THE MATURE NODE SEMICONDUCTOR LANDSCAPE

JOACHIM KUNKEL

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MATURE NODE SEMICONDUCTORS

Chips in 28nm+ process technologies, typically used in the following end-use markets

- aerospace & defense, automotive, industrial, medical devices

"The connotations associated with terms like 'mature,' 'older,' and 'legacy' are misleading because these categories of chips are constantly being refined for new requirements and applications…Legacy chips are destined to remain highly relevant to emerging industries and technologies far into the future."

Sujai Shivakumar, Charles Wessner, and Thomas Howell at the Center for Strategic and International Studies

EVOLUTION OF CHINA'S SEMICONDUCTOR INDUSTRY

"NATIONAL IC FUND"

- phase I (2014, $20B) in support of fabrication and design activities
- phase II (2019, $32B) w/ greater focus on supporting older node manufacturing, design activities, and increasingly also equipment and materials investments

PROVINCIAL AND MUNICIPAL FUNDS

- $50B since 2015

LOCAL GOVERNMENTS

- provide land, utilities, and other inputs at below cost for manufacturing sites

As a result of this government support, a 2020 study by BCG and SIA found that, all else equal, the cost of building and operating a fab in Mainland China is 37% lower than doing so in the United States

U.S. POLICY OBJECTIVES

2018 – address alleged ‘unfair’ trade practices by China hurting US companies, incl. in the semiconductor industry

- tariffs targeting industries in China’s “Made in China 2025” plan

POLITICO

Trump signs order setting stage to ban Huawei from U.S.

By ERIC GELLER
05/15/2019 05:23 PM EDT
Updated: 05/15/2019 07:05 PM EDT

President Donald Trump on Wednesday signed an executive order laying the groundwork to block Chinese telecommunications companies like Huawei from selling equipment in the U.S., a move aimed at neutralizing Beijing's ability to compromise next-generation wireless networks and U.S. computer systems.

Commerce on Wednesday took a separate but related action that would effectively prohibit U.S. companies from doing business with Huawei by adding it to the so-called "entity list."

U.S. POLICY OBJECTIVES

2018 – address alleged ‘unfair’ trade practices by China hurting US companies, incl. in the semiconductor industry

- tariffs targeting industries in China’s “Made in China 2025” plan

2019 – ban and contain Huawei because of national security concerns

- semiconductors as a chokepoint
- weaponizing US export controls targeting the global semiconductor supply chain

US-China Trade War

- tariffs on semiconductor raw materials
- shortages and supply chain disruptions

COVID-19 Pandemic

- increased demand for semiconductors
- supply chain vulnerabilities
- production halts

OUTCOME

Stockpiling

- short-term buying surges for chemicals and wafers to preempt tariff costs

Supply chain diversification

- U.S. and Chinese firms sought alternative sources (e.g., Japan, Korea, Taiwan)

Localization of the supply chain accelerated

- increased investment in domestic supply chain (‘CHIPS Acts’)
- Reshoring, onshoring, nearshoring, friendshoring, …

Bloomberg

U.S. Blacklists More Than 60 Chinese Firms, Including SMIC

- SMIC's shares slide 5.2% in Hong Kong trading on the news
- The effort is part of a wider campaign to contain China's rise

By Bloomberg News

December 17, 2020 at 9:46 PM PST
Updated on December 18, 2020 at 8:35 AM PST

The U.S. Commerce Department announced it's blacklisting Semiconductor Manufacturing International Corp., drone maker SZ DJI Technology Co. and more than 60 other Chinese companies "to protect U.S. national security."

"This action stems from China's military-civil fusion doctrine and evidence of activities between SMIC and entities of concern in the Chinese military industrial complex," the Commerce Department said in a statement.

The majority of the newly banned companies are Chinese and will join the likes of Huawei Technologies Co. on a list that denies them access to U.S. technology from software to circuitry.

South China Morning Post

China's top chip maker SMIC achieves 7-nm tech breakthrough on par with Intel, TSMC and Samsung, analysts say

SMIC took two years to achieve the leap from 14-nm to 7-nm, faster than TSMC and Samsung, TechInsights said

Experts said it is technically possible for SMIC to produce 7-nm chips even without the most advanced production equipment

Che Pan

Published: 10:00pm, 29 Aug 2022 | Updated: 12:13am, 30 Aug 2022

SMIC, which is on a US trade black list and facing additional restrictions on the import of advanced equipment, declined to comment on the findings when reached by the *Post*. The Hong Kong-listed company's financial statements do not contain any mention of 7-nm grade technology.

FOR IMMEDIATE RELEASE
October 7, 2022
www.bis.doc.gov

BUREAU OF INDUSTRY AND SECURITY
Office of Congressional and Public Affairs
OCPA@bis.doc.gov

Commerce Implements New Export Controls on Advanced Computing and Semiconductor Manufacturing Items to the People's Republic of China (PRC)

Washington, D.C.—The Department of Commerce's Bureau of Industry and Security (BIS) is implementing a series of targeted updates to its export controls as part of BIS's ongoing efforts to protect U.S. national security and foreign policy interests. These updates will restrict the People's Republic of China's (PRC's) ability to both purchase and manufacture certain high-end chips used in military applications and build on prior policies, company-specific actions, and less public regulatory, legal, and enforcement actions taken by BIS.

