Submission of the

Semiconductor Industry Association

Regarding

Index of Comments on the Possible Reinstatement of Previously Extended Exclusions

Section 301 Investigation: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation

Docket ID: USTR-2021-0019
Date: Dec 1, 2021

BY ELECTRONIC FILING

Mr. William Busis
Chairman
Section 301 Committee
Office of the United States Trade Representative
600 17th Street, N.W.
Washington, DC 20508

CC: Associate General Counsel Philip Butler; Assistant General Counsel Edward Marcus

Re: Request for Comments on the Possible Reinstatement of Certain Exclusions in the Section 301 Investigation of China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation

Dear Chairman Busis:

On behalf of the Semiconductor Industry Association (SIA), a U.S. trade association representing global leaders in semiconductor manufacturing, design, and research, accounting for 98% of US firms by revenue and nearly two-thirds of non-US semiconductor firms, we respectfully submit these comments in support of reinstatement by the Office of the United States Trade Representative's ("USTR") of certain semiconductor and semiconductor-related product exclusions from Section 301 tariffs as part of USTR's review of product exclusions that were granted and extended, but allowed to expire by the previous Administration. We are filing this request in response to USTR's *Request for Comments on the Possible Reinstatement of Certain Exclusions in*

the Section 301 Investigation of China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, 86 Federal Register 56,345 (October 8, 2021). The specific product exclusions at issue proposed by SIA for reinstatement are listed on USTR's website in an "Index of 549 Previously Extended Exclusions" (Index) and are specifically identified in Attachment A to this filing. We appreciate the opportunity to provide comments as USTR considers modification of tariffs imposed under Section 301 with the view of increasing access to and affordability of vital goods needed to battle the COVID-19 pandemic, significant economic inflation, and the ongoing global chip shortage.

More important, SIA respectfully urges USTR to immediately institute a much broader exclusion process covering other semiconductor and semiconductor-related products that were not listed in the Index and thus were ineligible for potential reinstatement or consideration as part of the current USTR review. The Index was limited to a relatively small number of products and a large number of semiconductor and semiconductor-related products, including products that are in critically short supply in the United States, were not eligible. The tariffs on semiconductors and semiconductor-related products such as semiconductor manufacturing equipment will undermine US technological leadership, cost jobs, and most importantly, are contributing to the current chip shortages and higher prices, and thus worsening the damage to US consumers of semiconductor products and the US semiconductor producers.

As the voice of America's semiconductor industry, SIA seeks to strengthen U.S. leadership of semiconductor manufacturing, design, and research by working with Congress, the Executive Branch, and other key U.S. industry stakeholders to encourage policies and regulations that fuel innovation, propel business, and drive international competition. Semiconductors are the bedrock of the today's American economy, powering virtually everything digital from cellphones and cars to supercomputers

and medical equipment. U.S. chipmakers lead the world with close to half of the global market. Semiconductors are a top five US export with more than $49 billion exports in semiconductors in 2020 and maintains a consistent trade surplus with China. Nearly half of the manufacturing operations of the leading U.S. semiconductor firms are located in the United States spread across 18 states, directly employing 250,000 highly-skilled and good-paying American jobs and supporting nearly 1.6 million additional US jobs. Moreover, the reality is that most of the chips imported from China were developed and manufactured at plants owned and operated by U.S. semiconductor companies there. Most importantly, we are a critical strategic U.S. asset. America's leadership in semiconductor technology helps to drive U.S. economic competitiveness, technological leadership, industrial capability, and military strength.

