

U.S. Census Bureau

Semiconductors, Electronic Components, and Semiconductor Manufacturing Equipment - 2009

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Address inquiries concerning these data to Census and Related Programs Support Branch, U.S. Department of Commerce, Census Bureau, Manufacturing and Construction Division, Washington, DC 20233-6900, or call Jenny Tran, 301-763-8715.

Table 1. Value of Shipments of Semiconductors, Electronic Components, and Semiconductor Manufacturing Equipment by Product Class  
[Values in millions of dollars]

Product class code	Product description	Year	Value
3332950	Semiconductor machinery	2009	5,063
		2008	r/ 9,357
		2007	13,190
		2006	12,598
		2005	9,728
3344111	Transmitting, industrial, and special purpose electron tubes	2009	773
		2008	806
		2007	734
		2006	690
		2005	652
3344114	Receiving-type electron tubes, including cathode ray (new and rebuilt)	2009	(D)
		2008	(D)
		2007	(D)
		2006	216
		2005	621
3344117	Electron tubes and parts, excluding glass blanks	2009	30
		2008	31
		2007	36
		2006	49
		2005	72
3344120	Bare printed circuit boards	2009	c/ 4,180
		2008	a/ r/ 5,269
		2007	4,443
		2006	4,933
		2005	4,856
3344131	Integrated microcircuits, including semiconductor networks, microprocessors, and MOS memories	2009	40,029
		2008	51,104
		2007	49,781
		2006	54,963
		2005	61,631
3344134	Transistors	2009	c/ 358
		2008	a/ 409
		2007	a/ 599
		2006	679
		2005	603
3344137	Diodes and rectifiers	2009	c/ 331
		2008	b/ 458
		2007	457
		2006	467
		2005	372
334413A	Other semiconductor devices	2009	11,983
		2008	r/ 11,363
		2007	10,176
		2006	10,483
		2005	8,330
3344140	Capacitors for electronic circuitry	2009	a/ 745
		2008	937
		2007	945
		2006	1,064
		2005	1,113
3344150	Resistors for electronic circuitry	2009	c/ 489
		2008	b/ r/ 622
		2007	b/ 645
		2006	660
		2005	653
3344160	Electronic coils, transformers, and other inductors	2009	1,058
		2008	1,380
		2007	1,393
		2006	1,231

			2005	1,216
3344170	Connectors for electronic circuitry		2009	a/ 3,036
			2008	a/ 4,065
			2007	4,189
			2006	3,980
			2005	3,589
334418B	Printed circuit assemblies, loaded boards and modules (printed circuit boards with inserted electronic components)		2009	a/ 15,001
			2008	a/ 20,257
			2007	a/ 20,382
			2006	19,591
			2005	20,106
3344191	Crystals, filters, piezoelectric, and other related electronic devices (except microwave filters)		2009	a/ 552
			2008	656
			2007	689
			2006	754
			2005	779
3344194	All other miscellaneous transducers, including electrical-electronic input/output transducers		2009	b/ 1,035
			2008	b/ t/ 1,352
			2007	1,466
			2006	1,323
			2005	1,401
3344197	Switches, mechanical, for electronic circuitry		2009	415
			2008	t/ 581
			2007	662
			2006	645
			2005	794
334419A	Microwave components and devices, except antennae, tubes, and semiconductors		2009	a/ 1,170
			2008	a/ t/ 1,286
			2007	a/ 1,541
			2006	1,470
			2005	1,306
334419E	All other miscellaneous electronic components		2009	b/ 3,889
			2008	a/ 4,772
			2007	a/ 4,831
			2006	4,346
			2005	4,040

Table 2. Shipments of Semiconductors, Electronic Components, and Semiconductor Manufacturing Equipment  
[Values in thousands of dollars]

