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# MARKET INTELLIGENCE

## IMPORT PROFILE

### INTEGRATED CIRCUITS

Pub. No.: 89106-IP September 1989



Industry, Science and  
Technology Canada

Industrie, Sciences et  
Technologie Canada

Canada

**IMPORT PROFILE**

**INTEGRATED CIRCUITS**

**Pub. No.: 89106-IP   September 1989**

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FOR MORE INFORMATION PLEASE CONTACT:

Market Intelligence Division  
Services to Business Branch  
Industry, Science and Technology Canada  
235 Queen Street  
Ottawa, Ontario  
K1A 0H5  
Tel: (13) 954-4970

OR  
Telecommunications and Microelectronics  
Division  
Industry Development Directorate  
Information Technologies Industry Branch  
Industry, Science and Technology Canada  
235 Queen Street  
Ottawa, Ontario  
K1A 0H5  
Tel: (613) 954-3289

REFERENCE SOURCES

Industry, Science and Technology Canada  
Statistics Canada  
Revenue Canada  
U.S. Department of Commerce

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EXPLANATORY NOTES

Valuation

Imports are generally recorded at the values established for customs duty purposes according to the provisions of the Customs Act. Customs values are identical to selling prices for most transactions between non-affiliated companies, but customs values exceed selling prices for many transactions between affiliated companies. All values are reported in Canadian dollars and do not include duty.

Identification of Foreign Exporting Companies

The names of the foreign exporting companies are as captured on the computer system and may not be the full legal corporate name. A foreign company may appear in the source several different ways. Attempts are made to consolidate all various entries into one company. For this reason, the value associated with any given company is deemed to be the minimum value. In addition, some of the value may be included in the "not known" category.

Average Growth Rate

Growth rates are calculated on the basis of annual compounding.

Rounding

Figures may not add due to rounding.

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## INTEGRATED CIRCUITS

## INTRODUCTION

This report is part of a continuing series designed to increase business awareness of the potential existing for production in Canada. An import profile on semi-conductors, a product very similar to integrated circuits, is also being prepared.

**CANADIAN IMPORTS**

A) Canadian International  
Trade Classification  
Prior to 1988\*

<u>Description</u>	<u>Commodity Code</u>	Total Imports 1987
		<u>Quantity</u> . <u>Value</u>
		(000 No.) (C\$ 000)

Import data are given for the years 1984-1987 on subsequent pages for the following product:

**Integrated Circuits** 638-31-10 317 647 513 837

Data on import trends for individual products within the above commodity group are shown separately on page 7.

Lists of 1987 Canadian importers and foreign exporters of integrated circuits to Canada are given in Appendices A and B, respectively, based on the pre-1988 coding system - Canadian International Trade Classification.

B) Harmonized System  
Effective 1988\*

<u>Description</u>	<u>Commodity Code</u>	Total <u>Quantity</u> (000 No.)	Imports <u>Value</u> (C\$000)	1988 <u>Average Unit Price</u> (\$/ No.)
Monolithic integrated circuits, digital	8542.11	285 731	1 400 359	4.90
Monolithic integrated circuits, not elsewhere specified	8542.19	101 331	180 428	1.78
Hybrid integrated circuits	8542.20	5 462	33 415	6.12
Electronic integrated circuits and microassemblies, not elsewhere specified	8542.80	15 642	70 504	4.51
Parts of electronic integrated circuits and microassemblies	8542.90	—	21 783	—
<b>TOTAL</b>		<b>—</b>	<b>1 706 489</b>	<b>—</b>

\*Note: Prior to 1988, Canadian import statistics were based on the Canadian International Trade Classification. However, since January 1988, these statistics have been classified and published according to the Harmonized Commodity Description and Coding System (H.S.), developed for international use by the Customs Cooperation Council. Figures given for the years prior to 1988 are not necessarily directly comparable to those of 1988.

CANADIAN PRODUCTION

Statistics Canada reports that the 1986 shipments of integrated circuits (including hybrid circuits) from fifteen establishments totalled \$87.1 million (latest year for which information is available). In 1985, eight establishments reported, accounting for \$72.1 million of shipments of integrated circuits.

