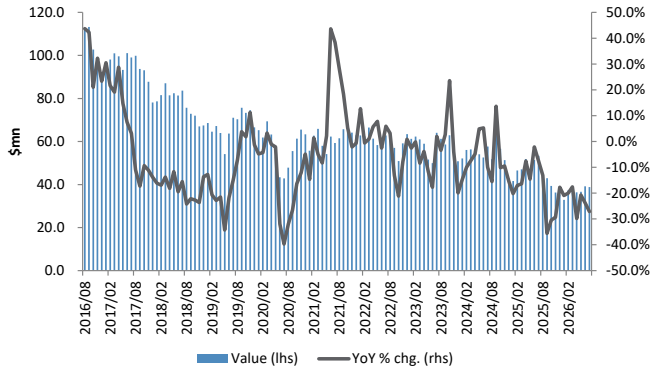
Source: METI, J.P. Morgan.

Figure 40: MCUs: Production quantity ('000 units)



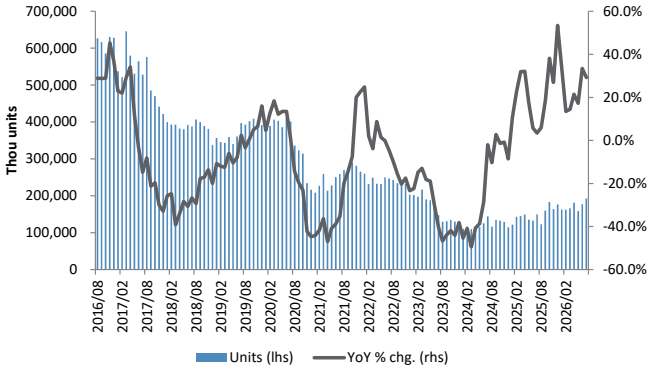
Source: METI, J.P. Morgan.

Figure 41: MCUs: Production value ($mn)



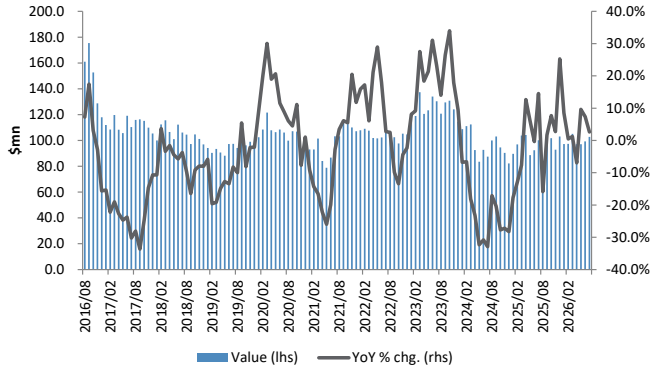
Source: METI, J.P. Morgan.

Figure 42: Logic ICs: Production quantity ('000 units)



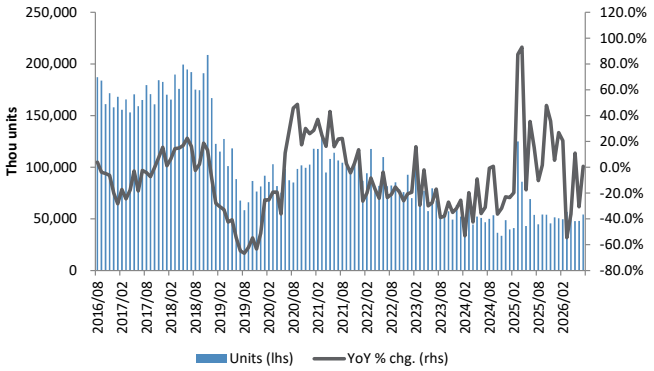
Source: METI, J.P. Morgan.

Figure 43: Logic ICs: Production value ($mn)



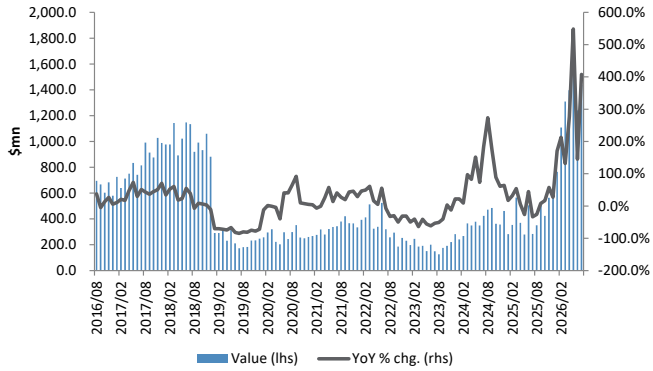
Source: METI, J.P. Morgan.

Figure 44: Memory: Production quantity ('000 units)



Source: METI, J.P. Morgan.

Figure 45: Memory: Production value ($mn)



Source: METI, J.P. Morgan.