Discussion

1. The Section 301 Tariffs Are Disrupting America's Industrial Supply Chains and Undermining the Biden Administration's Goal of Expanding U.S. Manufacturing and Jobs

As set out in our earlier submissions to USTR, SIA is deeply concerned that the continued imposition of the previous Administration's 25% Section 301 duties on critically needed semiconductor and semiconductor-related inputs is (1) exacerbating existing U.S. chip shortages, (2) contributing to factory shutdowns, lost jobs and reduced working hours for American workers, (3) undermining U.S. industrial production across a wide range of industries and technologies, (4) contributing to inflationary price pressures for certain imported chips, and 5) is not providing USTR with leverage because U.S. semiconductor companies are harmed rather than indigenous Chinese semiconductor companies. This situation was not helped by the previous Administration's decisions to deny or terminate product exclusions covering key semiconductor HTS categories. As the Section 301 tariffs kicked in, imports of semiconductor and semiconductor-related products from China fell sharply from $2,501,001,220 in

2017 to $2,284,328,973 in 2018 when tariffs were first imposed under USTR's Lists 1 and 2, then dropped precipitously to $1,537,403,766 in 2019 and $1,493,871,544 in 2020 under Lists 3 and 4a. As a result, semiconductor imports are down by roughly one-third.

With advances in technology, semiconductors have become an integral part of American manufacturing. Chips are a key component of advanced technologies like smartphones, computers, robotics, and AI, but have come to play a vital role in U.S. manufacturing of traditional American industrial products like automobiles, appliances, and medical equipment. Most importantly, semiconductors are an integral component of many of the healthcare and medical devices being used to combat the ongoing COVID-19 pandemic, such as ventilators that are being used to treat COVID-19 patients. Because semiconductors are such a critical intermediate input, the tariffs are raising U.S. manufacturing costs in a wide range of downstream sectors that rely on semiconductor technology, including the very industry sectors listed in the Made in China 2025 plan that the 301 tariffs are meant to assist: aerospace, ICT, robotics, industrial machinery, new materials, and electric vehicles. By driving up the cost of semiconductor inputs, the tariffs boost the cost of manufacturing industrial and technology products in the United States, disrupt industrial supply chains, and undermine the Administration's Build Back Better goal of bringing production and jobs back to this country and expanding high-wage opportunities for American workers.[1] Far from incentivizing U.S. manufacturing and bolstering U.S. competitiveness vis-a-vis China, the tariffs are actually pushing American firms to consider highly undesirable and counter-productive mitigation measures as means to offset cost increases, measures that run directly counter to the Administration's goals.

[1] As an industry association, SIA is not in a position to provide certain specific data requested by USTR and leave it to our SIA member companies to provide proprietary information, which is not available to us, on the volumes and quantities of imports and third country and U.S. sourcing, or the effects on company operations. However, as part of our ongoing and productive decades-long partnership with USTR seek here to draw attention to their industry-wide impacts and the need for a holistic review of the Administration's approach to the tariffs and their damaging supply chain impacts.

2. The Section 301 Tariffs Are Worsening the Already Damaging Impacts of the Global Chip Shortage on the United States

Covid-19 has created a perfect storm of unprecedented disruptions for global supply chains in with rippling effects on the global economy. In 2020-2021, the world experienced a once-in-a century pandemic that throttled supply and created wild and unpredictable swings in demand. Some of our downstream industrial customers sharply throttled back production and cancelled chip purchases while others saw soaring demand for semiconductors to maintain critical technology functions during worldwide lockdowns and increased remote working. Underlying this dynamic, massive dislocations in global logistics and transportation networks coupled with shortages of raw materials, key components, and intermediary products exposed extensive vulnerabilities in highly interdependent and globalized value chains already weakened by geopolitical frictions and lean production strategies pre-dating Covid-19.

In response, the global semiconductor industry has pushed production capacity to its limits to increase output to historically unprecedented levels. Throughout the pandemic, the industry has continued to power the Nation's manufacturing, critical infrastructure, defense industrial base, healthcare sector, workforce, and digital solutions. At the same time, supply chain challenges and dramatic market volatility have placed tremendous strain on the industry's capacity to meet expanding global needs during accelerating digitalization of the post-COVID-19 era. The industry today operates in a difficult environment with competing and growing demand from multiple critical sectors of the economy and remains beset by geopolitical tensions. While chipmakers are working around the clock to ramp up production by every possible means in the short-term – and producing semiconductors well-above pre-pandemic levels - supply chain challenges are unlikely to dissipate in the near-term.