Product code	Product description	Year	No. of cos.	Value
3332950	Semiconductor machinery	2009	(X)	5,063,303
		2008	r/	9,357,418
3332950106	Semiconductor wafer processing equipment, thin layer chemical vapor deposition	2009	16	527,313
		2008		(D)
3332950211	Semiconductor wafer processing equipment, thin layer physical vapor deposition	2009	8	(D)
		2008		(D)
3332950326	Semiconductor wafer processing equipment, plasma etch	2009	7	(D)
		2008		(D)
3332950401	Microlithography, including aligners	2009	8	125,084
		2008		(S)
3332950416	Semiconductor wafer processing equipment, thin layer epitaxial growth deposition	2009	3	(D)
		2008		(D)
3332950421	Semiconductor wafer processing equipment, wet etch	2009	9	a/
		2008	a/	97,617
				110,259
3332950441	Ion implantation, including current and voltage ion implanters	2009	2	(D)
		2008		747,262
3332950456	Wafer processing equipment, pattern generating apparatus	2009	1	(D)
		2008		(D)
3332950461	Other semiconductor wafer processing equipment	2009	38	1,759,207
		2008		3,216,999
3332950500	Parts for semiconductor manufacturing machinery, including packaging equipment	2009	48	836,073
		2008		1,579,588
3344111	Transmitting, industrial, and special purpose electron tubes	2009	(X)	772,578
		2008		806,091
3344111130	Power and special-purpose electron tubes, except forward wave tubes	2009	11	252,108
		2008		267,632
3344111210	Forward wave transmitting and industrial electron tubes (excluding X-ray)	2009	4	340,849
		2008		363,077
3344111310	All other transmitting, industrial, and special-purpose electron tubes, (excluding X-ray), including light sensing, light emitting devices, and miscellaneous special-purpose tubes	2009	11	179,621
		2008	r/	175,382
3344114	Receiving-type electron tubes, including cathode ray (new and rebuilt)	2009	(X)	(D)
		2008		(D)
3344114100	Receiving-type electron tubes, including cathode ray (new and rebuilt)	2009	2	(D)
		2008		(D)
3344117	Electron tubes and parts, excluding glass blanks	2009	(X)	29,501
		2008		31,183
3344117100	Electron tubes and parts, excluding glass blanks	2009	7	29,501
		2008		31,183
3344120	Bare printed circuit boards	2009	(X)	4,180,194
		2008	c/ a/ r/	5,268,606
3344120105	Single-sided glass printed circuit boards	2009	134	a/
		2008	a/ r/	72,461
				91,360
3344120110	Double-sided glass printed circuit boards	2009	172	c/
				358,384

