

16 DETAILED COST OF MATERIALS, PARTS, AND SUPPLIES

General - The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in **2**. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies that are not listed, describe and report them in the "Cost of all other materials . . ." at the end of this section. If you consumed less than \$25,000 of a listed material, include the value with "Cost of all other materials . . ." Census material code 009700 99 8.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

Valuation of Materials Consumed - The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amount actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

Contract Work - Include all materials consumed those you purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in **15**, line A5, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract or on commission should be excluded.

Resales - Cost for products bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in **15**, line A2, not in **16**. The value of these products shipped by this establishment should be reported in **2** under Census product code 000999 8900 6, "Resales."

INFORMATION COPY
DO NOT USE TO REPORT

Line No.	Materials, parts, and supplies	Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
			Cost, including delivery cost (freight-in)		
			\$ Bil.	Mil.	Thou.
0634		0630	0631		
1	Tube blanks	327212 03 1			
	Components for electronic circuitry, excluding tubes				
2	Printed circuit boards	334412 00 4			
3	Printed circuit assemblies, loaded boards or modules (printed circuit boards with inserted electronic components)	001900 C4 9			
4	Semiconductors, including transistors, diodes, rectifiers, and integrated circuits	334413 00 2			
5	Capacitors	334414 00 0			
6	Resistors	334415 00 7			
7	Other components and accessories, nec (Specify kind.) ↴	001900 D3 0			
8	Silicon, hyperpure	325188 35 7			

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CONTINUE WITH **16** ON PAGE 9

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If not shown, please enter your 11-digit Census File Number (CFN) from the mailing address.

16 DETAILED COST OF MATERIALS, PARTS, AND SUPPLIES - Continued

Line No.	Materials, parts, and supplies	Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
			Cost, including delivery cost (freight-in)		
			\$ Bil.	Mil.	Thou.
0634		0630	0631		
9	Silicon chips	331419 57 2			
10	Gold and other precious metals, all forms (including ingot, sheet, strip, solder, plating, electrodes, etc.)	331419 11 9			
11	Commodity gases (argon, helium, hydrogen, oxygen, nitrogen)	325120 05 3			
12	Doped chemicals and other doped materials for electronic use	331419 17 6			
13	Specialty gases (dopants - foreign atoms, etchants, nitrogen reactants)	325188 43 1			
14	Ferrites (powder and paste)	331111 07 0			
15	Metal powders	331000 AA 7			
16	Solvents	325100 74 1			
17	Cleaning compounds	325610 00 4			
18	Electronic computing equipment	334100 01 3			
19	Current-carrying wiring devices	335931 01 0			
20	Electronic communication equipment	334220 01 9			
21	Loudspeakers, microphones, and tuners (all types)	334310 05 9			
22	Electrical instrument mechanisms and meter movements (including instrument relays)	334515 01 2			
23	Electrical measuring instruments and parts, not listed elsewhere	334515 03 8			
24	Fractional horsepower electric motors (less than 1 hp)	335312 11 2			
25	Electrical transmission, distribution, and control equipment (including coils, switches, relays, regulators, motor controls, etc.)	001900 B1 6			
26	Masks (glass plates containing the pattern at a single integrated circuit)	325992 17 0			
27	Glass and glass products (excluding windows and mirrors)	327200 03 6			
28	Optical instruments and lenses (excluding sighting, tracking, and fire control)	333314 01 1			
29	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and other shapes	325211 05 0			
30	Resists (photosensitive resin films applied to the surface of a wafer)	326113 05 7			
31	Fabricated plastics products (excluding gaskets)	326100 11 2			