Understanding and addressing these challenges requires a holistic approach with consideration for each step and each factor in a highly complex and globalized supply chain. Demand for chips is increasing across the board and capacity and supply must expand everywhere, including in the U.S., to meet present and future needs.

In a global semiconductor shortage, every chip counts. The global shortage resulted from multiple factors, including COVID-19-related closures of key fabs; shortages of key materials, e.g. substrates; shipping delays; heightened demand for computer, electronics, and technology products, etc. But the Section 301 tariffs certainly do not help and only add to supply chain disruptions. In their most direct effect, the additional U.S. tariffs add 25% to the cost of covered semiconductors, and contribute to inflationary price increases driven by global shortages and rising demand. More broadly, the Section 301 tariffs are a tax that creates predictable incentives for customers to divert scarce semiconductor supplies to markets where they are not subject to punitive tariffs and to shift the manufacture, assembly, or sourcing of products, parts, and technologies that incorporate semiconductor components offshore in order to avoid paying the tariffs, as opposed to making products in the United States. The effect has been to exacerbate the current global shortages, further disrupt our customers' supply chains, and accentuate the damaging impacts of the global shortages in the United States. More important, these shortages are contributing to factory shutdowns and impacting paychecks in the form of reduced wages and hours. While removal of the Section 301 tariffs would be an incremental step, in the current global shortage even incremental steps to boost U.S. supply would count for a lot.

3. Tariffs on Parts and Components for Semiconductor Manufacturing Equipment Disincentivize an Urgently Needed Expansion of U.S. Semiconductor Production

Semiconductor manufacturing facilities are immensely capital-intensive, costing upwards of $10 billion and relying on hundreds of specialized tools, machines and equipment, many of which cost

millions of dollars apiece. Leading edge etching equipment, for example, can cost anywhere from $5-10 million. The domestic U.S. semiconductor equipment industry supplies about half (47%) of the global market for production tools, but even U.S. manufacturers rely on imports of components that are integrated into manufacturing tools. Imposing a 25% tariff on imports of the parts and components that go into U.S.-made semiconductor manufacturing equipment and other products in the semiconductor supply chain would substantially increase the cost of semiconductor manufacturing in the United States, and therefore disincentivize investments in U.S. manufacturing. With bipartisan support, Congress passed the "Creating Helpful Incentives to Produce Semiconductors for America Act" or "CHIPS Act" in the FY 2021 National Defense Authorization Act (NDAA) and is currently considering an investment tax credit to support new investments in advanced U.S. fabs as part of the "Facilitating American-Built Semiconductors (FABS) Act." Imposing steep taxes on semiconductor equipment components runs directly counter to the bipartisan Administration and Congressional goal of urgently expanding U.S. semiconductor manufacturing.

4. Semiconductor Product Exclusions Won't Diminish USTR's Negotiating Leverage or Pressures to Improve the Resiliency and Diversity of U.S. Supply Chains

China is currently not yet a major factor in global semiconductor technology. In, 2020, imports from China accounted for $2.65 billion of total U.S. imports of semiconductor and semiconductor-related products of $43.86 billion and a total U.S. market of $95.4 Billion By way of contrast, sales by U.S. semiconductor firms totaled $207.9 billion in 2020. Moreover, the reality is that most of the chips imported from China were developed and manufactured at plants owned and operated by U.S. semiconductor companies there. Most of these semiconductors are older, more basic, low-end and lower-value technologies,[2] but are still widely used in certain industrial applications, e.g. automobiles.

[2] In many U.S. industries, companies (including semiconductors) are reluctant to put their most advanced technologies in China because of longstanding concerns about rampant IPR theft.