			2008	b/	445,008
3344120115	Multilayer glass printed circuit boards		2009	180	(S)
			2008	r/	3,406,798
3344120120	Single-sided flex printed circuit boards		2009	32	130,012
			2008		227,617
3344120125	Double-sided flex printed circuit boards		2009	34	114,763
			2008		128,338
3344120130	Multilayer flex and rigid/flex printed circuit boards		2009	37	252,379
			2008	a/ r/	221,388
3344120139	Other printed circuit boards		2009	64	622,463
			2008	a/ r/	748,097
3344131	Integrated microcircuits, including semiconductor networks, microprocessors, and MOS memories		2009	(X)	40,028,705
			2008		51,104,469
3344131550	Monolithic integrated circuits, digital, nonsilicon		2009	6	957,527
			2008		(D)
3344131552	Monolithic integrated circuits, digital, silicon		2009	16	a/ 3,364,774
			2008		3,983,432
3344131574	Metal oxide semiconductor (MOS) field effect transistors, volatile memory DRAMs, 16 megabit and less		2009	2	(D)
			2008		(D)
3344131575	Metal oxide semiconductor (MOS) field effect transistors, volatile memory DRAMs, greater than 16 Mb, but less than 64 Mb		2009	1	(D)
			2008		(D)
3344131576	Metal oxide semiconductor (MOS) field effect transistors, volatile memory DRAMs, 64 Mb, but less than 128 Mb		2009	1	(D)
			2008		140,561
3344131577	Metal oxide semiconductor (MOS) field effect transistors, volatile memory DRAMs, greater than 128 Mb, but less than 256 Mb		2009	2	(D)
			2008		304,840
3344131578	Metal oxide semiconductor (MOS) field effect transistors, volatile memory DRAMs, greater than 256 Mb		2009	3	(D)
			2008		2,245,936
3344131583	Volatile memory SRAMs, 2 Mb and less		2009	1	(D)
			2008		(D)
3344131587	Volatile memory SRAMs, Greater than 2 Mb		2009	2	(D)
			2008		(D)
3344131588	Nonvolatile EEPROM		2009	6	332,591
			2008		374,490
3344131589	Other nonvolatile memory		2009	4	(D)
			2008		(D)
3344131581	NAND type flash EEPROM		2009	7	2,381,069
			2008		1,952,279
3344131593	NOR type flash EEPROM		2009	4	(D)
			2008		(D)
3344131256	Single core microprocessors (MPU)		2009	7	699,628
			2008	r/	1,329,496
3344131257	Multi-core microprocessors (MPU) operating with an external data bus of 16 bits or less		2009	9	(D)
			2008	r/	590,990
3344131260	Multi-core microprocessors (MPU) operating with an external data bus of 32 bits or more		2009	6	(D)
			2008		(D)
3344131234	Microcontrollers (MCU) operating with an external data bus of 8 bits or less		2009	8	1,363,445
			2008		1,238,558
3344131235	Microcontrollers (MCU) operating with an external data bus of 16 bits		2009	14	1,125,479
			2008	r/	1,868,985

3344131236	Microcontrollers (MCU) operating with an external data bus of 32 bits or more	2009 2008	4 b/ r/	(D) 504,305
3344131943	Complementary BiMOS	2009 2008	7 b/ r/	441,249 504,305
3344131945	Other digital silicon Ics	2009 2008	16 b/ r/	(D) (D)
3344131962	Nondigital silicon monolithic integrated circuits, radio frequency	2009 2008	8 b/ r/	(D) (D)
3344131903	Nondigital silicon monolithic integrated circuits, analog	2009 2008	20 b/ r/	2,420,558 3,207,488
3344131907	Nondigital silicon monolithic integrated circuits, other	2009 2008	15 b/ r/	1,551,052 2,806,441
3344131918	Hybrid integrated circuits, radio frequency	2009 2008	15 b/ r/	(D) (D)
3344131951	Hybrid integrated circuits, other	2009 2008	32 b/ r/	1,741,956 797,762
3344131912	Other	2009 2008	26 b/ r/	2,073,865 1,911,230
3344134	Transistors	2009 2008	(X) c/ a/	357,825 409,147
3344134100	Transistors	2009 2008	23 c/ a/	357,825 409,147
3344137	Diodes and rectifiers	2009 2008	(X) c/ b/	331,169 458,478
3344137100	Diodes and rectifiers	2009 2008	36 c/ b/	331,169 458,478
334413A	Other semiconductor devices	2009 2008	(X) r/	11,983,257 11,363,097
334413A105	Solar cells	2009 2008	11 b/ r/	1,549,043 (D)
334413A110	Photovoltaic modules	2009 2008	14 r/	857,418 625,348
334413A123	Light-emitting diodes (LEDs)	2009 2008	19 b/ r/	657,478 713,468
334413A137	Other light sensitive and light-emitting devices	2009 2008	12 b/ r/	794,555 501,156
334413A140	Thyristors (SCR's, triacs, PNPN diodes)	2009 2008	8 b/ r/	(S) (D)
334413A150	All other semiconductor devices (tunnel diodes, thermo-electric semiconductor junctions, metal-oxide varistors, solid-state transducers, and special semiconductor devices)	2009 2008	27 c/ r/	324,674 419,955
334413A154	Semiconductor parts, chips and wafers	2009 2008	51 b/ r/	4,788,318 4,967,728
334413A165	All other semiconductor parts (headers, packages, heat sinks, other accessories, etc.)	2009 2008	41 b/ r/	2,964,199 1,271,214
3344140	Capacitors for electronic circuitry	2009 2008	(X) a/	745,485 936,569
3344140173	Capacitors for electronic circuitry	2009	59 a/	741,752