CONTINUE WITH 16 ON PAGE 10

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33404096

16 DETAILED COST OF MATERIALS, PARTS, AND SUPPLIES - Continued						
Line No.	Materials, parts, and supplies	Census material code	Consumption of purchased materials and of materials received from other establishments of your company			
			Cost, including delivery cost (freight-in)			
			\$ Bil.	Mil.	Thou.	
0634		0630	0631			
	Fabricated metal products (excluding forgings)					
32	Sheet metal products (excluding stampings)	332000 A9 9				
33	Metal stampings	332000 AC 2				
34	Bolts, nuts, screws, rivets, washers, and screw machine products	332722 03 2				
35	Other fabricated metal products	332000 33 0				
36	Forgings	332100 01 5				
37	Castings (rough and semifinished)	331000 35 6				
	Shapes and forms (excluding castings, forgings, and fabricated metal products)					
38	Steel	331200 01 4				
39	Copper and copper-base alloy	331421 11 5				
40	Aluminum and aluminum-base alloy	331000 39 8				
41	All other nonferrous shapes and forms	331000 83 6				
42	Insulated wire and cable (including magnet wire)	331000 A7 4				
43	Paper and paperboard containers (including shipping sacks and other paper packaging supplies)	322200 17 1				
44	Cost of all other materials and components, parts, containers, and supplies consumed (Specify the principal materials, etc., included in this value.) ↴	009700 99 8				
45	TOTAL (Should equal total reported in 16, line A1)	771000 00 7				
17-21 Not Applicable.						

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If not shown, please enter your 11-digit Census File Number (CFN) from the mailing address.

22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE

General - The manufactured products and services listed below are generally made in your industry. If you make products that are not listed, describe and report them in the "All other products made in this establishment" section at the end of 2. PLEASE DO NOT COMBINE PRODUCT LINES.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

Valuation of Products - Report the value of the products shipped and services performed at the net selling value, f.o.b. plant to the customer; i.e., after discounts and allowances, and exclusive of freight charges and excise taxes.

If you transfer products to other establishments within your company, you should assign the full economic value to the transferred products; i.e., include all direct costs of production and a reasonable proportion of all other costs and profits.

Contract Work - Report PRODUCTS MADE BY OTHERS FOR YOU FROM YOUR MATERIALS on the specific product lines as if they were made by you in this establishment. On the other hand, do not report on the specific product lines PRODUCTS THAT YOU MADE FROM MATERIALS OWNED BY OTHERS. Report only the amount that you received for "commission or contract receipts" for printed circuit boards under Census code 000930 0031 3, printed circuit assemblies under Census code 000930 0032 1, and all other contract work receipts under Census code 000930 0014 9.

Resales - Do not report on the specific product lines those PRODUCTS BOUGHT AND SOLD OR TRANSFERRED FROM OTHER ESTABLISHMENTS OF YOUR COMPANY AND SOLD WITHOUT FURTHER MANUFACTURE. Report only a value under Census code 000999 8900 6, "Resales."

Detailed Data Reported Elsewhere - Items denoted by an asterisk (*) require totals for groups of products covered in the more frequent Current Industrial Reports (CIR). If you report on the CIR form, the sum of the detailed products should equal the total reported on this form. For corresponding survey item codes, see paragraph 4, "Comparability," of CIR Instruction Manual.

NOTE: Only totals are requested; do not duplicate detail reported on the CIR.

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
1	Electron tubes Transmittal, industrial, and special-purpose (except X ray) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)* . . .	334411 1100 3			
2	Receiving-type (including cathode ray) (new and rebuilt) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)* . . .	334411 4100 0			
3	Parts (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334411 7100 7			
4	Printed circuit (wiring) boards or assemblies (Report contract work receipts for work done by you for others on their own materials on lines 52 and 53.) Printed circuit (wiring) boards (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334412 0100 2			
5	External modems, consumer (Corresponds to value of shipments reported on CIR Form MA334P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment, for 2002.)*	334418 4100 5			
6	Printed circuit assemblies, loaded boards or modules (printed circuit boards with inserted electronic components) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334418 A100 8			