Because most of the imported chips are produced by U.S., Taiwanese, Korean, or other foreign firms, as opposed to leading Chinese state-owned enterprises or national champions, the tariffs do not create much, if any, incentives for China to address U.S. concerns about forced technology transfers, IPR theft, cyber-theft, or state-sponsored acquisition of foreign technologies, including semiconductors.

Finally, much of what China performs in the global semiconductor supply chain consists of low-value assembly, packaging and testing (ATP) services for semiconductors that are manufactured elsewhere. This is the final stage of semiconductor manufacturing in which a block of semiconductor material is encapsulated in a supporting case that prevents physical damage and corrosion. The case, known as a "package," supports the electrical contacts which connect the device to a circuit board. Packaging is followed by testing of the finished integrated circuit. Because packaging and testing are low-value and labor-intensive, these services moved to Asia decades ago and are currently performed in places like Taiwan, Thailand, Malaysia, the Philippines, Vietnam, China, and other Asian countries. China accounts for 22% of the total number of worldwide ATP facilities. This activity is conducted either by wholly-owned subsidiaries of semiconductor manufacturers or by outsourced semiconductor assembly and test companies (OSATs). Chinese OSATs are still far behind compared to other global competitors (mostly from Taiwan), who dominate the advanced packaging space.

The cost of moving or replacing ATP infrastructure would be substantial and further complicated by the extreme pressures that current supply chain disruptions are placing on ATP facilities and other parts of the semiconductors production process. These additional costs would reduce the capital available to U.S. chip manufacturers invest in advanced R&D to support continued U.S. leadership, could lead to delays in previously planned U.S. investments in advanced fabs, and would have to be passed on to U.S. industrial customers in the form of increased prices. For U.S. companies without manufacturing operations (e, g., the growing number of fabless companies that design semiconductors

and outsource production), relocating ATP would require breaking contracts with existing ATP firms, finding an alternate ATP provider with sufficient capacity and capability to be available, and incurring the costs of realigning its global supply chains to new ATP facilities in new locations. It will also require our U.S. industrial and technology customers to requalify semiconductor chips from their new ATP facilities to be requalified for their end products to meet technical specifications in the midst of massive supply chain disruptions, a global pandemic, and severe restrictions on travel in many Asian market.

5. SIA Welcomes the Administration's Efforts to Improve the Resilience and Diversity of U.S. Semiconductor Supply Chains.

SIA strongly supports the Administration's goal of addressing discriminatory, burdensome, and trade-distorting Chinese practices and improving the diversity and resiliency of America's supply chains. We are working hard to expand production and improve resiliency. Issuance by USTR of temporary product exclusions would help address current shortages and bring down prices of imported semiconductors covered by the tariffs, but leave in place the long-term pressures to diversity production outside China, precisely because such product exclusion are time-limited and there are no guarantees they would be renewed or reinstated when they expire in a year.

Conclusion

For the foregoing reasons, SIA urges USTR to (1) reinstate exclusions from Section 301 tariffs for the semiconductor and semiconductor-related products listed in the attached Annex A and in addition (2) immediately initiate a broader product exclusion process for products in the attached Annex B that were ineligible for consideration in the current review because they were not listed in the USTR Index. The temporary exclusion of the products on Annexes A and B from USTR's Section 301 tariffs would help to alleviate the existing shortages of semiconductor and semiconductor-related products, reduce the cost of imported products which currently incorporate the cost of a 25% U.S. tariff, assist U.S.

manufacturing and jobs which are heavily dependent on supplies of competitively priced semiconductors, and support the efforts by SIA's member companies and the Biden Administration to address the impacts of the current shortages on U.S. industry.