The export controls announced in the two rules today restrict the PRC's ability to obtain advanced computing chips, develop and maintain supercomputers, and manufacture advanced semiconductors. These items and capabilities are used by the PRC to produce advanced military systems including weapons of mass destruction; improve the s
decision making, planning, and logistics, as well as of its autor
commit human rights abuses. Finally, these rules make clear th
prevent BIS from making compliance determinations will impa
technology through addition to the Entity List.

ASML forced to suspend some China exports after US escalates tech battle

By Diksha Madhok, CNN
2 minute read · Updated 3:37 AM EST, Tue January 2, 2024

(CNN) — ASML has been ordered by the Dutch government to restrict shipment of some of its chip-making equipment to China, the company said on Monday.

The curb comes after the United States ramped up its own restrictions on the types of semiconductors that American companies will be able to sell to China and also pressed its allies to enact their own.

EE Times

DESIGNLINES | AI & BIG DATA DESIGNLINE

Uproar as Biden Administration Limits AI Chip Shipments

By Sally Ward-Foxton 01.15.2025 0

In its final days, the Biden Administration has rushed through new rules designed to prevent AI developments that could threaten U.S. national security. However, the new rules have faced strong criticism from the chip and cloud industries, who argue that the revised rules are unnecessarily stri will eventually favor Chinese chip competitors.

These rules would apply to Nvidia previous-gen A100, current-gen H100 and next-gen B200 GPUs, as training-capable chips from companies like AMD, Cerebras, SambaNova and others. While the ru designed to limit training large-scale above the 600 INT8 TOPS limit also f like Groq, Untether and Tenstorrent.

Bloomberg

US Warns That Using Huawei AI Chip 'Anywhere' Breaks Its Rules

By Lynn Doan

May 13, 2025 at 12:17 PM PDT

The Commerce Department issued guidance stating that the use of Huawei Technologies Co.'s Ascend artificial intelligence chips "anywhere in the world" violates the government's export controls, escalating US efforts to curb technological advances in China.

Bloomberg

US to Keep China Chip Curbs, Spurning Nvidia's Call for Relief

By Michael Shepard and Edward Ludlow

May 21, 2025 at 10:02 AM PDT

The Trump administration will maintain efforts to keep advanced artificial intelligence technology out of China's hands, a top White House official said, brushing off calls from Nvidia Corp. Chief Executive Officer Jensen Huang to ease restrictions on chip exports to the world's second largest economy.

U.S. POLICY OBJECTIVES

Protecting national security and foreign policy interests evolved to include securing U.S. High-Performance Compute ('HPC') and AI leadership

- stop China from being able to manufacture or have manufactured advanced HPC and AI chips, by controlling export (and access!) to
  - semiconductor manufacturing equipment for 7nm and below (e.g., EUV lithography)
  - EDA software for Gate-All-Around ('GAA') technology (i.e., [3nm,] 2nm and below)
- keep advanced HPC and AI chips out of China's hands
  - high-performance CPU, GPU, NPU, HBM, and high-speed interconnect chips

Exclusive: Nvidia to launch cheaper Blackwell AI chip for China after US export curbs, sources say

Reuters

By **Liam Mo** and **Fanny Potkin**

May 26, 2025 2:46 AM PDT · Updated 15 days ago

Aa

BEIJING/TAIPEI, May 26 (Reuters) - Nvidia (NVDA.O) will launch a new artificial intelligence chipset for China at a significantly lower price than its recently restricted H20 model and plans to start mass production as early as June, sources familiar

Placeholder for next announcement

Public Report on the Use of Mature-Node Semiconductors

Summary

In January 2024, the Department of Commerce's Bureau of Industry and Security (BIS) issued surveys to a representative sample of U.S. industry on the production and use of mature-node semiconductor devices (also known as legacy chips) manufactured by entities based in the People's Republic of China (PRC or China) and used in critical industries and U.S. Government supply chains.[1] The survey aimed to identify how U.S. companies are sourcing mature-node semiconductors. The resulting analysis will inform U.S. policy to bolster the semiconductor supply chain, promote a level playing field for legacy chip production, and reduce national security risks posed by the PRC.[2]

Overall, end users had limited visibility into the origins of the chips used in their products. Some 44 percent of surveyed companies were unable to determine whether their products contained any chips manufactured by PRC-based foundries. Another 38 percent of companies reported that their products contained some PRC chips, while 17 percent of end users were able to affirm they provided products with no chips manufactured by PRC-based foundries. also suggests that many companies are unaware of the risks, from global created by potential overreliance on PRC manufacturers.

ORIGIN OF CHIPS IN END USE PRODUCTS

- 44% - unable to determine
- 38% - some China chips
- 17% - affirmed no China chips

USE OF CHINA FOUNDRIES FOR CHIP MANUFACTURING

- Less than 2% of total chip sales

USE OF CHINA CHIPS IN USER END PRODUCTS IS PERVASIVE, BUT SHALLOW

- 2.8% of all chip count
- 1.3% of chips by value
- 17% - affirmed no China chips

End users had sufficient visibility, however, to reveal that the use of chips manufactured in PRC-based foundries is pervasive. The data indicate that at least two thirds of respondents' products likely contain chips manufactured by PRC-based foundries.

