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OMB Control Number: 0694-0119
Expiration Date: September 30, 2024
DEFENSE INDUSTRIAL BASE ASSESSMENT: U.S. MICROELECTRONICS INDUSTRY
SCOPE OF ASSESSMENT
The U.S. Department of Commerce (DOC), Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), is conducting a survey and assessment of the capabilities of the U.S. microelectronics industrial base to support the national defense as required in Section 9904 of the National Defense Authorization Act (NDAA) of Fiscal Year 2021 (15 USC §4654), in light of the global nature and interdependencies of the supply chain. The survey will collect information on the upstream materials and downstream end uses associated with microelectronics production.
This survey is not part of the application for funding under Section 9902 of the 2021 NDAA (15 USC \$4652). Individual survey responses will not affect your organization's eligibility and/or consideration for CHIPS Act or other government funding.
RESPONSE TO THIS SURVEY IS REQUIRED BY LAW
A response to this survey is required by law (50 USC §4555). Failure to respond can result in a maximum fine of \$10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 USC §4555). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request. Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.
BURDEN ESTIMATE AND REQUEST FOR COMMENT
Public reporting burden for this collection of information is estimated to average 14 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer. Room 6883. Bureau of Industry and Security, U.S. Department of

Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694-0119), Washington, D.C. 20503.

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	General Instructions
	Your organization is required to complete this survey on the U.S. Microelectronics industrial base.
	You must complete the survey using the DOC/BIS template which is Microsoft Excel based and can be downloaded at [link TBA].
A	If you are not able to download the survey document, at your request BIS staff will email the Excel survey template directly to you.
	For your convenience, a PDF version of the survey and required drop-down content is available on the BIS website to aid internal data collection. DO NOT SUBMIT the PDF version of the survey as your response to BIS. Should this occur, your organization will be required to resubmit the survey in Excel format.
в	This survey is not part of the application for funding under Section 9902 of the 2021 NDAA (15 USC \$4652). Individual survey responses will not affect your organization's eligibility and/or consideration for CHIPS Act or other government funding.
	Any forecasts requested in this survey are understood to be speculative and for aggregate, statistical purposes.
с	Your organization has the option to provide a single Corporate level response or separate Business Unit/Division level responses for each of its semiconductor-related businesses.
	Note, if your organization is completing Business Unit/Division level surveys, any reference to "your organization" should be inferred as business unit or division. The reporting level must remain consistent throughout the survey, unless instructed otherwise.
D	Respond to every question. Surveys that are not fully completed will be returned for completion. Use the comment boxes to provide any information to supplement responses provided in the survey form. Make sure to record a complete answer in the space provided, even if the space does not appear to expand to fit all of the information.
	Survey inputs should be completed by typing in responses or by using a drop-down menu.
Е	Do not disclose any U.S. Government (USG) classified information in this survey form.
F	Submission of completed survey documents should be done using the designated Semiconductor Study inbox: SemiconductorStudy@bis.doc.gov
	Questions related to the survey should be directed to BIS survey support staff at SemiconductorStudy@bis.doc.gov
G	E-mail is the preferred method of contact.
	You may speak with a member of the BIS survey support staff by calling (202)-482-7808.
	For questions related to the overall scope of this assessment, contact <u>SemiconductorStudy@bis.doc.gov</u> or:
н	Jason D. Bolton Division Director, Industrial Studies Defense Industrial Base Division BIS/Export Administration/Office of Technology Evaluation 1401 Constitution Avenue, NW, Room 1093 Washington, DC 20230
	DO NOT submit completed surveys to Mr. Bolton's postal or personal email address. All surveys must be submitted electronically to [TBD].
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Sec	tion 1: Organization Information											
Indi rem	cate the reporting level for this survery be ain consistent throughout the survey.	efore proceeding	by selecting Corp	orate/Organization Level Response or	Business Unit/Div	vision Level Resp	onse from the dropdown below. Note,	the reporting level of responses must				
	Reporting Level:							]				
								-				
	Corporate Information				Business Unit o	or Division Inform	nation					
	Provide the following information about yo	our organization's	corporate locatio	n.	Provide the following information about the Business Unit/Division completing this survey, if applicable. Business Unit/Division Name							
	Organization Name Street Address				Street Address	vision Name						
	City				City							
	State/Province				State/Province	0.4						
	Postal Code/Zip Code Country of Global Headquarters				Postal Code/Zip Country	Code						
	Contact Information				ooundy							
Provide your organization's (1) primary point of contact and (2) alternate point of contact for this survey. The primary point of contact will serve as the principal liaison between your organization and the Department of Commerce regarding completion of this survey.												
В	Point of Contact Name			Official Title	Phone	Number	Email Address	State/Province				
	1											
	2 Ownership							 				
	Is your organization publicly traded or priv	vately held?			If your organizati	on is publicly trade	ed, provide its stock ticker symbol:					
	Is your organization owned, in whole or in part, by another entity?											
	If yes, provide all entities that, directly or indirectly, own or have beneficial ownership of five percent or more of your organization in descending order in the table below.											
	Entity Name	Percent Held	Voting Percent	Street Address	City	State/Province	Co	ountry				
c	1		-		-	-						
Ĭ	2											
	3											
	4 5											
	6											
	7											
	8											
	9 10											
	Facilities											
	Provide the total number of U.Sbased fa organization participates. Facilities should					conding number o	f facilities for each segment of the micr	roelectronics industry in which your				
			Segn	aent			Total U.S. Facilities	Total Non-U.S. Facilities				
	Total		Jegn	ien			1000 0.5.1 000005	Total Non-0.5.1 denites				
	Intellectual Property (IP) Core											
	Electronic Design Automation (EDA) Design											
	Test and Verification											
	Front-End Manufacturing											
	Assembly and/or Packaging	and Tecling										
	Semiconductor Manufacturing Equipment Materials and/or Inputs	and rooling										
	Electronic Manufacturing Services (EMS) Research and Development (R&D)	/Printed Circuit B	oard (PCB) Asser	nbly								
	Intermediate or End User of Semiconduct	or Products										
	Distribution and/or Warehousing											
	Other			(Specify Here)								
	Other Government and Industry Codes			(Specify Here)								
	Provide the Unique Entity Identifer (UEI) a	assigned to your	organization by S	AM.gov, if applicable:								
	Provide the primary CAGE, DUNS, and/or	r NAICS code(s)	associated with y	our organization's corporate location, as	s applicable.							
E								1				
	Commercial and Government Entity (CAGE) Code(s):			Data Universal Numbering System (DUNS) Code(s):			NAICS (6-digit) Code(s):					
	Find CAGE codes at: https://cage.dla.mil/			Find DUNS numbers at: https://www.dnb.com/			Find NAICs codes at: https://www.census.gov/naics/					
H				inposition and income	I							
	Comments		DUC	INESS CONCIDENTIAL - Der Section	70E(d) of the De	fense Production	a Act					

### Previous Page Section 2: Facilities and Operations

Identify each of your organization's facilities in operation since 2017, including facilities that are ide/standby, closed, or planned/expected (e.g. facilities that are or will be under construction or development). Then, provide the information related to each facility, as applicable. Note, for (g), (h), (i), and (j), you may specify the metric as applicable to your organization if the default metric is not appropriate using the dropdown menu option.

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Facilities should include manufacturing facilities, design(R&D facilities, and distribution facilities. Do not include facilities that are solely engaged in sales and/or marketing activities. If you are reporting closed facilities, you only need to report facilities that have been closed within the past five years.

For column (h), "optimal 2022 capacity" is the capacity level this facility would have in 2022 if your organization were able to make this change with no cost or lead time.