Respectfully submitted,

ANNEX A – SIA HTS CATEGORIES FOR PROPOSED REINSTATEMENT
From USTR Index of 549 Previously Extended Exclusions

U.S. Note for Granted	FRN Citation Granted Exclusion	U.S. Note for Extended Exclusion	FRN Citation Extended Exclusion	Exclusion Product Description
20(q)(198)	84 FR 49564 (Sept. 20, 2019)	20(kkk)(30)	85 FR 59587 (Sept. 22, 2020)	Dual layer printed circuit board assemblies, each valued over $30 but not over $35 (described in statistical reporting number 8504.90.7500)
20(q)(244)	84 FR 49564 (Sept. 20, 2019)	20(kkk)(36)	85 FR 59587 (Sept. 22, 2020)	Butt splice connectors, for a voltage not exceeding 1,000 V, each valued not over $3 (described in statistical reporting number 8536.90.4000)
20(q)(247)	84 FR 49564 (Sept. 20, 2019)	20(kkk)(37)	FR 85 59587 (Sept. 22, 2020)	Ring terminals, for a voltage not exceeding 1,000 V (described in statistical reporting

				number 8536.90.4000)

SEMICONDUCTOR INDUSTRY ASSOCIATION

ANNEX B – SIA HTS CATEGORIES PROPOSED FOR FUTURE REVIEW

USTR List 1 - $34 Billion (June 20, 2018)

HTS Subheading	Product Description	Importance to SemiconductorIndustry
84569031	Machine tools operated by electro-chemical or ionic-beam processes, for working metal	Essential high-endtool for semiconductor manufacturing
84569071	Machine tools operated by electro-chemical or ionic-beam processes, other than for working metal	Essential high-endtool for semiconductor manufacturing
84717060	ADP storage units other than magnetic disk, not in cabinets for placing on a table, etc., not entered with the rest of a system	Important electronic good thatincludes significant U.S. semiconductorcontent
85044040	Electrical speed drive controllers for electric motors (static converters)	May in future include semiconductor modules now classified under8541.29 if thermistor ispresent.
85049075	Printed circuit assemblies of electrical transformers, static converters and inductors, nesoi	Significant amountof U.S. semiconductors is embedded on printed circuit boards
85369040	Electrical terminals, electrical splicers and electrical couplings, wafer probers, for a voltage not exceeding 1,000 V	Essential high-endtool for semiconductor testing

85369085	Other electrical apparatus nesi, for switching or making connections to or in electrical circuits, for a voltage not exceeding 1,000 V, nesoi	Semiconductor related product thatis majority produced by non- Chinese companies
85412100	Transistors, other than photosensitive transistors,	Semiconductor transistor that is

HTS Subheading	**Product Description**	**Importance to Semiconductor Industry**
84569031	Machine tools operated by electro-chemical or ionic-beam processes, for working metal	Essential high-endtool for semiconductor manufacturing
84569071	Machine tools operated by electro-chemical or ionic-beam processes, other than for working metal	Essential high-endtool for semiconductor manufacturing
84717060	ADP storage units other than magnetic disk, not in cabinets for placing on a table, etc., not entered with the rest of a system	Important electronic good thatincludes significant U.S. semiconductorcontent
85044040	Electrical speed drive controllers for electric motors (static converters)	May in future include semiconductor modules now classified under8541.29 if thermistor ispresent.
85049075	Printed circuit assemblies of electrical transformers, static converters and inductors, nesoi	Significant amountof U.S. semiconductors is embedded on printed circuit boards
85369040	Electrical terminals, electrical splicers and electrical couplings, wafer probers, for a voltage not exceeding 1,000 V	Essential high-endtool for semiconductor testing
85412100	Transistors, other than photosensitive transistors, with a dissipation ration of less than 1 W	Semiconductor transistor that is majority produced by non-Chinese companies