			2008	(D)
3344140175	Parts for capacitors, including unfinished chips for further finishing and assembly		2009 2008	4 3,733 (D)
3344150	Resistors for electronic circuitry		2009 2008	(X) c/ b/ r/ 489,126 622,265
3344150182	Resistors for electronic circuitry		2009 2008	50 b/ a/ r/ 373,870 481,401
3344150184	Parts for resistors		2009 2008	8 (S) (S)
3344160	Electronic coils, transformers, and other inductors		2009 2008	(X) 1,057,615 1,380,085
3344160100	Electronic coils, transformers, and other inductors		2009 2008	161 1,057,615 1,380,085
3344170	Connectors for electronic circuitry		2009 2008	(X) a/ a/ 3,036,378 4,064,947
3344170100	Coaxial (RF) connectors for electronic circuitry		2009 2008	40 a/ a/ r/ 379,723 506,346
3344170400	Cylindrical connectors for electronic circuitry		2009 2008	31 c/ c/ 742,720 962,956
3344170700	Rack and panel (rectangular) connectors for electronic circuitry		2009 2008	23 a/ 233,541 309,035
3344170A00	Printed circuit connectors for electronic circuitry		2009 2008	32 682,583 934,509
3344170D17	Other connectors		2009 2008	59 b/ a/ 783,651 1,048,969
3344170D25	Parts for connectors (connectors shipped but still requiring further manufacture)		2009 2008	26 214,160 303,132
334418B	Printed circuit assemblies, loaded boards and modules (printed circuit boards with inserted electronic components)		2009 2008	(X) a/ a/ 15,000,511 20,256,744
334418B105	Computer and peripheral printed board assemblies		2009 2008	161 4,035,174 4,635,384
334418B110	Communications printed board assemblies		2009 2008	161 a/ a/ 2,259,243 3,784,257
334418B115	Industrial process control board assemblies		2009 2008	194 b/ b/ r/ 1,142,687 1,354,058
334418B120	Instrumentation printed board assemblies (except industrial process)		2009 2008	172 c/ a/ r/ 1,710,468 1,844,111
334418B125	Search and detection printed board assemblies		2009 2008	66 b/ a/ r/ 661,672 675,661
334418B130	Consumer electronics, printed board assemblies		2009 2008	114 a/ a/ 716,822 1,066,499
334418B137	Other printed board assemblies, subassemblies and modules, including office equipment, point of sales and plotter controllers		2009 2008	246 a/ a/ 4,474,445 6,896,774
3344191	Crystals, filters, piezoelectric, and other related devices (except microwave filters)		2009 2008	(X) a/ a/ 552,433 655,566
3344191127	Filters (except microwave)		2009 2008	34 202,468 280,471
3344191180	Piezoelectric devices		2009 2008	38 b/ a/ 349,965 375,095