While the use of these chips is pervasive, it is also shallow. PRC chips account for only about 2.8 percent of all chips by count, and about 1.3 percent of chips by value. In other words, even though PRC chips were present in the vast majority of surveyed companies' products, they currently make up a small proportion of the total chips in most individual products.

In addition to end users, BIS also surveyed suppliers of semiconductors. BIS collected data from 22 organizations on their use of PRC-based foundries for outsourced production. Surveyed U.S. chip suppliers have minimal use of PRC-based foundries: chips manufactured at these facilities account for less than two percent of total chip sales by surveyed companies. That said, several chip suppliers indicated that capacity expansion in China is beginning to cause pricing pressure, and that the combination of subsidies for foundries and downstream industries in China, as well as pressure to use PRC-origin content in China, may impact their competitive positions.

EE Times

Mature-Node Foundries Face Overcapacity from China

By Alan Patterson 01.02.2025 0

U.S. government officials, after signaling concerns about the surge in capacity for months, on Dec. 23 2024, announced an investigation into what the Biden administration called China's unfair trade practices. The measure follows a series of export controls and prohibitions the administration has taken to slow the advance of China's tech industry.

The Office of the U.S. Trade Representative is launching a Sec
called "China's targeting of mature-node chips for dominance
addition, the investigation will assess China's impact on the p
other wafers used as inputs.

CHINA MATURE NODE CAPACITY SURGE LEADS U.S. GOVERNMENT TO LAUNCH SECTION 301 INVESTIGATION

- "unfair" foreign barriers to U.S. exports
- concerns oversupply will wreak havoc domestic supply

U.S. TRADE REPRESENTATIVE ('USTR') EXAMINING

- "China's targeting of mature node chips for dominance and the impact on the U.S. economy"

Congressional Research Service
Informing the legislative debate since 1914

IN FOCUS

April 8, 2025

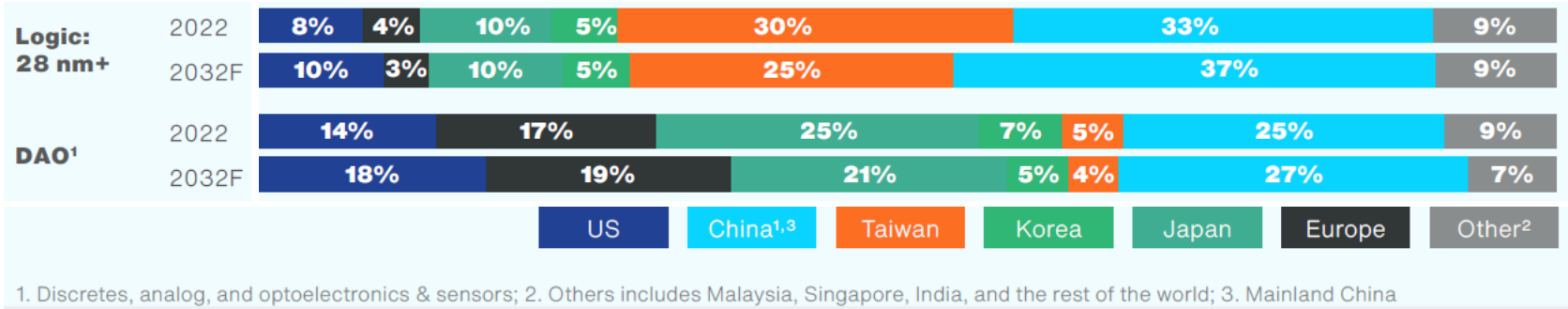
Section 301 and China: Mature-Node Semiconductors

Title III of the Trade Act of 1974 (Sections 301-310, codified at 19 U.S.C. §§2411-2420) is referred to as "Section 301." It is one of the principal statutory means by which the United States enforces U.S. rights under trade agreements and addresses "unfair" foreign barriers to U.S. exports. It grants the U.S. Trade Representative (USTR) a range of authorities to investigate foreign trade actions, policies, and practices and to impose trade sanctions on foreign countries found to have violated U.S. trade agreements or to have engaged in acts that are "unjustifiable," "unreasonable," or "discriminatory," and burden or restrict U.S. commerce.

PRC state-led policies, if successful, could lead to a loss of U.S. technological leadership, shift semiconductor production and related capabilities to China, and ultimately support a range of PRC advancements, including military applications. Congress has considered ways to counter PRC policies and boost U.S. capabilities. The CHIPS and Science Act (P.L. 117-167) appropriated $52.7 billion in federal funding until expended and provided tax incentives to expand U.S. semiconductor capacity. The Trump Administration is reportedly asking firms to commit more U.S. investment before it issues CHIPS funds.