		Location		Operations						Energy l	Jse	Future Outlook			
	(a)	(b)	(C)	(d)	(e)	(f)	(g)	(h)	(1)	0		(k)	. (1)	(m)	(n)
Facility Name	City	State/Province	Country	Primary Operation (select from drop-down)	Operating Status (select from drop-down)	Initial Year of Operations (yyyy)	2022 Capacity (if applicable)	Optimal 2022 Capacity (if applicable)	Expected 2027 Capacity (if applicable)	2022 Facility Total Energy Usage		cility Energy Use Change Through 2027 t from drop-down)	Do you have any plans to expand this facility within the next 10 years?	Do you have any plans to modernize this facility within the next 10 years? (select from drop-down)	Explain the future outlook for this facility, as applicable.
						0,,,,,	Wafer Starts / Week (200mm equiv.)	Wafer Starts / Week (200mm equiv.)	Wafer Starts / Week (200mm equiv.)	Megawatt Hour (MWh)	Change in Energy Use	Reason for the Change	(select nom drop down)	(select nom drop down)	(
1							(200min equiv.)	(200mm equiv.)	(200mm equiv.)	(wwwii)	Lifeigy Ose				(
2															1
2 3 4															í
4															í
5															(
6															
7															1
8															l
9															l
10															1
11															l
12															t
14				+											l
7         8           9				1		-			1				-		(
16															1
17															(
18															í
19															(
20															[
21															(
22															1
23															l
24															
25															l
26															1
27															1
20															i
30															i
31															1
32															(
33															(
34															(
35															
36															1
37															l
38									1						1
39															1
40															1
41															
42															t
43				1											(
45				1		1			1						(
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Comments															

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ontion	201	Droduot	Capability	

Not spe	<u>e:</u> Sections 3a-3d are in cification on your organ	nterconnected. In sections ization's primary products	s 3a-3c, you are asked to provide s within each category, as applical	information on your ble.	organization's gen	eral product capabilities, p	roduction capabilities, and	the estimated end use	for each category. In se	ction 3d, you are asked	to provide more
	For each product categ however, you may spec	ory your organization des ify the metric as applicab	signs, manufactures, and/or distrib le to your organization within the	utes, indicate the ap dropdown menu.	propriate participa	tion type and provide the c	corresponding product cate	gory information, as ap	plicable. For (f), (g), (h),	and (i), the default metr	ic is nanometer (nm),
			(0)	(b)			oduct Category Informati		(2)	(12)	(1)
ŀ			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Product	Category	Participation Type (select from drop-down)	Percent (%) of Production	Current Lead Time	Primary Material (select from drop-down)	Primary Wafer Size (select from drop-down)	Primary Technology Node	Smallest Technology Node	Largest Technology Node	Expected Primary Technology Node in 2027
			(Select nom alop-down)	(By Revenue)	(Weeks)	(select from drop-down)	(select from arop-adwin)	Nanometer (nm)	Nanometer (nm)	Nanometer (nm)	Nanometer (nm)
	1 Analog ICs										
	2 Microcontroller and	Microprocessor ICs									
[]	3 Logic ICs										
	4 Memory ICs										
	5 Discretes										
	6 Optoelectronics										
	7 Sensors & Actuator	'S									
	8 Printed Circuit Boar										
	9 Equipment and Too	<u> </u>									
L 1	10 Intermediate or End										
- F	11 Test and Design Ve										
	12 Assembly and/or Pa										
	13 Other	(Specify Here)									
	14 Other	(Specify Here)									
	15 Other	(Specify Here)									
	Comments										
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Manufacture Assembly/Packaging/Test Design Distribution U.S. Non-U.S. U.S. Non-U.S. U.S. Non-U.S. U.S. Non-U.S. sks (se (s In House (Direct Sales) In House (Direct Sales) Pre-Existing Licensed IP Bloc Pre-Existing Licensed IP Blocl Outsourced (Third-Party Sale Outsourced (Third-Party Sale Outsourced Outsourced Outsourced Outsourced Outsourced Outsourced In House In House Total In House In House Total In House In House Total Total Product Category 1 Analog ICs 0% 0% 0% 0% 2 Microcontroller and Microprocessor ICs 0% 0% 0% 0% 3 Logic ICs 0% 0% 0% 0% 4 Memory ICs 0% 0% 0% 0% 5 Discretes 0% 0% 0% 0% 6 Optoelectronics 0% 0% 0% 0% 7 Sensors & Actuators 0% 0% 0% 0% 8 Printed Circuit Boards 0% 0% 0% 0% 9 Equipment and Tooling 0% 0% 0% 0% 10 Intermediate or End Product 0% 0% 0% 0% 11 Test and Design Verification 0% 0% 0% 0% 12 Assembly and/or Packaging 0% 0% 0% 0% 13 Other: N/A 0% 0% 0% 0% 14 Other: N/A 0% 0% 0% 0% 15 Other: N/A 0% 0% 0% 0% Comments

## For each product category your organization designs, manufactures, and/or distributes, estimate the percentage of each function (i.e. Design, Manufacture, Assembly/Packaging/Test, and Distribution) that is carried out by the specified locations (U.S. or Non-U.S.) and by whom (in-house or outsourced). For the Design function, pre-existing IP blocks should be counted separately from both in-house and out-sourced design.

Previous Page Section 3b: Production Capability

Previous Page Section 3c: Product End Use (Estimate)

	For each product category ye	our organization designs, n	manufactures,	and/or distribute	es, <u>estimate</u> the	e percentage of	revenue attribu	ited to each con	nmercial and de	fense end use,	where known.					
							Commercia	al End Use					Defense	End Use		
	Product Ca	legory	Appliances/ Consumer Goods	Automotive	Commercial Aerospace	Healthcare/ Medical	Industrial	IT/Computers: Consumer Products	IT/Computers: Servers	Mobile Devices	Network Infrastructure	Other Commercial	U.S. Defense	Foreign Defense	Total	Unknown
	1 Analog ICs														0%	100%
	2 Microcontroller and Micro	processor ICs													0%	100%
	3 Logic ICs														0%	100%
A	4 Memory ICs														0%	100%
	5 Discretes														0%	100%
	6 Optoelectronics														0%	100%
	7 Sensors & Actuators														0%	100%
	8 Printed Circuit Boards														0%	100%
	9 Equipment and Tooling														0%	100%
	10 Intermediate or End Proc														0%	100%
	11 Test and Design Verifica														0%	100%
	12 Assembly and/or Packag	ing													0%	100%
	13 Other: N/A														0%	100%
	14 Other: N/A														0%	100%
	15 Other: N/A														0%	100%
в	Overall, how confident is you	r organization in estimating	g its product e	nd-uses on a sc	ale of 1 (Not at	all confident) to	5 (Extremely c	onfident)? Selec	t the closest nur	mber from the s	scale in the drop	down.	[			
	Comments															
					BUSINESS	CONFIDENTIA	L - Per Sectio	n 705(d) of the	Defense Produ	uction Act						

### Previous Page Section 3d: Primary Products

For each product category your organization designs, manufactures, and/or distributes, list up to the three primary product types with the highest gross revenue and provide the corresponding product type information, as applicable.

For (g), (h), (i), and (j), the default metric is nanometer (nm), however, you may specify the metric as applicable to your organization within the dropdown menu.