3344194	All other miscellaneous transducers, including electrical-electronic input/output transducers	2009 2008	(X) b/ b/ r/	1,034,649 1,352,103
3344194105	Transducers, electroacoustic (sonar, ultrasonic, vibration, etc.)	2009 2008	15 b/ r/	111,088 132,119
3344194110	Transducers, accelerometers	2009 2008	5 b/	153,946 207,370
3344194115	Transducers, pressure	2009 2008	25 b/ b/	445,249 577,589
3344194120	Transducers, strain gauges and other mechanical	2009 2008	14 b/ b/	95,855 115,925
3344194135	Transducers, other	2009 2008	22 c/ b/	228,511 319,100
3344197	Switches, mechanical, for electronic circuitry	2009 2008	(X) r/	415,373 580,615
3344197100	Switches, mechanical, for electronic circuitry	2009 2008	40 r/	415,373 580,615
334419A	Microwave components and devices, except antennae, tubes, and semiconductors	2009 2008	(X) a/ a/ r/	1,170,154 1,286,234
334419A105	Ferrite, including yttrium garnets, microwave components (circulators, isolators, phase shifters, attenuators, equalizers, limiters, mixers, etc.)	2009 2008	28 r/	136,201 153,423
334419A110	Attenuators (dummy loads, high and low-power terminations, etc.)	2009 2008	26 a/	104,515 152,596
334419A125	Reactive microwave components	2009 2008	24 a/ r/	153,247 167,006
334419A130	Switches, coaxial and waveguide	2009 2008	27 a/ r/	130,640 138,249
334419A147	Other microwave devices	2009 2008	49 a/ r/	437,185 453,989
334419A150	Microwave subassemblies, including parametric amplifiers and other solid-state assemblies	2009 2008	23 b/ c/	208,366 220,971
334419E	All other miscellaneous electronic components	2009 2008	(X) b/ a/	3,888,799 4,771,593
334419E125	Oscillators (except instrumentation and crystal types)	2009 2008	17 a/	124,243 128,623
334419E130	Static power supply converters for electronic applications, regulated	2009 2008	38 a/ a/	424,057 497,954
334419E135	Static power supply converters for electronic applications, other (unregulated, variable frequency, ac, dc, converters and inverters, vibrator, etc.)	2009 2008	26 a/	120,020 260,426
334419E140	Electronic cable harnesses and cable assemblies	2009 2008	191 a/ a/	1,568,892 1,950,282
334419E155	Magnetic cores	2009 2008	12 b/	78,839 118,735
334419E180	All other specialized electronic hardware	2009 2008	127 c/ a/ r/	1,572,748 1,815,573

Table 3. Shipments, Exports, and Imports of Semiconductors, Printed Circuit Boards, and Other Electronics Components: 2009  
[Values in thousands of dollars]

Product code 1/	Product description	Manufacturers' shipments value	Exports of domestic merchandise 2/	Imports for consumption 3/ 4/
333295000T	Semiconductor manufacturing equipment	4,227,230	3,175,688	2,192,280
3332950500	Parts for semiconductor manufacturing machinery, including packaging equipment	836,073	1,286,703	916,790
334411100T	Power and special-purpose electron tubes, except forward wave tubes	431,729	121,545	94,393
3344114000	Receiving-type electron tubes, including cathode ray (new and rebuilt)	(D)	14,684	5,210
3344117000	Electron tube parts	29,501	17,681	15,801
3344120100	Bare printed circuit boards	c/	4,180,194	1,140,713
334413000T	Processors and controllers	(D)	9,514,352	6,271,761
334413100T	Memories, Dynamic read-write random access (DRAM)	(D)	904,505	1,658,255
334413200T	Memories, Static read-write random access (SRAM)	(D)	109,184	192,023
334413300T	Electrically erasable programmable read-only memory (EEPROM)	(D)	2,154,184	1,200,125
3344131589	Other nonvolatile memory	(D)	21,295	21,495
334413500T	Memories, other	(D)	155,381	247,509
334413600T	Integrated circuits, other	a/	7,787,431	4,411,132
3344134100	Transistors	c/	357,825	1,420,857
3344137100	Diodes and rectifiers	c/	331,169	371,253
334413A105	Solar cells	1,549,043	1,056,717	1,463,650
334413A123	Light-emitting diodes (LEDs)	657,478	526,818	672,639
334413A137	Other light-sensitive and light-emitting devices	794,555	120,468	306,141
334413A140	Thyristors, SCR's, triacs, and PNPN diodes	(S)	39,690	133,233
334413A154	Chips and wafers	4,788,318	1,843,736	685,989
334413A165	All other semiconductor parts (headers, packages, heat sinks, other accessories, etc)	2,964,199	1,072,576	376,548
3344140173	Capacitors	a/	741,752	636,185
3344140175	Parts for capacitors, including unfinished chips for further finishing and assembly	3,733	61,601	32,719
3344150182	Resistors	b/	373,870	203,027
3344150184	Parts for resistors	(S)	56,777	31,578
3344160100	Electronic coils, transformers, and other inductors	1,057,615	335,301	853,519
3344170100	Coaxial (RF) connectors for electronic circuitry	a/	379,723	99,635
3344170400	Cylindrical connectors for electronic circuitry	c/	742,720	134,017
3344170700	Rack and panel (rectangular) connectors for electronic circuitry	a/	233,541	39,380
3344170A00	Printed circuit connectors for electronic circuitry	682,583	480,293	330,735
3344191180	Piezoelectric devices	b/	349,965	173,924
3344197100	Switches, mechanical, for electronic circuitry	415,373	934,035	1,321,769