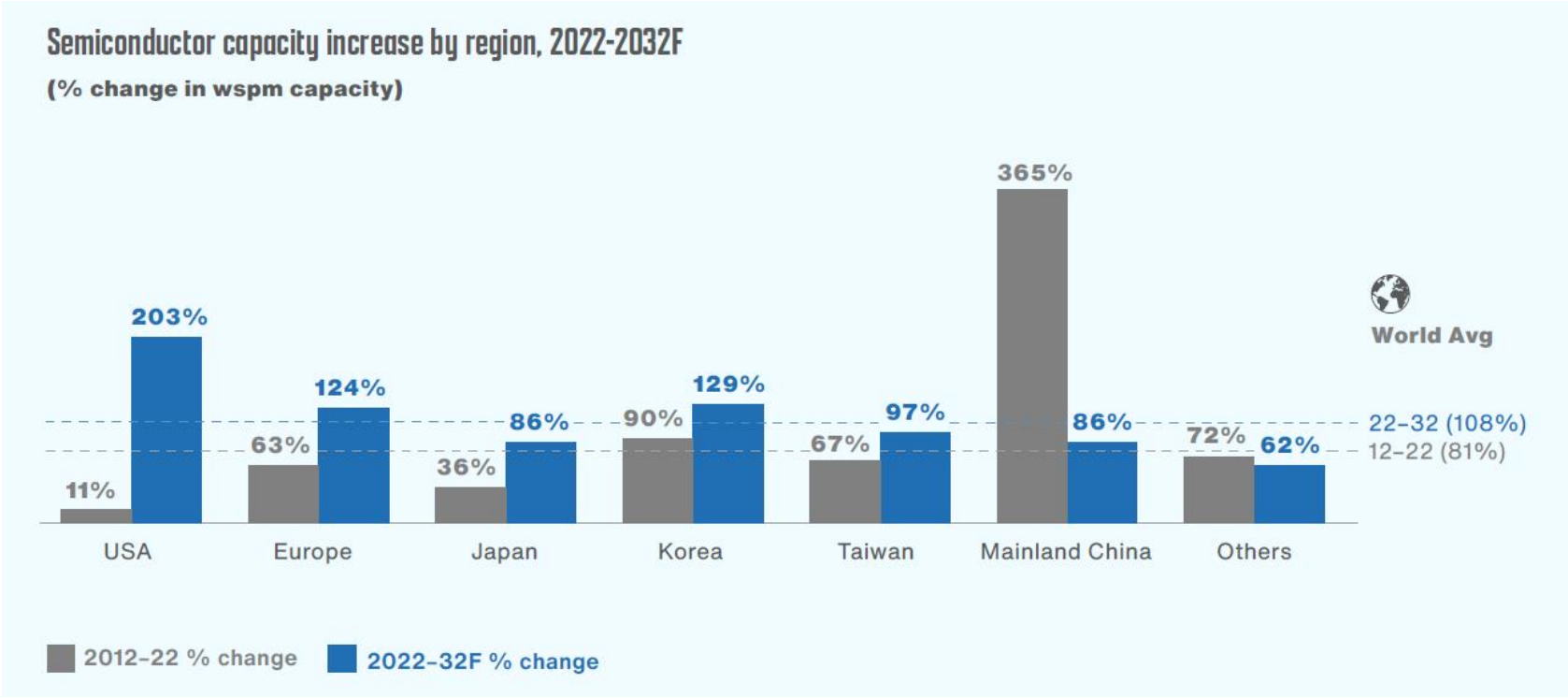
CHINA WAS CUT OFF FROM ADVANCED NODE MANUFACTURING TECHNOLOGY

- invested in mature node manufacturing



CHINA'S SHARE OF GLOBAL MATURE NODE PRODUCTION FORECASTS

- 31% in 2023 to 39% in 2027 (ITIF, Stephen Ezell) (TrendForce)
- 33% in 2024 to 45% in 2027 (ChatGPT)



CHINA'S MATURE NODE MANUFACTURING INVESTMENT MAINLY INTO

- foundry business vs.
- IDM business in the West

CHINA “NATIONAL IC FUND”

- phase III (2024, $47.5B) with manufacturing equipment a priority

CHINESE NEW MATURE NODE MANUFACTURING CAPACITY BY 2027

- SMIC ~340k WSPM
- YDME ~370k WSPM
- Hua Hong ~40k WSPM
- Nexchip ~80k WSPM
- CRM ~40-60k WSPM
- CanSemi ~40k WSPM
- TOTAL ~910-930k WSPM

China’s aggressive expansion comes at a time when the market for legacy chips is already well supplied. Utilization rates for producers of mature-node chips have fallen from nearly 100% in 2020 to 65-75% at present

according to Gavekal Research (3/16/2024 WSJ)

Currently, China’s capacity can address well over half of mature- and essential-node chip demand. Moreover, its fab whitespace and unboxed tools give it a ceiling of almost 100%. Global fab utilization for mature node chips is well below 80%

According to Dan Hutcheson, TechInsights vice chair (1/2/2025 EETimes)

U.S. MATURE NODE NEW MANUFACTURING CAPACITY BY 2027

- TI ~160k WSPM
- GF ~120k WSPM
- TSMC ~30-40(?)k WSPM
- ADI ~30-40k WSPM
- TOTAL ~360k WSPM

EU MATURE NODE NEW MANUFACTURING CAPACITY BY 2027

- Infineon ~40-60k WSPM
- GF ~35-45k WSPM
- ESMC ~40k WSPM
- STM ~<?> WSPM
- TOTAL ~120-180k WSPM

OTHER MATURE NODE NEW MANUFACTURING CAPACITY

- TSMC, JASM (JP) ~50k WSPM
- UMC (TW, SG) ~30k WSPM
- Powerchip w/ Tata (TW, IN) ~50k WSPM
- Vanguard International w/ NXP (TW, SG) ~55k WSPM

PRODUCTS FROM CHINA FOUNDRIES

- getting more competitive for some consumer electronics applications
- remain significantly less reliable for end-use applications such as automobiles

"To safeguard the security and stability of the automotive industry chain and [the broader] supply chain, the association suggests that Chinese automotive enterprises exert caution in purchasing US chips."