					Pro	duct Type Information					
		(a)	(b)	(C)	(d)	(e)	(f)	(g)	(h)	(i)	0
Product Category		Primary Product Type (select from drop-down)	Product Description	Percent (%) of Category's Production (By	Current Lead Time (Weeks)	Primary Material (select from drop-down)	Primary Wafer Size (select from drop-down)	Primary Technology Node	Smallest Technology Node	Largest Technology Node	Expected Primary Technology Node in 2027
				Revenue)				Nanometer (nm)	Nanometer (nm)	Nanometer (nm)	Nanometer (nm)
	1										
1 Analog ICs	2										
	1										
2 Microcontroller and Microprocessor ICs	2										
	3										
3 Logic ICs	2										
	3			1							
	1										
4 Memory ICs	2										
	3										
5 Discretes	1										
5 Discretes	3		[								
	1										
6 Optoelectronics	2			1							
	3										
	1										
7 Sensors & Actuators	2										
	3	(write-in)									
8 Printed Circuit Boards	2	(write-in)									
	3	(write-in)									
	1	(write-in)									
9 Equipment and Tooling	2	(write-in)									
	3	(write-in)									
	1	(write-in)									
10 Intermediate or End Product	2	(write-in)									
	3	(write-in) (write-in)									
11 Test and Design Verification	2	(write-in)		1							-
	3	(write-in)		1							
	1	(write-in)									
12 Assembly and/or Packaging	2	(write-in)									
	3	(write-in)									
	1	(write-in)									
13 Other: N/A	2	(write-in) (write-in)		1							
	1	(write-in)									
14 Other: N/A	2	(write-in)		1							[
	3	(write-in)		1	İ			1	ĺ	l	
	1	(write-in)									
15 Other: N/A	2	(write-in)									
	3	(write-in)									<u> </u>
Comments											
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Previous Page Section 4: Outsourced Production											
For ea	each production function your organization outsource U.S. and physically located outside of the U.S. Ne oplicable.	es (i.e. Design, Manufacturin xt, list up to the ten service p	g, Assembly/Packaging/Te roviders most important for	st, and/or Distribution), indi your organization's contine	cate the total number of service ued operations in each of respe	providers your organization ctive functions and provide th	uses both physically located the corresponding information,				
A	) Outsourced Design (IP Licensing)										
	Total Number of Providers Servicing in the U.S.:			Total Number of Providers	Servicing Outside of the U.S.:						
	Design/IP Provider Name	Primary Location of Service Performance (select from drop-down)	Primary Product Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider	Primary Reason for Service Provider Selection (select from drop-down)	Availability of Alternative Service Providers (select from drop-down)				
А	1 2 3										
	4 5 6 7										
	8 9 10										
в	) Outsourced Manufacturing										
	Total Number of Providers Servicing in the U.S.:			Total Number of Providers	Servicing Outside of the U.S.:		[				
	Manufacturing Provider Name	Primary Location of Service Performance (select from drop-down)	Primary Product Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider	Primary Reason for Service Provider Selection (select from drop-down)	Availability of Alternative Service Providers (select from drop-down)				
	1 2										
в	3 4										
	5										
	6 7										
	8 9										
	10										
C											
C	10			Total Number of Providers	Servicing Outside of the U.S.:						
C	10           ) Outsourced Assembly/Packaging/Test           Total Number of Providers Servicing in the U.S.:           Assembly/Packaging/Test Provider Name	Primary Location of Service Performance (select from drop-down)	Primary Product Category (select from drop-down)	Total Number of Providers Percent (%) of Primary Product Dependent on Provider	s Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall on Provider	Primary Reason for Service Provider Selection (select from drop-down)	Availability of Alternative Service Providers (select from drop-down)				
	10           ) Outsourced Assembly/Packaging/Test           Total Number of Providers Servicing in the U.S.:           Assembly/Packaging/Test Provider Name           1           2	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
C C	10           ) Outsourced Assembly//Packaging/Test           Total Number of Providers Servicing in the U.S.:           Assembly/Packaging/Test Provider Name           1	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
	10         ) Outsourced Assembly//Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
	10         ) Outsourced Assembly//Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly//Packaging/Test Provider Name         1         2         3         4         5         6         7	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
	10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
	10         ) Outsourced Assembly//Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
с	10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8         9	Performance	Category	Percent (%) of Primary Product Dependent	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
с	10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8         9         10	Performance	Category	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall	Service Provider Selection	Service Providers				
с	10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8         9         10         Outsourced (Third-Party) Distribution         Total Number of Providers Servicing in the U.S.:         Distribution Provider Name	Performance	Category	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider	Service Provider Selection	Service Providers				
C D	10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8         9         10         Outsourced (Third-Party) Distribution         Total Number of Providers Servicing in the U.S.:         Distribution Provider Name         1	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				
с	10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8         9         10         ) Outsourced (Third-Party) Distribution         Total Number of Providers Servicing in the U.S.:         Distribution Provider Name         1         2         3	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				
C D	10	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				
C D	10         10         ) Outsourced Assembly/Packaging/Test         Total Number of Providers Servicing in the U.S.:         Assembly/Packaging/Test Provider Name         1         2         3         4         5         6         7         8         9         10         Outsourced (Third-Party) Distribution         Total Number of Providers Servicing in the U.S.:         Distribution Provider Name         1         2         3         4         5         6	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				
C D	10         )           10         )           10         )           10         )           10         )           10         )           10         )           10         )           11         )           2         )           3	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				
C D	10	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				
C D	10           10           ) Outsourced Assembly//Packaging/Test           Total Number of Providers Servicing in the U.S.:           Assembly/Packaging/Test Provider Name           1           2           3           4           5           6           7           8           9           10           Outsourced (Third-Party) Distribution           Total Number of Providers Servicing in the U.S.:           Distribution Provider Name           1           2           3           4           5           6           7           8           9           10	Performance (select from drop-down)	Category (select from drop-down)	Percent (%) of Primary Product Dependent on Provider	Percent (%) of Products Dependent Overall on Provider Servicing Outside of the U.S.: Percent (%) of Products Dependent Overall	Service Provider Selection (select from drop-down)	Service Providers (select from drop-down)				

# Previous Page Section 5: Material and Input Suppliers

		and input category, provide the to r organization sources, as applica					A) and its facilities located	outside of the U	.S. (Part B); then, provide	the corresponding informa	tion for each material and
	A) U.S. Facilit	es									
		Material and Input Category	Total Suppliers	Total # of Suppliers Physically Located in the U.S.	Percent (%) Supplied by U.S Based Suppliers	Primary Reason for Supplier Selection (select from drop-down)	Availability of Alternate Suppliers (select from drop-down)	Lead Time (Weeks)	2018 Inventory Levels (Weeks of Supply)	2022 Inventory Levels (Weeks of Supply)	Optimal Inventory Levels (Weeks of Supply)
	1 Wafer										
	a Bulk Silio	con									
	b Other	(Specify Here)									
	c Other	(Specify Here)									
	2 Photoresist										
	3 Photomask										
	4 Gases										
	5 Wet Chemi										
A	6 CMP Slurry										
	7 PVD Targe										
	8 ALD/CVD N										
	9 Electroplati										
	10 Spin-on Die										
	11 Leadframes										
	12 Packaging	Substrates									
	13 Ceramics										
	14 Bonding Wi		_								
	15 Die Attach		_								
	16 Encapsulat 17 Other										
	17 Other 18 Other	(Specify Here)									
	19 Other	(Specify Here)									
	20 Other	(Specify Here)									
		(Specify Here)									
	B) Non-U.S. Fa	aciinties									
		Material and Input Category	Total Suppliers	Total # of Suppliers Physically Located in the U.S.	Percent (%) Supplied by U.S Based Suppliers	Primary Reason for Supplier Selection (select from drop-down)	Availability of Alternate Suppliers (select from drop-down)	Lead Time (Weeks)	2018 Inventory Levels (Weeks of Supply)	2022 Inventory Levels (Weeks of Supply)	Optimal Inventory Levels (Weeks of Supply)
	1 Wafer										

	alegory	 in the U.S.	Suppliers	(select from drop-down)	(select from drop-down)	(vveeks)	(weeks of Supply)	(weeks of Supply)	(weeks of Supply)
1 Wafer									
a Bulk Silicon									
b Other	(Specify Here)								
c Other	(Specify Here)								
2 Photoresist									
3 Photomask									
4 Gases									
5 Wet Chemicals									
B 6 CMP Slurry									
7 PVD Targets									
8 ALD/CVD Materia									
9 Electroplating Me	tals								
10 Spin-on Dielectric	S								
11 Leadframes									
12 Packaging Substr	ates								
13 Ceramics									
14 Bonding Wire									
15 Die Attach Materi									
16 Encapsulation Re									
21 Other	(Specify Here)								
22 Other	(Specify Here)								
23 Other	(Specify Here)								
24 Other	(Specify Here)								
Comments									
		В	USINESS CONFIDEN	ITIAL - Per Section 705(d)	of the Defense Production	on Act			