CONTINUE WITH 22 ON PAGE 12

33404112

22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
7	Semiconductors and related devices Integrated microcircuits (including semiconductor networks, microprocessors, and MOS memories) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334413 1100 9			
8	Transistors (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334413 4100 6			
9	Diodes and rectifiers (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334413 7100 3			
10	Other semiconductor devices (including semiconductor parts, such as bare die, wafers, and heat sinks) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334413 A100 9			
11	Capacitors for electronic circuitry (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334414 0100 8			
12	Resistors for electronic circuitry (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334415 0100 5			
13	Coils, transformers, reactors, and chokes for electronic circuitry (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334416 0100 3			
14	Connectors for electronic circuitry Coaxial (RF) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334417 1100 0			
15	Cylindrical (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334417 4100 7			
16	Rack and panel (rectangular) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334417 7100 4			
17	Printed circuit (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334417 A100 0			
18	Other (including parts) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334417 D100 7			
19	Electronic components, nec Crystals, filters, piezoelectric, and other related electronic devices, except microwave filters (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334419 1100 6			
20	Transducers, electrical-electronic, input or output (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334419 4100 3			

CONTINUE WITH 22 ON PAGE 13

33404120

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22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
21	Electronic components, nec - Continued Switches For electronic circuitry (mechanical) (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334419 7100 0			
22	For electrical circuitry (including vehicular switches) (Corresponds to value of shipments reported on CIR Form MA335K, Wiring Devices, for 2002.)*	335931 5100 5			
23	Microwave components and devices, except antennae, tubes, and semiconductors (Corresponds to the value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards and Other Electronic Components, for 2002.)*	334220 7100 2			
24	Earphones and headsets (except telephone), phonograph cartridges and pickups, and phonograph needles and styli (Corresponds to value of shipments reported on CIR Form MA334M, Consumer Electronics, for 2002.)*	334419 E101 0			
25	Electronic components, nec (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334419 E110 1			
26	Home antenna, auto antenna, and antenna accessories, sold separately (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334419 E120 0			
27	Plotter controllers (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334419 E130 9			
28	Electroplating, plating, polishing, anodizing, and coloring	332813 0101 1			
29	Carrier line equipment (repeaters, line transceivers, multiplex equipment including channel banks, analog and digital) and external modems for POTS, ISDN, DSL, PSTN lines transmission (Corresponds to value of shipments reported on CIR Form MA334P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment, for 2002.)*	334210 4100 6			
30	All other telephone and telegraph equipment, including telephone sets, data communication equipment, telephone answering machines, and facsimile communication equipment (Corresponds to value of shipments reported on CIR Form MA334P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment, for 2002.)*	334210 7100 3			
31	Communication systems and equipment, except broadcast, but including microwave equipment such as transmitters, receivers, and amplifiers, cellular systems and equipment both analog and digital, electronic support equipment for communication systems, antenna systems, and space satellites (Corresponds to value of shipments reported on CIR Form MA334P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment, for 2002.)*	334220 1100 8			
32	Broadcast, studio and related electronic equipment, except magnetic recording and reproducing heads (Corresponds to value of shipments reported on CIR Form MA334P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Equipment, for 2002.)*	334220 2110 6			

CONTINUE WITH 22 ON PAGE 14

33404138

22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
33	Magnetic recording and reproducing heads including audio, video, digital, and instrumentation (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	334220 2120 5			
34	Test equipment for testing electrical, radio, and communication circuits, and motors, except portable instrument transformers	334515 3100 9			
35	Relays for electronic circuitry, industrial control overload, and switchgear type (Corresponds to value of shipments reported on CIR Form MA335A, Switchgear, Switchboard Apparatus, Relays, and Industrial Controls, for 2002, item codes 5400 - 5496.)*	335314 1100 8			
36	Electronic wire and cable made of nonferrous metals from purchased wire.	335929 G100 7			
37	Wire connectors for electrical circuitry (Corresponds to value of shipments reported on CIR Form MA335K, Wiring Devices, for 2002.)*	335931 9100 1			
38	Rectifying apparatus Semiconductor power conversion apparatus, except for electronic circuitry Semiconductor battery chargers Automotive	335999 3101 2			
39	Industrial and railroad	335999 3104 6			
40	Semiconductor high-voltage power supplies in excess of 2kV (except separate associated apparatus, such as controls, capacitors, switchgear, etc.) 100 kW or less	335999 3107 9			
41	More than 100 kW	335999 3111 1			
42	All other ac to dc semiconductor power conversion and rectifying apparatus, except for electronic circuitry All other ac to dc semiconductor power conversion apparatus (including computer supplies) (Specify kind.)	335999 3213 5			
43	Uninterruptible power supply (UPS) systems	335999 3216 8			
44	Other rectifying (power conversion) apparatus, except for electronic circuitry (Specify kind.)	335999 3219 2			
45	Electronic control modular chips for motor vehicles (Corresponds to value of shipments reported on CIR Form MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components, for 2002.)*	336322 C119 8			