Footnotes:

1/ For comparison of the North American Industry Classification System (NAICS)-based product codes with Schedule B export codes, and HTSUSA import codes, see Table 4.

2/ Source: Census Bureau report EM 545, U.S. Exports.

3/ Source: Census Bureau report IM 145, General Imports for Consumption.

4/ Value represents the c.i.f. (cost, insurance, and freight) value at port of entry in the United States plus import duties.

Note 1: Some data may not be comparable due to definitional differences between the value of product shipments and the value of export shipments.

Table 4. Comparison of combined North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2009

Combined code	Product code	Product description	Export code 1/	Import code 2/
333295000T	3332950106	Semiconductor manufacturing equipment	8486.10.0000	8486.10.0000
	3332950211		8486.20.0000	8486.20.0000
	3332950326		8486.40.0020	8486.40.0020
	3332950401		8486.40.0030	8486.40.0030
	3332950416		8543.70.2000	8543.70.2000
	3332950421			
	3332950441			
	3332950456			
	3332950461			
3332950500	3332950500	Parts for semiconductor manufacturing machinery, including packaging equipment	8486.90.0000	8486.90.0000
334411100T	3344111130	Power and special purpose electron tubes, except forward wave tubes	8540.71.2000	8540.71.2000
	3344111310		8540.71.4000	8540.71.4000
			8540.72.0000	8540.72.0000
			8540.79.0000	8540.79.0000
			8540.89.0020	8540.89.0020
			8540.89.0040	8540.89.0040
			8540.89.0080	8540.89.0080
3344114000	3344114000	Receiving-type electron tubes, including cathode ray (new and rebuilt)	8540.11.0035	8540.11.1030
			8540.11.0070	8540.11.1040
			8540.11.0080	8540.11.1050
			8540.12.0000	8540.11.1055
			8540.60.0055	8540.11.1065
			8540.60.0080	8540.11.1080
			8540.81.0000	8540.11.2401
				8540.11.2801
				8540.11.3000
				8540.11.4401
				8540.11.4801
				8540.11.5000
				8540.12.1040
				8540.12.1080
				8540.12.2000
				8540.12.5040
				8540.12.5080
				8540.12.7000
				8540.60.0020
				8540.60.0040
				8540.60.0060
				8540.60.0080
				8540.81.0000
3344117000	3344117000	Electron tube parts	8540.91.2000	8540.91.1500
			8540.91.4000	8540.91.2000
			8540.99.0000	8540.91.5000
				8540.99.4000
				8540.99.8000
3344120100	3344120100	Bare printed circuit boards	8534.00.0020	8534.00.0020
			8534.00.0040	8534.00.0040
			8534.00.0050	8534.00.0050
			8534.00.0070	8534.00.0070
			8534.00.0080	8534.00.0080
			8534.00.0085	8534.00.0085
			8534.00.0095	8534.00.0095
334413000T	3344131234	Processors and controllers	8542.31.0000	8542.31.0000
	3344131235			
	3344131236			
	3344131256			
	3344131257			
	3344131260			
334413100T	3344131574	Memories, dynamic read-write random access (DRAM)	8542.32.0015	8542.32.0001
	3344131575		8542.32.0024	8542.32.0020
	3344131576			8542.32.0021
	3344131577			8542.32.0022
	3344131578			8542.32.0023
334413200T	3344131583	Memories, static read-write random access (SRAM)	8542.32.0040	8542.32.0040
	3344131587			