Previ	ious Page Next Page																
Sect	ion 5b:	Material and Inputs of	Concern														
F	or each	material and input categ	gory that your organization sou	rces, name up to three of th	ne most essential material	and inputs that your	organization has diffic	ulty acquiring.	When reporting the s	supplier's country, pro	vide the count	ry where the s	upplier is phys	ically located n	ot the country where th	e supplier's headquar	ters are located.
		al and Input Category	Name of Material or Input of	Level of Difficulty to Acquire	Primary Product Affected		Primary Supplier		Se	econdary Supplier		Lead Time	Inven	tory Levels (W	eeks of Supply)	Do you anticip mater	pate difficulties to acquire this ial/input in the future?
	Materi	ai and input Category	Concern	(select from drop-down)	(select from drop-down)	Supplier Name	Supplier Country	Percent (%) Supplied	Supplier Name	Supplier Country	Percent (%) Supplied	(Weeks)	2018	2022	Optimal	Level of Dificulty	Explain
	1 Waf	er	2														
	2 Pho	toresist	1														
	3 Pho	tomask	1														
	4 Gas	ies	1 2														
	5 Wet	Chemicals	1														
	6 CM	P Slurry	3														
∣⊦	_	) Targets	3														
∣⊦	_	)/CVD Materials	3														
∣⊦	_	ctroplating Metals	3														
∣⊦	_		2														
∣⊦	_	n-on Dielectrics	2 3 1														
	L1 Lea	dframes	3														
	L2 Pac	kaging Substrates	2														
	L3 Cera	amics	2														
:	L4 Bon	ding Wire	1 2 3														
	L5 Die	Attach Material	1 2 3														
	L6 Enc	apsulation Resins	1 2 3														
:	L7 Oth	er: N/A	1														
	L8 Oth	er: N/A	1														
	L9 Oth	er: N/A	1														
	20 Oth	er: N/A	1														
	21 Oth	er: N/A	1														
	22 Oth	er: N/A	2														
	23 Oth	er: N/A	3 1 2														
	24 Oth	er: N/A	3 1 2														
			3														
		Comments	BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act														

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Section 6: Equipment Suppliers
Section 6. Equipment Suppliers

Fo	r each equipment	category, provide the total number	er of suppliers yo	ur organization uses for its	facilities located in the	U.S. (Part A) and its f	acilities located	outside of th	e U.S. (Part B	); and provide	e the corresponding inform	nation, as applicable.		
	A) U.S. Facilitie	s quipment Category	Total Number	Primary Equipment	Primary Supplier	Description/	Average I	Lead Time by (Weeks) (as	Equipment V applicable)	/afer Size	Primary Reason for Supplier Selection	Primary Challenge/Concern	Availability of Alternate Suppliers	Additional Comments
			of Suppliers	Supplier Name	Country	Specific Tool	<=150mm	200mm	300mm	No Size	(select from drop-down)	(select from drop-down)	(select from drop-down)	Additional Comments
	1 Design Too 2 Deposition	ls and EDA Software												
	3 RTP and O	kidation Diffusion												
	4 Lithography 5 Photoresist													
A	6 Material Re	moval and Cleaning												
		n Implantation (doping) ntrol (Metrology and Inspection)												
	9 Manufacturi	ng Automation												
	10 Other Wafe	r Fabrication Equipment elated Equipment												
	12 Assembly E	quipment												
	13 Other 14 Other	(Specify Here) (Specify Here)												
	15 Other	(Specify Here)												
	B) Non-U.S. Fa	cilities												
	E	quipment Category	Total Number of Suppliers	Primary Equipment Supplier Name	Primary Supplier Country	Description/ Specific Tool		(Weeks) (as	Equipment V applicable)	/afer Size	Primary Reason for Supplier Selection (select from drop-down)	Primary Challenge/Concern (select from drop-down)	Availability of Alternate Suppliers (select from drop-down)	Additional Comments
	1 Design Too	ls and EDA Software					<=150mm	200mm	300mm	No Size				
	2 Deposition													
	3 RTP and O: 4 Lithography	kidation Diffusion												
в	5 Photoresist	Processing												
		moval and Cleaning n Implantation (doping)												
	8 Process Co	ntrol (Metrology and Inspection)												
	9 Manufacturi	ng Automation r Fabrication Equipment	-											
	11 Test and Re	elated Equipment												
	12 Assembly E 13 Other	quipment (Specify Here)												
	14 Other	(Specify Here)												
	15 Other	(Specify Here)												
	Export Controls													
	1 What is you	r organization's outlook for equipn	ment supply over	the next three years?					]					
	2 Indicate the	impact of export controls on your	production levels	s and provide an explanati	on below.									
С	3 Have expor	t controls affected your organization	on's equipment a	cquisition processes? If ye	s, provide an explanatio	on below.								
	4 Has your or	ganization experienced loss of sa	les opportunities	due to export controls? If y	ves, provide an explana	tion below.			]					
	Comments													
					BUSIN	ESS CONFIDENTIAL	- Per Section	705(d) of the	Defense Pro	duction Act				

### <u>Previous Page</u> Section 7: Current and Future End Use

(Part B):

(a) the percentage (%) of your organization's total revenue attributed to the end use overall, (b) the percentage (%) of (a) attributed to U.S. sales in the end use, (c) the primary non-U.S. country of end use, (d) the total percentage (%) of (a) attributed to its primary country of end use, and (e) the percentage (%) of the end use segment using advanced packaging.

Example: Your organization's total revenue is split 50/50 between the Automotive and Commercial Aerospace end uses. Of the percentage of total revenue attributed to each respective end use, 50% of the Automotive and 100% of the Commercial Aerospace end use total revenue is attributed to U.S. sales across its end uses.

	(a)	(b)
Commercial End Use	Percent (%) of Total Revenue	Percent (%) of End Use Total Revenue from U.S. Sales
Automotive	50%	50%
Commercial Aerospace	50%	100%
Total Commercial	100%	75%

Next, in each Total Commercial and Total Defense row in both Part A (current end uses) and Part B (future/expected end uses), identify the primary non-U.S. country of respective total end use, the percentage (%) of total revenue attributed to the primary country, and the percentage (%) of the respective total end use using advantaged packaging.