CONTINUE WITH **22** ON PAGE 15

33404146

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22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts			
			Value, f.o.b. plant			
			\$ Bil.	Mil.	Thou.	
	0734	0730	0731			
	All other products made in this establishment - <i>Specify and report each product with sales value of \$50,000 or more that cannot be assigned to one of the "listed products and services". For all remaining products, write "Other" and report a single total value.</i>					
46		18				
47		26				
48		34				
49		42				
50		59				
51		67				
	Contract work (Receipts for work done for others on their own materials)					
52	Printed circuit (wiring) boards	000930 0031 3				
53	Printed circuit assemblies, loaded boards or modules (printed circuit boards with inserted electronic components)	000930 0032 1				
	All other receipts for work done for others on their materials (<i>Specify products worked on and kind of work.</i>) ↴					
54		000930 0014 9				
	Miscellaneous receipts					
55	Receipts for research and developmental work	000999 8041 9				
56	Other miscellaneous receipts (including repair work, except computer maintenance and repair, installation, sales of scrap and refuse, etc.) . . .	000999 8098 9				
57	Resales - Sales of products bought and sold without further manufacture, processing, or assembly (The cost of such items should be reported in 15, line A2.)	000999 8900 6				
58	TOTAL (<i>Should equal 4, line A</i>)	770000 0000 8				

23-25 Not Applicable.

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26 SPECIAL INQUIRIES

SEMICONDUCTORS

1. Does this establishment outsource any or all semiconductor manufacturing to "third party(ies)"?

8731 Yes - Specify name(s) of "third party(ies)" ↴

Domestic-based

0872

Offshore-based (non-US)

0873

8732 No - Go to line 2

2. Type of business of this establishment (Mark "X" ALL that apply.)

8740 Semiconductor manufacturer (FAB)

8741 Supplier of semiconductors (FABLESS)

8742 Integrated device manufacturer

8743 Wafer foundry

8744 Packaging and/or testing

8745 Intellectual property provider

8746 Contract manufacturer

27 Not Applicable.



33404161

29 OPERATIONAL STATUS

Activity that best describes this establishment's status at the end of 2002
(Mark "X" only ONE box.)

0011 <input type="checkbox"/> In operation	0013 <input type="checkbox"/> Temporarily or seasonally inactive							
0012 <input type="checkbox"/> Under construction, development, or exploration	0014 <input type="checkbox"/> Ceased operation - Give date at right →	0018 <table border="1"> <tr> <th>Month</th> <th>Day</th> <th>Year</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	Month	Day	Year			
Month	Day	Year						
	0015 <input type="checkbox"/> Sold or leased to another operator - Give date at right AND enter new name and mailing address below ↴	→						

0060 Name of new owner or operator	0061 Employer Identification Number		
	Enter EIN of new owner (9 digits) →		-
0062 Mailing address (number and street, P.O. Box, etc.)			
0063 City, town, village, etc.	0064 State	0065 ZIP Code	
			-

Remarks (Please use this space for any explanations that may be essential in understanding your reported data.)

30 CERTIFICATION - This report is substantially accurate and was prepared in accordance with the instructions.

Is the time period covered by this report a calendar year?
0078 Yes 0079 No - Enter time period covered →

FROM 0070	Month	Year	TO 0071	Month	Year

0072 Name of person to contact regarding this report 0073 Title

Telephone 0074	Area code	Number	Extension	Fax 0075	Area code	Number
		-				-

0076 Internet e-mail address Date completed
0069

	Month	Day	Year

Thank you for completing your 2002 Economic Census form.
PLEASE PHOTOCOPY THIS FORM FOR YOUR RECORDS AND RETURN THE ORIGINAL.

33404187