85412900	Transistors, other than photosensitive transistors, with a dissipation rating of 1 W or more	Semiconductor transistor that is overwhelmingly produced by non- Chinese companies
85413000	Thyristors, diacs and triacs, other than photosensitive devices	Semiconductor transistor that is majority producedby non-Chinese companies
85414070	Photosensitive transistors	Semiconductor transistor that is majority produced by non-Chinesecompanies
85414080	Photosensitive semiconductor devices nesi, optical coupled isolators.	Semiconductor transistor that is majority producedby non-Chinese companies
85414095	Photosensitive semiconductor devices nesi, other	Semiconductor transistor that is majority producedby non-Chinese companies
85415000	Semiconductor devices other than photosensitive semiconductor devices, nesi	Semiconductor transistor that is majority producedby non-Chinese companies
85416000	Mounted piezoelectric crystals	Semiconductor transistor that is majority producedby non-Chinese companies
85419000	Parts of diodes, transistors, similar semiconductor devices, photosensitive semiconductor devices, LED's and mounted piezoelectric crystals	Semiconductor transistor that is majority producedby non-Chinese companies
85447000	Optical fibre cables made up of individually sheathed fibres, whether or not	Critical componentfor advancing computing and communicationsplatforms whichintegrate semiconductors

	containing electric conductors or fitted with connectors	

90248000	Machines and appliances for testing the mechanical properties of materials other than metals	Essential high-endtool for semiconductor manufacturing
90303338	Other instruments and apparatus, nesi, for measuring or checking electrical voltage, current, resistance or power, without a recording device	Essential high-endtool for semiconductor manufacturing
90308200	Instruments and apparatus for measuring or checking semiconductor wafers or devices	Essential high-endtool for semiconductortesting
90309025	Printed circuit assemblies for instruments and apparatus for measuring or detecting ionizing radiation	Significant amountof U.S. semiconductors is embedded on printed circuit boards
90309066	Printed circuit assembliesfor subheadings and apparatus of 9030.40 & 9030.82	Significant amountof U.S. semiconductors is embedded on printed circuit boards
90309068	Printed circuit assemblies, NESOI	Significant amountof U.S. semiconductors is embedded on printed circuit boards
90309084	Parts and accessories for instruments and apparatus for measuring or checking semiconductor wafers or devices, nesoi	Essential high-endtool for semiconductor testing

90309089	Parts and accessories for instruments and apparatus for measuring or checking semiconductor wafers or devices	Essential high-endtool for semiconductor testing
90314100	Optical measuring/checking instruments/appliances for inspecting semiconductor wafers/devices or photomasks/reticle used to mfg such devices	Essential high-end tool for semiconductor manufacturing, used for optical measuring and checking
90318040	Electron beam microscopes fitted with equipment specifically designed for the handling and transport of semiconductor devices or reticles	Essential high-end tool for semiconductor manufacturing, used for optical measuring and checking
90328960	Automatic regulating or controlling instruments and apparatus, nesi	Essential high-end tool for semiconductor manufacturing

USTR LIST 2 - $16 BILLION (August 16, 2018)

85411000	Diodes, other than photo-senstitive or light-emitting diodes
85412100	Transistors, other than photosensitive transistors, with a dissipation ration of less than 1 W
85412900	Transistors, other than photosensitive transistors, with a dissipation rating of 1 W or more
85413000	Thyristors, diacs and triacs, other than photosenstitive devices
85414070	Photosensitive transistors
85414080	Photosensitive semiconductor devices nesi, optical coupled isolators.
85414095	Photosensitive semiconductor devices nesi, other
85415000	Semiconductor devices other than photosensitive semiconductor devices, nesi
85416000	Mounted piezoelectric crystals
85419000	Parts of diodes, transistors, similar semiconductor devices, photosensitive semiconductor devices, LED's and mounted piezoelectric crystals
85423100	Processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or both
85423200	Memories
85423300	Amplifiers
85423900	Electronic Integrated Circuits, NESOI
85429000	Parts of electronic integrated circuts and microassemblies

Source: Official U.S. government trade data, U.S. Department of Commerce, obtained from the U.S. International Trade Commission, Dataweb: https://dataweb.usitc.gov/.

[26] Semiconductor imports refer to all 8-digit HTS subheadings in HS 8541 and 8542 except the two subheadings in 8541 that provide for LEDs (85414020) and solar cells (the vast majority of 85414