(a) (%) of Total Revenue 0%	Percent (% Total Re	(b) %) of End Use venue from 5. Sales	Primary Non-U.S.	c) Country of End Use a drop-down)	Percent (%) of	d) f End Use Total rimary Country	(e Percent (%) of B Advanced B	End Use Using
Revenue	Total Re	venue from					Percent (%) of I Advanced F	End Use Usin Packaging
0%								
0%								
0%								
0%							1	
0%					1			
0%								-
0%			1					
0%					-			
0%								
0%								
0%								
070		0%					· · · · · · · · · · · · · · · · · · ·	
		U%						
cent (%) of Total Revenue	Total Re	%) of End Use evenue from 5. Sales	Primary Non-U.S. (select from	Country of End Use a drop-down)		f End Use Total rimary Country	Percent (%) of E Advanced F	End Use Using Packaging
0%		0%						
(a)		(b)	(	c)	(i	d)	(e)	)
cent (%) of Total Revenue	Total Re			Country of End Use a drop-down)	Percent (%) of Revenue to P	f End Use Total rimary Country	Percent (%) of E Advanced F	End Use Using Packaging
27 2032	2027	2032	2027	2032	2027	2032	2027	2032
					-			
					-			
			i		-	<u> </u>		
A 004	0%	094						
0 090	0%	070					I	
cent (%) of Total Revenue	Total Re	venue from			Percent (%) of Revenue to Pr	End Use Total rimary Country	Percent (%) of E Advanced F	End Use Using Packaging
27 2032	2027	2032	2027	2032	2027	2032	2027	2032
			I					
			1					
	1		I	L		L 1		
% 0%	0%	0%	<u> </u>		+			
% 0%	0%	0%						
	Revenue           27         2032           27         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         2032           20         20           20         20           20         20           20         20           20         20           20         20           20         20           20         20           20         20           20         20           20         20           20         20           20         20	Revenue         Otal revenue           27         2032         2027           2032         2027         2027           4         4         4           6         0%         0%           6         0%         0%           7         0%         0%           6         0%         0%           7         0%         0%	Revenue         U.S. Sales           27         2032         2027         2032           27         2032         2027         2032           20         2027         2032         2032           20         2027         2032         2032           20         2027         2032         2032           20         2027         2032         2032           20         20         2032         2032           20         2032         2032         2032           20         2032         2032         2032           20         2032         2032         2032           20         2032         2032         2032           20         2032         2032         2032           20         20         2032         2032           20         20         2032         2032         2032           20         20         20         2032         2032           20         20         20         20         20           20         20         20         20         20           20         20         20         20         20 <t< td=""><td>Revenue         1/Uai Revenue from U.S. Sales         (select from (select from 2032           27         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2032         2032         2027         2032         2027           2032         2032         2032         2027         2032         2027           2032         2032         2032         2032         2032         2027           2032         2032         2032         2032         2032         2032           2032         2032         2032         2032         2037<td>Revenue         10al revenue ironin U.S. Sales         (select from drop-down)           27         2032         2027         2032         2027         2032           20         2027         2032         2027         2032         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         20         2027         2032         2027           2020         2027         2032         2027         2032           2020         2027         2032         2027         2032           2020         2027         2032         2027         2032           2020         2020         2020         <t< td=""><td>Revenue         Total Revenue from U.S. Sales         Total Revenue from (select from drop-down)         Revenue to Private           27         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2032         2027         2032         2027         2032         2027           203         203         203         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         <t< td=""><td>Revenue         If data revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country           27         2032         2027         2032         2027         2032         2027         2032           201         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032         2027         2032           2020         2020         2020         2020&lt;</td><td>Revenue         If Uar Revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country         Advanced I           27         2032         2027</td></t<></td></t<></td></td></t<>	Revenue         1/Uai Revenue from U.S. Sales         (select from (select from 2032           27         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2027         2032         2027         2032         2027           2032         2032         2032         2027         2032         2027           2032         2032         2032         2027         2032         2027           2032         2032         2032         2032         2032         2027           2032         2032         2032         2032         2032         2032           2032         2032         2032         2032         2037 <td>Revenue         10al revenue ironin U.S. Sales         (select from drop-down)           27         2032         2027         2032         2027         2032           20         2027         2032         2027         2032         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         20         2027         2032         2027           2020         2027         2032         2027         2032           2020         2027         2032         2027         2032           2020         2027         2032         2027         2032           2020         2020         2020         <t< td=""><td>Revenue         Total Revenue from U.S. Sales         Total Revenue from (select from drop-down)         Revenue to Private           27         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2032         2027         2032         2027         2032         2027           203         203         203         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         <t< td=""><td>Revenue         If data revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country           27         2032         2027         2032         2027         2032         2027         2032           201         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032         2027         2032           2020         2020         2020         2020&lt;</td><td>Revenue         If Uar Revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country         Advanced I           27         2032         2027</td></t<></td></t<></td>	Revenue         10al revenue ironin U.S. Sales         (select from drop-down)           27         2032         2027         2032         2027         2032           20         2027         2032         2027         2032         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         2027         2032         2027         2032           20         20         2027         2032         2027           2020         2027         2032         2027         2032           2020         2027         2032         2027         2032           2020         2027         2032         2027         2032           2020         2020         2020 <t< td=""><td>Revenue         Total Revenue from U.S. Sales         Total Revenue from (select from drop-down)         Revenue to Private           27         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2032         2027         2032         2027         2032         2027           203         203         203         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         <t< td=""><td>Revenue         If data revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country           27         2032         2027         2032         2027         2032         2027         2032           201         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032         2027         2032           2020         2020         2020         2020&lt;</td><td>Revenue         If Uar Revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country         Advanced I           27         2032         2027</td></t<></td></t<>	Revenue         Total Revenue from U.S. Sales         Total Revenue from (select from drop-down)         Revenue to Private           27         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2027         2032         2027         2032         2027           203         2027         2032         2032         2027         2032         2027         2032         2027           203         203         203         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032         2032 <t< td=""><td>Revenue         If data revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country           27         2032         2027         2032         2027         2032         2027         2032           201         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032         2027         2032           2020         2020         2020         2020&lt;</td><td>Revenue         If Uar Revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country         Advanced I           27         2032         2027</td></t<>	Revenue         If data revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country           27         2032         2027         2032         2027         2032         2027         2032           201         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032           2027         2032         2027         2032         2027         2032         2027         2032         2027         2032           2020         2020         2020         2020<	Revenue         If Uar Revenue from U.S. Sales         (select from drop-down)         Revenue to Primary Country         Advanced I           27         2032         2027

	IIS	

Does your organization have a supply chain risk management (SCRM) program?

Section 8: Supply Chain and Risk Management

What software, subscriptions, and/or tools do your organization use to help anticipate and monitor supply chain risks (e.g. disruptions, bottlenecks, delays, etc.)?

What protocols do your organization have in place to mitigate supply chain risks (e.g. bottlenecks, disruptions, delays, etc)? Please explain.