CANADIAN EXPORTS

Prior to 1988 Statistics Canada did not provide separate export data for integrated circuits. They were included with semi-conductors and parts. Effective January 1, 1988, Canadian exports are listed as below.

1988 Canadian Exports

<u>Description</u>	<u>Commodity Code*</u>	<u>Total Exports 1988</u>
		<u>Quantity (000 No.)</u>
		<u>Value (\$ 000)</u>
Monolithic integrated circuits, digital	8542.11	48 331 524 112
Monolithic integrated circuits, n.e.s.	8542.19	13 110 35 610
Hybrid integrated circuits	8542.20	789 11 868
Electronic integrated circuits and microassemblies, n.e.s.	8542.80	497 3 601
Parts of electronic integrated circuits and microassemblies	8542.90	— 31 279
<b>TOTAL</b>		<b><u>N.A.</u> 606 470</b>

\*NOTE: Based on the Harmonized Commodity Description and Coding System (H.S.) which was implemented in Canada effective January 1988.

N.A.- Not applicable

UNITED STATES' IMPORTS

The United States Department of Commerce indicates that U.S. imports of integrated circuits from all countries totalled \$12.0 billion in 1988. Canada's share of U.S. imports totalled \$888.1 million. For further details see data shown in Appendix C.

MARKET SUMMARY

There are only 20 companies in Canada engaged in the design, or design and fabrication of active components (semiconductor chips) and related engineering services. The range of products includes silicon bipolar integrated circuits (IC's), metal oxide silicon (MOS) IC's, application-specific integrated circuits (ASIC's), hybrid microcircuits, and various compound semiconductors including gallium arsenide (GaAs) related alloys and optical emitter and detector devices. These companies are located mostly in Ontario and Quebec. Semiconductor research, development, design and fabrication is most heavily concentrated in the Ottawa area.

There are three IC wafer fabrication lines in Canada. The largest, owned by Northern Telecom, is a captive line which manufactures MOS devices exclusively for use in its own telecommunications equipment. Mitel, the second largest manufacturer, also manufactures MOS devices, again partially for its own systems requirements and partially for the merchant market. Gennum Corporation, of Burlington, Ontario, operates the only bipolar silicon wafer fabrication facility in Canada. Its products are sold exclusively to the merchant market.

A number of companies are active in GaAs technology. Bell-Northern Research has the largest program, again dedicated to its internal requirements. Optotek has a small but complete GaAs wafer fabrication line for its research and development programs. It makes GaAs-based light-emitting diodes (LED's) infrared detectors and customized monolithic microwave integrated circuits (MMIC's) for strategic military and commercial applications. OMVPE Technologies Inc. has developed a proprietary process for the deposition of epitaxial layers which it plans to market to semiconductor manufacturers. RCA manufactures silicon detectors, InGaAs detectors and GaAs laser diodes. Bel-Tronics Ltd. has a GaAs design capability to complement its in-house microwave technology. Silonex Inc. manufactures cadmium sulphide and other compound photovoltaic cells. Precision Photomask Inc. is Canada's only merchant supplier of photo-lithographic services to the semiconductor industry. Cominco Ltd. produces electronic grade materials for compound semiconductors.