CAAM (1/1/2025 SCMP)

China struggles to build an automotive chip supply chain to break free of heavy reliance on imports

- self-sufficiency rate for automotive chips is currently less than 10%

according to an official at MIIT (1/1/2025 SCMP)

China's automotive chip self-sufficiency rate is

- less than 1% for computing and control chips
- only 8% for power and memory chips

according to Wang Qing, deputy director at the Development Research Centre (1/1/2025 SCMP)

CHINA'S NEW 28 NM+ MANUFACTURING CAPACITY WILL BE LARGELY ABSORBED BY DOMESTIC DEMAND

- commoditized chips
- Beijing's "buy Chinese" mandates

AT THE COST OF TIGHTER MARGINS DUE TO PRICE COMPETITION

EXPORTS WILL HELP SOAK UP ANY SURPLUS

CHINA'S NEW 28NM+ MANUFACTURING CAPACITY IS THREATENING LONG-HELD DOMINANCE OF TAIWAN BASED MATURE NODE FOUNDRIES TSMC, POWERCHIP, UMC AND VANGUARD INTERNATIONAL

- China consumer-focused companies are increasingly asking Taiwanese chip firms to use Chinese fabs

"For chips that will be used in China, we won't be able to do the business... We must exit, otherwise, there's no way to survive."
Frank Huang, chairman Powerchip
(2/11/2025 Taipei Times)

- pursue more advanced and specialty process technologies

THERE IS NO SINGLE MARKET FOR 'MATURE NODE' SEMICONDUCTORS'

- aggregating capacities based on process node does not account for the diversity of applications and requirements
- "overcapacity" is an inappropriate lens
- for products

    stringent qualification of product quality and reliability

    long-term contract arrangements are preferred because of thin margins and high switching costs

IN SOME MARKET SEGMENTS, FOREIGN CHIP FIRMS LIKE

- Infineon, TI, NXP, Renesas, ADI

MAY RETAIN THEIR POSITION IN THE CHINA MARKET FOR THE FORESEEABLE FUTURE BECAUSE OF

- technological differentiation

LOOKS FAMILIAR?

CHINA'S INDUSTRIAL DEVELOPMENT PLAYBOOK

- massive shotgun subsidies results in many market entrants
- brutal competition in local market selects the winners

PLAYED OUT REPEATEDLY IN THE PAST

- solar panels, mobile devices, consumer electronics, …

PLAYING OUT TODAY

- electric vehicles, mature-node semiconductors

OUTCOME

PRICING

- fierce competition with lower ASPs instead of innovation in China
- manufactures under pressure

OUTLOOK

- China dominating cost-focused mature node capacity while margins compress
- ‘no China chips’ mandates and ‘in China for China’
- life will be especially difficult for new small-scale players

WOLFSPEED

6/19/2024 Wolfspeed plant delayed as EU's chipmaking plans flounder (Reuters)

Wolfspeed has delayed plans to build a $3B plant in Germany …

3/6/2025 NC chipmaker Wolfspeed awaits critical CHIPS funding as Trump slams semiconductor program (The News & Observer)

During his address to a joint session of Congress Tuesday night, President Donald Trump called on House Speaker Mike Johnson to end the CHIPS and Science Act and repurpose any leftover program funds "to reduce debt or any other reason you want to." "Your CHIPS Act is a horrible, horrible thing," Trump said. "We give hundreds of billions of dollars and it doesn't mean a thing."

5/13/2025 "Policy uncertainty made long-term planning impossible," said Preston Caldwell, senior U.S. economist at Morningstar, in an analysis. Wolfspeed's U.S.-centric production strategy left it vulnerable to geopolitical tensions (FT)

5/22/2025 American semiconductor pioneer Wolfspeed nears collapse due to Washington's policies (Xinhua)

The collapse followed months of financial strain exacerbated by Trump administration policies, including so-called reciprocal tariffs, and delayed CHIPS Act funding

6/2/2025 US-based SiC wafer and substrate provider Wolfspeed is reportedly preparing to file for bankruptcy, triggering concerns across the SiC industry. Renesas, which signed a 10-year SiC wafer supply deal with Wolfspeed in 2023 and paid US$2 billion in advance, could be among the most affected (DIGITIMES Asia)

WOLFSPEED CHINA COMPETITORS

WORLDWIDE SIC MARKET SHARES (2024)

- Wolfspeed 33.7% - crystal -> substrate –> epi wafers –> devices -> modules
- TanKeBlue 17.3% – crystal -> substrate -> epi wafers
- SICC 17.1% - crystal -> substrate

YOFC LAUNCHED CHINA'S LARGEST SIC WAFER FACTORY IN WUHAN IN MAY 2025, TARGETING

- 3.5k 6-inch wafers per month by EO 2025
- 30k 6-inch wafers per month by 2026+

CHINA'S AGGRESSIVE PUSH INTO THE SIC MARKET IS DRIVING PRICES TO RECORD LOWS (NIKKEI)

- Wolfspeed's 6-inch SiC premium automotive grade epi wafers sold for ~$1,500 each
- Sanan IC is offering epi wafers in the $500-700 range
- TanKeBlue is offering epi wafers in the $500-700 range
- SICC's substrates can be under $500

RENESAS

6/2/2025 Renesas scraps SiC production plan amid rising Chinese challenge (DIGITIMES Asia)

Japanese chipmaker Renesas Electronics has scrapped its plan to mass-produce silicon carbide (SiC) power semiconductors, originally set to begin in early 2025 at its Takasaki plant in Gunma Prefecture. The company has also disbanded the dedicated team behind the project.