For the below supply chain practices or features, identify how your organization's activities (a) have changed since 2017 and (b) are expected to change from 2022 to 2027.

	ltem	Change since 2017	Explanation of Changes	Expected Changes from 2022 to 2027	Explanation of Anticipated Changes
	1 Redundancy of suppliers				
	2 Localized supply chains				
	3 Target inventory levels				
в	4 Length of supplier contracts				
	5 Length of customer contracts				
	6 Use of non-cancellable supplier contracts				
	7 Use of non-cancellable customer contracts				
	8 Number of supply chain management workers				
	9 Use of distributors				
	10 Use of supply chain modeling and forecasting				
	11 Use of shipping and receiving ports				
	12 Other (Specify				
	13 Other (Specify	y Here)			
	Please describe your organization's general method for r	namaning inventory levels of childa mar	ieriais.		
	In the event of an unexpected shutdown, how long would	I it take your organization to resume norm	nal levels of production? (select from dropdown)		
с	Identify the three materials/inputs for which your organiza	ation expects to have the greatest increas	se in usage/demand in the next 10 years:		
	Material/Input		Explanation		
	1				
	2				
	3				
	Comments				
		BUSINESS CONFIDENTIAL -	Per Section 705(d) of the Defense Production Act		

	evious Pa										Next Page
		U.S. Employment and Workford the questions below pertaining to		workforco dovo	lonmont in the l	19					
	-	ment Totals	employment and	workioice deve	iopment in the t	5.5.					
	Record	the total number of U.S. Citizen a age of non-U.S. Citizen FTE empl	nd non-U.S. Citize oyees and contra	en full time equi ctors that are H	valent (FTE) em 1-B Visa Holder	ployees and cont s. Then, indicate	tractors at your U the annual turno	.S. facilities for ver rate for U.S.	each year from 2 Citizen and non-	2017 to present, a -U.S. Citizen FTE	as well as the E employees.
					2017	2018	2019	2020	2021	2022	Annual Turnover Rate
A	1 U.S.	Citizen									
		-U.S. Citizen									
		% of H1-B Visa Holders % from U.S. Arms Embargoed Co	untries*								
	,	As of the release of this survey this in	cludes: Afghanistar				c, China (PRC), Co	ngo, Cuba, Cypru	s, Eritrea, Haiti, Ira	an, Iraq, Lebanon,	ĺ
_		ibya, North Korea, Russia, Somalia, ional Qualifications	South Sudan, Suda	n, Syria, Venezue	la, and Zimbabwe	9					
		the total number of current and ex	rocted full time o	quivalant (ETE)	omployoos by	nualification Thor	, identify the prin	nany ioh titlo ass	ociated with eac	ch oducational los	vol and kov
	challenç	ges associated with recruiting or m	naintaining employ	yees at each ed	ucational level.	qualification. The	i, identity the phi	nary job title as	sociated with eac	In educational lev	ver and key
			2022	2027	2032	Primary	Job Title	Explan	ation of Challeng	ges Recruiting/Ma	aintaining
в	No Edu	cation Requirement									
	High Sc	hool/GED									
	Certifica	ation or Partial College									
	B.S./B.A	λ.									
	M.S./M.	A.									
	Doctora										
	Vacanc	ies									
		h occupation category that your o									
	number categor	of current employees and numbe y.	r of current vacan	icies (2022) as v	vell as the numb	per of vacancies e	expected in the n	ext 5 years (202	(7) and in the ne	xt 10 years (2032	2) in each
								0	0.000		
		Occupational Categories			Educational on Required	Average Salary	Average Starting Salary	Current Employees	Current Vacancies		r of Employees ected)
					n dropdown)	(\$)	(\$)	2022	2022	2027	2032
	Manufa	cturing Engineers, Scientists, R&D	)								
С	Product	ion Line Operations									
	Testing	and Quality Control									
	<u> </u>										
	<u> </u>	tion Technology/Computing									
	Sales, A	Administrative, and Management									
	Other	(Specify Here)									
	Other	(Specify Here)									
	Workfo	rce Development									
	Indicate recruitin	your organization's level of difficu g/training workers with little indust	lty try experience.			Explain:					
	Indicate	which of the following methods ye	, ,	by, then rank the	· · ·		ganization's recr	uitment/training			
	1 Inter	Program	l		Use	Rank			Explanation		
	2 Outr	each to K-12									
		ernship with local high schools nership with local community colle	ane								
		nership with local university	.9-								
		nership with semiconductor assoc icipation in career fairs	iations								
		ct advertising									
		each to specific communities (e.g									
	10 Part 11 Othe	nership with local American Job C er	enters (Specif	y here)		+					
	12 Othe		(Specif								
D	Identify	the skills necessary for your indus	stry that are curre	ntly least availal	ole:						
	lf you h	ave had difficulty obtaining and re	taining the neces	sary skilled work	force; what step	os could and shou	uld the U.S. gove	rnment pursue t	o assist industry	prevent that diffi	iculty in the
	future?										
	What ke	ey workforce programs are your or	ganization undert	aking to rebuild	the semiconduc	ctor workforce in t	he U.S.?				
	What de	es your organization offer to amo	loves as part of	workforco rotan	tion offorte? (c -	salan/waaa isa	reases bonues	tuition roimbur	compet ata)		
	winat de	bes your organization offer to emp	ioyees as part of	workionce retern	aon enons r (e.g	, sala ynvage mc	reases, ponuses	, taluon reimbuls	Schent, etc)		
	What tra	ainings or certifications does your	organization cove	er for employees	?						
	What pe	ercentage of your current employe	es has received o	on-the-job trainir	g related to the	skills identified as	s necessary for t	ne industry and	how often are the	ese trainings con	ducted?
		, , , , , , , , , , , , , , , , , , ,		,			,,				
$\vdash$											
		Comments									
<b>—</b>			DUCIN			ction 705(d) of th	Dofonce Dred	uction Act			

<u>Previous Page</u> Section 10a: Financials Next Page

Report the following financial line items for the years 2017 to present.

Record \$ in Thous	sands, e.g. \$12,000.00 = sur	vey input of \$12				
Reporting Schedule:						
Income Statement (Select Line Items)	2017	2018	2019	2020	2021	2022 (Estimate)
1 Net Sales (and other revenue)						
a. % of U.S. Sales						
1.1. % of U.S. sales from U.S. locations						
1.2. % of U.S. sales from non U.S. locations						
b. % of Non-U.S. Sales						
2.1. % of non-U.S. sales from U.S. locations						
2.2. % of non-U.S. sales from non-U.S. locations						
2 Cost of Goods Sold						
3 Total Operating Income (Loss)						
4 Earnings Before Interest and Taxes						
5 Net Income						
Balance Statement (Select Line Items)	2017	2018	2019	2020	2021	2022 (Estimate)
1 Cash						
2 Inventories						
3 Current Assets						
4 Total Assets						
5 Current Liabilities						
6 Total Liabilities						
7 Retained Earnings						
8 Total Owner's Equity						
Human Capital Expenditure	2017	2018	2019	2020	2021	2022 (Estimate)
1 a. Total Salary and Wages (Including Benefits)						
b. Estimated costs associated with recruitment						
c. Estimated costs associated with workforce training		1				
On a scale of 1 to 10, estimate your organization's overall financial health (1 being immin	ent failure and 10 being highl	y profitable for the	forseable future).			
mments						
	- Per Section 705(d) of the	Defense Dredue	41 A			