334413300T	3344131581 3344131588 3344131593	Electrically erasable programmable read-only memory (EEPROM)	8542.32.0050	8542.32.0050
3344131589	3344131589	Erasable (except electrically) programmable read-only memory (EPROM)	8542.32.0060	8542.32.0060
334413500T	3344131550 3344131552 3344131943 3344131945	Memories, other	8542.32.0070	8542.32.0070
334413600T	3344131903 3344131907 3344131912 3344131918 3344131951 3344131962	Integrated circuits, other	8542.39.0000	8542.39.0000
3344134100	3344134100	Transistors	8541.21.0080 8541.29.0080	8541.21.0040 8541.21.0075 8541.21.0095 8541.29.0040 8541.29.0075 8541.29.0095
3344137100	3344137100	Diodes and rectifiers	8541.10.0050 8541.10.0060 8541.10.0070 8541.10.0080 8541.40.6050	8541.10.0050 8541.10.0060 8541.10.0070 8541.10.0080 8541.40.6050
334413A105	334413A105	Solar cells	8541.40.6020 8541.40.6030	8541.40.6020 8541.40.6030
334413A123	334413A123	Light-emitting diodes (LEDs)	8541.40.2000	8541.40.2000
334413A137	334413A137	Other light sensitive and light-emitting devices	8541.40.7080 8541.40.8000 8541.40.9500	8541.40.7080 8541.40.8000 8541.40.9500
334413A140	334413A140	Thyristors, SCR's, triacs, and PNPN diodes	8541.30.0080	8541.30.0080
334413A154	334413A154	Chips and wafers	8541.10.0040 8541.21.0040 8541.29.0040 8541.30.0040 8541.40.6010 8541.40.7040 8541.50.0040 8541.50.0080	8542.10.0000 8542.21.8005 8542.21.8010 8542.29.0010 8542.90.0000 8541.10.0040 8541.21.0040 8541.29.0040 8541.30.0040 8541.40.6010 8541.40.7040 8541.50.0040 8541.50.0080
334413A165	334413A165	All other semiconductor parts, including headers, packages, and heat sinks, accessories, etc.	8542.90.0000	8542.90.0000
3344140173	3344140173	Capacitors	8532.21.0020 8532.21.0040 8532.21.0050 8532.21.0080 8532.22.0020 8532.22.0040 8532.22.0055 8532.22.0085 8532.23.0020 8532.23.0040 8532.23.0060 8532.24.0020 8532.24.0040 8532.24.0060 8532.25.0010 8532.25.0020 8532.25.0030 8532.25.0040	8532.21.0020 8532.21.0040 8532.21.0050 8532.21.0080 8532.22.0020 8532.22.0040 8532.22.0055 8532.22.0085 8532.23.0020 8532.23.0040 8532.23.0060 8532.24.0020 8532.24.0040 8532.24.0060 8532.25.0010 8532.25.0020 8532.25.0030 8532.25.0040