According to Nikkei Asia, the move comes amid weakening demand for electric vehicles and growing competition from Chinese manufacturers, many of which are ramping up SiC production with the help of government subsidies.

6/2/2025 The challenges are mounting across the sector. Rohm has posted its first loss in 12 years, and companies like STMicroelectronics (32% market share), Onsemi (20-25% market share), and Infineon (15-20% market share) are cutting jobs or restructuring operations. These developments underscore the same market pressures that led Renesas to abandon its SiC mass production plans (DIGITIMES Asia)

South China Morning Post

Trump tariffs: Chinese chip firms shrug off trade war, as US already cut them off

Chipmakers and analysts anticipate benefits to China's chip supply chain from the fresh US tariffs, including for equipment and components

Wency Chen in Shanghai

Published: 9:00pm, 10 Apr 2025 | Updated: 11:06pm, 10 Apr 2025

A number of listed Chinese semiconductor companies have reassured investors that they are largely unaffected by China's increased import tariffs, citing earlier US sanctions as a mitigating factor.

China recently increased duties on all American goods to 84 per cent in retaliation to US President Donald Trump's so-called "reciprocal" tariffs, which took effect at 12pm on Thursday. Dozens of Chinese chip firms have since said that there is little impact on their operations.

Chip designer Loongson Technology also said on Thursday that the latest tariffs "have no negative impact on the company", and emphasised its commitment to independent research and development of chips, software systems and self-controllable supply chains, along with zero US-based revenue.

Shenzhen-based IoT chip developer Leaguer Microelectronics issued a statement noting that the bulk of its materials are sourced domestically, and its revenue is exclusively generated within China.

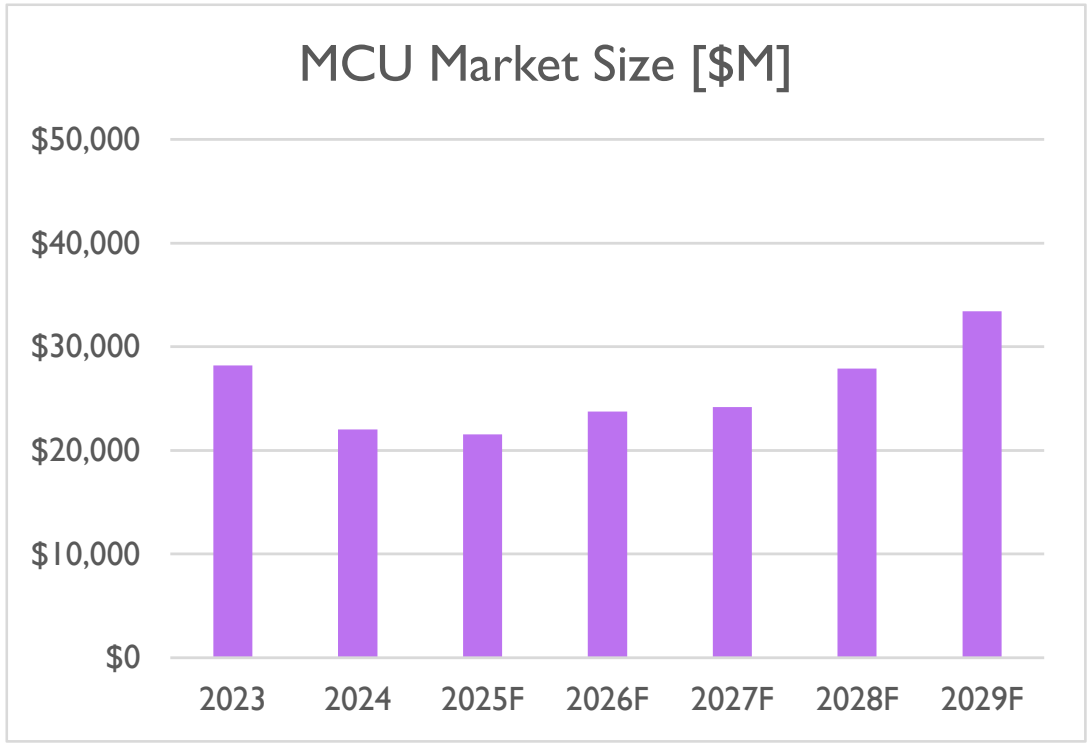
Some companies highlighted their global strategies to manage the impact of tariffs. Longsys Electronics, a major storage systems provider, said on Tuesday that its Brazil subsidiary helped it mitigate the effects of the US-China trade war.