Data Confirmation
2020 Net Sales
None

Pre Se	evious Page ection 10b: Research, Development, and Capital Expen	nditures										Next Pag
	Research & Development (R&D) Expenditure	landres		201		2018	2019	2020	2021	2022	2027	2032
				201		2018	2019	2020	2021	(Estimate)	(Expected)	(Expected)
	1 Total R&D Investment a. % of investment in R&D carried out in the U.S.											
	<ul> <li>b. % of investment in R&amp;D carried out in the 0.5.</li> </ul>	U.S.										
	Government-Funded R&D			201		2018	2019	2020	2021	2022	2027	2032
	2 Total R&D funding received from U.S. government so	ources				2010	2010	2020	LOLI	(Estimate)	(Expected)	(Expected)
	a. % of R&D funding from U.S. Federal Government	ouroes										
	b. % of R&D funding from U.S. State and Local Gove	ernments										
	3 Total R&D funding received from non-U.S. governme	ent sources										
	a. Primary country and % of R&D funding received											
~	b. Secondary country and % of R&D funding received	d										
	c. Tertiary country and % of R&D funding received											
	Identify your organization's top anticipated R&D priorities primary Country and State source of funding, as applicate	s over the next five years and p ble.	rovide a brief description	n. Next, indicate tr	percent (%)	) of funding	your organization	anticipates to rei	ceive from govern	ment (both U.S. d	r non-U.S.), and	provide the
				Bor	ent (%) of Fu	unding		Primary S	ource of Governm	ent Funding (as a	upplicable)	
	R&D Priority	Description		Anticip	ted from Gov	vernment	Cou	ntry	% of Funding	Sta	ıte	% of Funding
	1							-	-			-
	2											
	3											
	4											
	5									2022	2027	2032
	Capital Expenditure (CapEx)			201		2018	2019	2020	2021	(Estimate)	(Expected)	(Expected)
	1 a. Total CapEx Investment											
	<ul> <li>b. % of investment in the U.S.</li> <li>c. % of investment outside of the U.S.</li> </ul>				-							
	Does your organization expect to use the investment	t tax credit included in Section	107 of the CHIPS Act of	2022								
	(also known as the FABS Act)?			LULL			Exp	lain:				
							_					
	2 If Yes, estimate the expected total value of the applic	cable investment					Exp	lain:				
	Does your organization expect to be impacted by the	e corporate minimum tax includ	ed as part of the Inflation	ı			E.m.	loin				
	Reduction Act of 2022?						Exp	iain:				
	Does you diganization expect to be impacted by the corporate minimum tax included as part of the minatori Explain: Reduction Act of 2022?											
	In the table below identify your emerization's enticipate	d top CopEy priorition over the	nout five to ten years									
	In the table below, identify your organization's anticipated									"Other Gravita		
	In the table below, identify your organization's anticipated For each CapEx priority, select the option from the drop response. Then, provide a description of the CapEx inve			restment. If the op	on provided (	l do not repr	esent your organi quipment that will		nt priority, use the	"Other: Specify I	nere:" option to w	rite in your
	For each CapEx priority, select the option from the drop or response. Then, provide a description of the CapEx invest	down menu that best aligns wi stment priority. For example, if	th your organization's inv your organization is inve					zation's investme be acquired throu				
		down menu that best aligns wi stment priority. For example, if	th your organization's inv your organization is inve					zation's investme be acquired throu				
	For each CapEx priority, select the option from the drop response. Then, provide a description of the CapEx inve- For the Product Category, select the two product categor When providing the "Anticipated Total Cost (\$)", indicate	down menu that best aligns wi stment priority. For example, if	th your organization's inv your organization is inve	the respective premium or third par Primary Techn	nary technolo funding.			zation's investme be acquired throu		se the comment s	ection at the end	of the page.
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	For each CapEx priority, select the option from the drop response. Then, provide a description of the CapEx inve- for the Product Categooy, select the two product categoo When providing the "Anticipated Total Cost (§)", indicate CapEx Investment Priority Description	down menu that best aligns wi stment priority. For example, it ries that will be primarily affect the overall cost of the investm Primary Facility	th your organization's inv your organization is inve ed by the investment and ent, including any goverr Product Category	the respective present or third par Primary Techn Node	nary technolo funding. ogy	logy node. I	If you need to repo	zation's investme be acquired throu ort additional proc	luct categories, us	se the comment s Primary So Antic	ection at the end urce of Governme ipated (as applica	of the page. ent Funding able)
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Pr	evious Page									Next Page				
Se		t Ventures and Partnerships nt ventures does your organizatio	on currently participate in?											
		nt ventures uses your organizatio												
	Identify your o	rganization's current joint venture	e relationships, including public/private R&E	0 partnerships. Explain the	purpose of			g, co-production, produ	uct integration, after-ma	rket support, etc.), as applicable.				
		Organization/Entity Name	Country	Controlling Shareholder	Year Initiated	Primary Purpose of (select from d	of Relationship Tropdown)		Explain					
	1 2													
	3 4													
А	5													
	6													
	7 8													
	9													
	10													
	12													
	13 14													
	15													
	Has your organization had any actions blocked (or failed as a result of lack of government approval) or mandated by a government entity? Such actions might include mergers, acquisitions, joint ventures, partnerships, sales agreements, licensing agreements, etc.													
If yes, identify the action(s) and government(s) involved.														
		Actions	Government Involved				Ex	plain						
	1													
	2													
	3													
	4													
	5													
		nization received solicitations or	requests for partnership from entities that a	are known/suspected of be	ing state ov	wned or affiliated with 1	foreian aovernme	ent?						
			enrment, then provide an explanation.											
		Entity Name	Foreign Government				Ex	plain						
в	1													
	2													
	3													
	4													
	5													
		nization folt coorcod to charo too	chnology with a JV partner or government?											
	Has your orga		sinology with a 3v partiel of government?											
	If yes, provide	the following information for eac	ch instance your organization felt coreced to	o share technology.					1	I				
		Entity Name	Type of Technology	Description		Did the transfer occur?	Metho	d of Transfer	Country (if applicable)	Estimated Value (USD) of the transferred technology				
	1													
	2													
	3													
	4													
	5													
		anization currently participate in	any semiconductor industry consortia? If ye	es, please provide an expla	anation.	1	•		1					
С	Explain													
		anization currently participate in	any Cooperatve Research or Production A	greements? If yes, please	provide an	explanation.								
C	Explain													
Co	omments													
			BUSINESS		otion 70E	d) of the Defence Dro	duction Act							

	vious Page						Next Pag
Se	tion 11b: Tecl	nnology Transfers					
	Has your orgar otherwise state	nization lost control of its IP to any entity whose primary beneficiary you -controlled?	r organization knows or suspects is	a foreign government or is affiliate	d with a foreig	n government or is	
	If yos identify	the most recent entities of such transfers, the beneficiary country, the p	imany mothod of transfor, the type	of IP, and provide an explanation			
	ii yes, identify	the most recent endues of such transfers, the beneficiary country, the pl	iniary method of transfer, the type t			1	
		Entity Name	Beneficiary Country	Primary Method of Transfer	Type of IP		Explain
1	1						
А	2						
	3						
	4						
	6						
	7						
	8						
	9						
	10						
		nization experienced any unauthorized transfers of its microelectronics- m 2017 to present?	elated design and manufacturing in	ntellectual property, including trade	secrets or con	fidential business	
	2017 to presen	ethods by which unauthorized transfers of your organization's microelec t, the suspected location of the perpetrator(s), the type of IP, trade secr Method	ets or confidential business information Suspected Country	sturning intellectual property, including tation that was transferred, and expl	ain. Type of	IP/ TradeSecrets/	Explain
					Confidential	Business Information	
	Cybersecurity i						
	-	n your organization -ins at organization facilities					
	Business partn	-					
в	Dumpster divin						
-		/ees (other than persons performing R&D within your organization)					
	Former employ	rees					
	External IT sys	tem contractors					
		ming R&D within your organization					
	0	ampus Wi-Fi network interceptions					
		butside industry analysts/experts					
		/our bankers/financiers contractors and suppliers					
Violation of Non-Disclosure Agreements (NDAs) Insertion of vulnerabilities in the supply chain							
		managed service provider					
	Phishing/spear	• •					
	Other	(Specify Here)					
	Comments						
		BUSINESS CO	NEIDENTIAL - Per Section 705(d)	of the Defense Broduction Act			