			8532.25.0060	8532.25.0060
			8532.25.0070	8532.25.0070
			8532.29.0020	8532.25.0080
			8532.29.0040	8532.29.0020
			8532.30.0010	8532.29.0040
			8532.30.0090	8532.30.0010
				8532.30.0090
3344140175	3344140175	Parts for capacitors, including unfinished chips for further finishing and assembly	8532.90.0000	8532.90.0000
3344150182	3344150182	Resistors	8533.10.0020	
			8533.10.0042	8533.10.0020
			8533.10.0057	8533.10.0042
			8533.10.0070	8533.10.0057
			8533.21.0025	8533.10.0060
			8533.21.0045	8533.10.0065
			8533.21.0075	8533.21.0010
			8533.21.0080	8533.21.0020
			8533.21.0090	8533.21.0030
			8533.39.0080	8533.21.0040
			8533.40.0080	8533.21.0050
				8533.21.0060
				8533.21.0070
				8533.21.0080
				8533.21.0090
				8533.31.0000
				8533.39.0080
				8533.40.8050
				8533.40.8060
				8533.40.8070
			8533.90.0000	
3344150184	3344150184	Parts for resistors	8533.90.4000	
			8504.31.2000	8533.90.8000
3344160100	3344160100	Electronic coils, transformers, and other inductors	8504.31.4035	
			8504.31.4065	8504.31.2000
			8504.31.6000	8504.31.4035
			8504.32.0000	8504.31.4065
			8504.33.0020	8504.31.6000
			8504.33.0040	8504.32.0000
			8504.34.0000	8504.33.0020
			8529.90.3540	8504.33.0040
			8540.91.2000	8504.34.0000
				8529.90.3300
				8529.90.3600
				8536.69.4010
				8540.91.2000
3344170100	3344170100	Coaxial (RF) connectors for electronic circuitry	8536.69.4020	8536.69.4010
3344170400	3344170400	Cylindrical connectors for electronic circuitry	8536.69.4030	8536.69.4020
3344170700	3344170700	Rack and panel (rectangular) connectors for electronic circuitry	8536.69.5050	8536.69.4030
3344170A00	3344170A00	Printed circuit connectors for electronic circuitry	8536.69.5050	8536.69.4050
3344191180	3344191180	Piezoelectric devices	7104.10.0000	7104.10.0000
			8541.60.0060	8541.60.0010
			8541.60.0080	8541.60.0020
				8541.60.0030
				8541.60.0050
				8541.60.0060
				8541.60.0080
3344197100	3344197100	Switches, mechanical, for electronic circuitry	8536.50.7000	8536.50.7000
			8536.50.9020	8536.50.9020
			8536.50.9025	8536.50.9025
			8536.50.9030	8536.50.9031
			8536.50.9035	8536.50.9032
			8536.50.9040	8536.50.9033
			8536.50.9045	8536.50.9035
			8536.50.9050	8536.50.9040
			8536.50.9055	8536.50.9045
			8536.50.9065	8536.50.9050
				8536.50.9055
				8536.50.9065

Footnotes:

1/ Source: 2009 edition, Harmonized System-based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

**2/** Source: Harmonized Tariff Schedule of the United States, Annotated (2009).

Symbols:

- (D) - Withheld to avoid disclosing data of individual companies.
- (X) - Not applicable.
- (NA) - Not available.
- r/ - Revised by 5 percent or more from previously published data.
- (n.e.c.) - Not elsewhere classified.
- (n.s.k.) - Not specified by kind.
- (nehp) - Net engine horsepower
- (btuh) - British thermal units per hour
- (pt.) Part.
- Represents zero.

Estimation symbols - Percent of estimation for each item is indicated as follows:

- a/ - 10 to 19 percent of this item has been estimated.
- b/ - 20 to 29 percent of this item has been estimated.
- c/ - 30 to 49 percent of this item has been estimated.
- (S) - Withheld because estimates did not meet publication standards

#### HISTORICAL NOTE

The Census Bureau has collected data on selected electronic and associated products since 1961 on survey MA36N, Selected Electronics and Associated Products. In 1985, survey MA36N was divided into three annual surveys which are presently collected as: MA334P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment; MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components; and MA334S, Electromedical Equipment and Irradiation Equipment (Including X-Ray).

Beginning in 2005 data for the MA334Q was collected under the title Semiconductors, Electronic Components, and Semiconductor Manufacturing Equipment.

Historical Current Industrial Reports data may be obtained from a Federal Depository Library. To locate a Federal Depository Library in your area, please visit <http://www.gpoaccess.gov/libraries.html>.