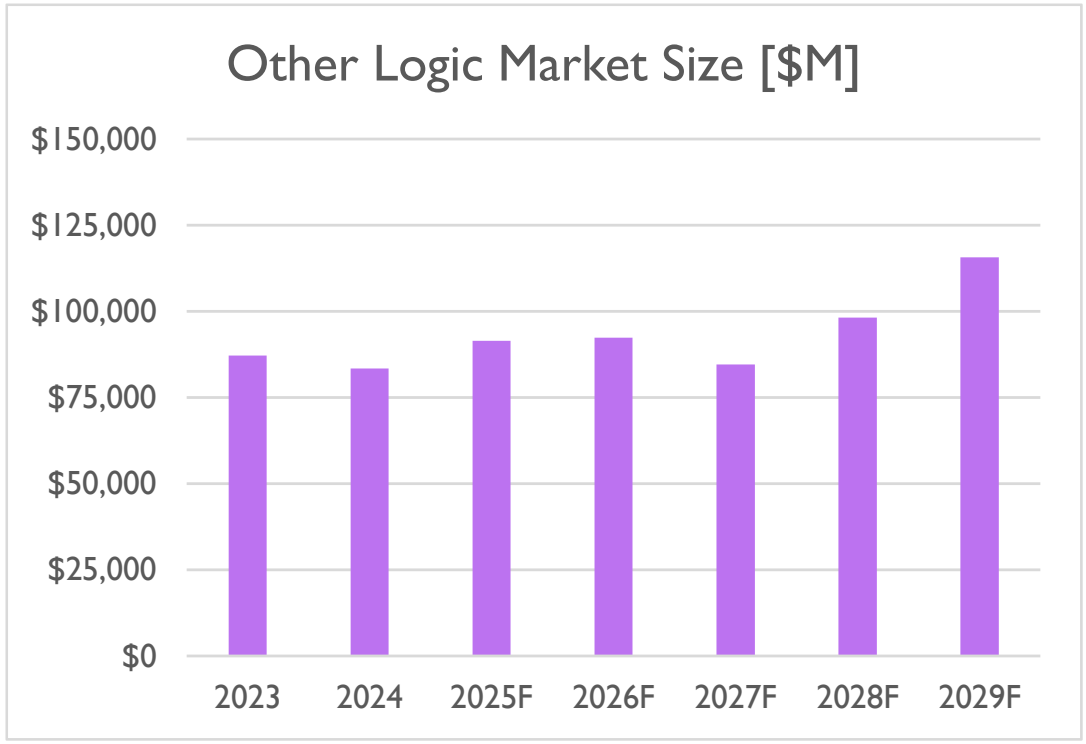
Maxscend Microelectronics, a radio-frequency chip designer based in eastern Jiangsu province, reassured investors on Monday that its emphasis on domestic supply chains mean that "the latest tariff measures have minimal impact on our business operations".

These reactions reflect a years-long decoupling between the Chinese and American semiconductor industries, and China's push for technological self-reliance. Given the globalised nature of chip supply chains, determining the true "origin" of many products is often complex.

Gu Wenjun, chief analyst at local semiconductor research firm ICwise, wrote in a commentary for the business news publication Caixin that the escalating tariffs "will help foster a supply chain independent from the US".