Previous Page Section 12: Competitive Factors					Next Page
	by process step, as well	as the breakout of the p	ercentage of cost of sales	carried out o	or sourced (a) in the U.S. and (b) outside of the U.S.
Process Step	Percent (%) of Cost of Sales	Percent (%) Carried out or sourced in U.S.	Percent (%) Carried out or sourced outside U.S.		Explain
1 Direct Labor					
a Design Labor					
b Front-End Manufacturing Labor					
c Back-End Manufacturing Labor					
A 2 Core IP					
3 Fabrication as a Service (Foundry Services)					
4 Material Inputs					
5 Processed Inputs					
6 Energy					
7 Water					
8 Test and Verification					
9 Assembly and/or Packaging					
10 Transportation					
11 Other					
the next most important, etc.) when deciding on a	location to invest on the	e expansion or construction	on of facilities, and explain	Rank	advantage. Next, rank your organization's top five factors (1 being the most important; 2 being Explain
Labor Cost		Advantage	Advantage	Rank	Explain
Labor Availability					
Labor Quality					
Material Cost					
Material Availability					
Material Quality					
Equipment Cost					
Equipment Availability					
Equipment Quality					
R&D Cost					
B R&D Quality					
Energy Reliability					
Environmental Compliance Cost					
Export Control Compliance Cost					
Export Control Policies					
Energy Cost Renewable Energy Accessibility					
Construction Time					
Construction Cost					
Proximity to Customers					
Tax Costs					
Government Incentives					
Collaboration Benefits					
Ability to Protect IP					
Other	(specify here)				
Other	(specify here)				
Comments	B		AL - Per Section 705(d) o	f the Defen	se Production Act

Pr	evio	us Page	Next Page
Se	ctio	n 13: Long Term Development and Investment	
			xpansion or construction of facilities? Please list the decision making factors by importance.
	VVI	at factors do you consider when investing on the e	xpansion of construction of facilities? Please list the decision making factors by importance.
		Deciding Factor	Explanation
A	1		
	2		
	3		
	5		
		Į.	
	Wh	ich value chain segments are most in need of gove	ernment incentives and/or financial intervention? (List up to the 3 by order of importance).
		Value Chain Segment	E selandia
		(select from dropdown)	Explanation
	1		
	2		
	3		
	-		
	1	Are there any regulations preventing your organiza	ation from constructing, expanding or modernizing any facilities in the U.S.? If yes, provide an explanation.
	2	What can the U.S. government do to promote high	er investment of microelectronics manufacturing in the United States?
	-	What can the 0.3. government do to promote high	er investinent of microelectronics manufacturing in the Onited States:
	3	What can help your organization's coordination wit	th local economic development organizations to help facilitate investment?
	-		
	4	How can the United States government help facilit	ate the long-term competitiveness of your organization?
в			
	-	What other economic clusters should the United S	tates Government invest in to help strengthen the semiconductor industry? For example, AI, etc. How could these investments
	5	benefit your company?	
	_		
	6	How could the United States Government stimulat help with R&D?	te R&D partnerships within the semiconductor fields and related sectors such as metals, materials, etc at research universities, etc to
	-		
	7	What are the most important emerging technologie	es that your organization is currently exploring or developing?
	-		
	8	What are the most important emerging technologie	as for the microelectronics industry as a whole?
	9	What are the main obstacles to introducing emergi	ing technologies into broad-scale manufacturing? Are those obstacles larger or smaller in the United States? How and why?
	-		
		2	
		Comments	
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<u>Previous Page</u> Section 14: Challenges

issues for both time frames (1 being the most impor understanding of your concerns. Then, provide any Explanations and suggested solutions are helpful bu	suggestions	for ways th	ext most imp e U.S. Gover	rnment can	help mitigate the issue, if applicable.	d narrative will ald the U.S. Government's
			0000	0007		
Type of Issue	2017 to		2023 to		Explanation of Issue	Suggested USG Solution/Mitigation
	-Yes/No-	Rank	-Yes/No-	Rank	•	
Aging equipment, facilities, or infrastructure						
Aging workforce						
Competition - domestic						
Competition - foreign						
Counterfeit parts						
Cyber security						
Environmental regulations/remediation						
Export controls/ITAR & EAR						
Financing/credit availability						
Government acquisition process						
Government purchasing volatility						
Government regulatory burden						
Healthcare						
Industrial espionage - domestic						
Industrial espionage - foreign						
Input availability (e.g. materials)						
Input quality						
Intellectual property/patent infringement						
Labor availability/costs						
Lack of infrastructure						
Lack of public R&D partnerships (e.g. universities)						
Natural disasters (including disease/quarantine)						
Obsolescence						
Pension costs						
Proximity to customers						
Proximity to suppliers						
Qualifications/certifications						
R&D costs						
Reduction in USG demand						
Taxes						
Trade disputes						
Worker/skills retention						
Other (specify here)						
Other (specify here)						
Other (specify here)						
Comments						

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Section 15: Certification	
	oplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal tion to any department or agency of the United States Government as to any matter within its jurisdiction (18
Once this survey is complete, first save it to your compu	ter, and then submit the document via [instructions TBA].
Organization Name	
Organization's Internet Address	
Name of Authorizing Official	
Title of Authorizing Official	
E-mail Address	
Phone Number and Extension	
Date Certified	
In the box below, provide any additional comments or an	y other information you wish to include regarding this survey assessment.
How many hours did it take to complete this survey?	
BUSINESS	CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

	Extinitions
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	ånign. Agdisator Tanolfis Asalig ICs designed specifically for and used in scenarior application.) end equipment. Consume end equipment is
Consumer	some but are increasingly becoming more and more possible. Noticed in this collegory are Digital TW (2714), Digital Sild Converse, 1893 Alignes, DVD players, Sel Top Boses (5718), Carer Consules, N PR Audu/Mato possibility, Nome Extendenment Bytems and White Databas
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Industrial & Others Dealers	Special and particular special processing of the and and in induction and response in a default brain, or show applications on operation in 20- abums. Science and an application of the application of th
Ernal Egneland Raticherg Transistans	Sandolaris salls a poset dicapation of test Ban Dal (the power discipation represents, for load encotechingers, the saling of 28 dispress C has at an addition (theopenation and test characterization counted (parts, for saling ar2 dispress C case assessed and "this saling") which is all the and measures and quartitation tests, do in the saling counter the saling set of the saling parts and the saling set of the saling set o
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MOS Standard Critis MOS Display Orvers	Bendard Calcura secula consisting al a user-specified anaryseneri a (predicteral and took sub-coulds of any bendon (presing, logis or energy, ex.). Doctors: specifiedly designed to consist and door that part daylays such as UCD (dyactorystic daylay), PCP (doctor daylay yords), sti
MDS Tauch Surrer Controllers	Scholard dealers within assumpany loads some alligibies and are searcher of determining the loader of single or multi-loads gestares, sight and game, using searchers which are order soming photoages. These absences are shared for interfacing with a more humber-an-assum- ing and an area of the searchers and the searchers are searchers and for a searchers are shared as a searchers and photoa area. The searchers are searchers are an area of the searchers are shared and games are shared as a searchers are searchers are an area of the searchers are are photoarea and a PC search KCC, if the dealers Communities (Code). As a searchers are instables are approximate and are are photoarea and a PC search KCC, if the dealers Communities (Code). As a searchers are an area of the searchers are are an area of the searchers are are dealers are also and a PC searchers are an area of the searchers are area of the searchers are are dealers are also and a PC searchers are also and a photoarea are an area of the searchers are a searchers are an area of the searchers are also and dealers. Communities and an efficiency of the searchers are also are also and an efficiency of the search of the searchers are also and an efficiency of the search of the searchers are also are also and an efficiency of the search of the searchers are also and an efficiency of the search of the searchers are also and an efficiency of the search of the searchers are also and an efficiency of the search of the searchers are also and the searchers are also are also are also and the searchers are also
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