MATURE NODE SEMICONDUCTOR MARKETS*

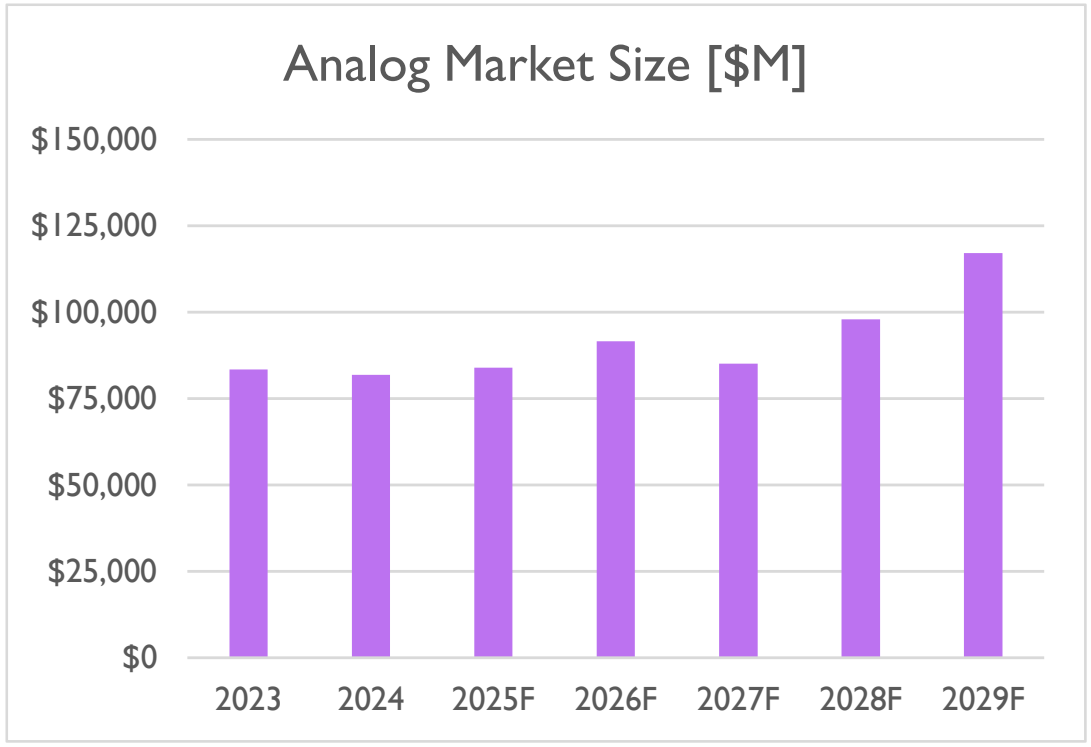


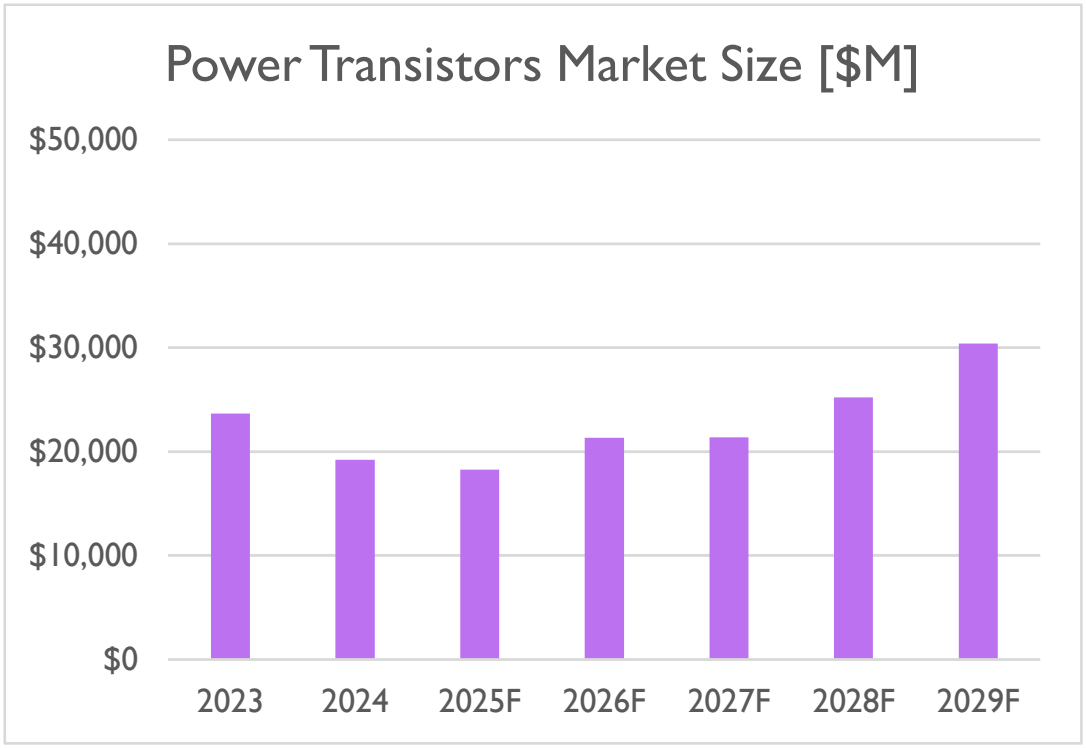


MPU and ASIC reported under 'Other Logic'

*Source: Tech Insights - Semiconductor Forecast Update and Top Supplier Rankins, May 2025

MATURE NODE SEMICONDUCTOR MARKETS*





*Source: Tech Insights - Semiconductor Forecast Update and Top Supplier Rankins, May 2025

South China Morning Post

Opinion | US-China trade war goes nuclear with Trump's chip software ban

Sweeping ban, albeit hard to enforce, threatens to kneecap China's semiconductor ambitions and endanger its national security

Stanley Chao

Published: 8:30pm, 4 Jun 2025

It is hardly a stretch to say that the Trump administration went nuclear last week in banning the sale of American semiconductor design software to China. The unprecedented move signals a tectonic shift in policy. The goal now is not simply to slow down China's semiconductor ambitions; it is to halt them.

EMPYREAN TECHNOLOGY, CHINA'S LEADING EDA PLAYER, CLAIMED LAST YEAR THAT IT COULD FULLY SUPPORT 7NM DIGITAL PROCESSES AND 5NM ANALOG PROCESSES

OTHER LEADING CHINESE EDA COMPANIES INCLUDE GWX TECHNOLOGY, PRIMARIUS, SEMITRONIX, SHENZHEN GIGA DESIGN AUTOMATION, UNIVISTA, AND X-EPIC

CHINESE EDA COMPANIES' DOMESTIC MARKET SHARE

- 2018 6.2%
- 2020 11.5%
- 2025E 14%

ALFREDO MONTUFAR-HELU, A SENIOR ADVISER TO THE CHINA CENTER AT US-BASED RESEARCH GROUP THE CONFERENCE BOARD, ECHOED THAT A MAJOR POINT OF CONTENTION AT THE COMING TRADE TALKS WOULD CENTER AROUND EXPORT CONTROLS, ESPECIALLY THOSE IMPOSED BY CHINA ON RARE EARTHS AND THE U.S. ON ADVANCED TECHNOLOGIES(6/6/2025 SCMP)

THANK YOU

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