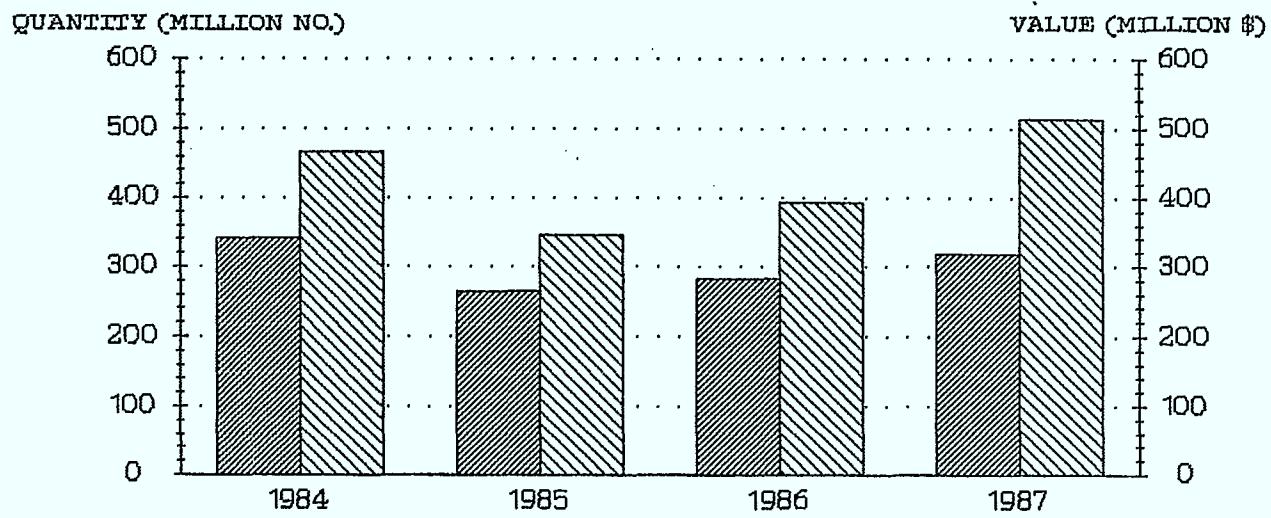
Canada's hybrid microcircuit manufacturers specialize in medium-volume, high value-added products, which are based primarily on thick film technology, and customized to meet specific applications. Circo Craft Company Inc. is the largest Canadian merchant supplier. Epitek International Inc. and Microtel Pacific Research Ltd. also serve the merchant market. The larger MNE systems companies (Garrett Manufacturing Ltd., Litton Systems Canada Ltd., and Canadian Marconi Company) produce thick and thin hybrids at the divisional level for military applications. Almost all the hybrid chip requirements are imported.

The ASIC market has emerged in recent years in response to the needs of systems designers to utilize VLSI (very large scale integration) technology in their products in order to achieve improvements in cost, quality, reliability and functionality. At the same time, they can respond quickly with proprietary IC designs to market shifts and reduced product life cycles. Competition in this market is related primarily to the quality of ASIC designs and design cost which is relatively high in comparison to the actual chip. The lack of an in-house production facility is not an entry barrier to the ASIC market, since the chip fabrication may be contracted out to independent foundries. This phenomenon has enabled several Canadian designers to enter the market, among them Calmos Systems Inc., Genesis Microchip, Optotek, Mosaid Technologies Inc., Microtel Pacific and Silicart Inc. The largest supplier, LSI Logic Corporation of Canada Inc., which is U.S. owned, was established in Calgary in 1985.

Total merchant shipments of semiconductors reached about \$70 million in 1985. Captive production in 1985 is estimated at between \$125-\$150 million at fair market value. Between 85 and 90 percent of merchant semiconductor production is exported to the U.S. and Europe. Mitel and Gennum account for over 75 percent of merchant semiconductor sales. Other semiconductor companies range between \$1 million to \$10 million in annual sales.

**IMPORT DATA**

INTEGRATED CIRCUITS  
COMMODITY CODE 638-31  
IMPORT TRENDS



QUANTITY

340



VALUE

466

264

346

282

393

318

514

**IMPORTS BY MAJOR FOREIGN COUNTRY OF EXPORT**

FOREIGN COUNTRY OF EXPORT	1984	1985	1986	1987	AVERAGE ANNUAL GROWTH RATE 1984-87
					%
UNITED STATES					
QUANTITY (000 NO.)	289295	223880	242170	270023	0
VALUE (C\$000)	381997	304842	330085	427183	4
REPUBLIC OF KOREA					
QUANTITY (000 NO.)	8861	3181	2800	3921	-17
VALUE (C\$000)	7128	4085	3591	20262	42
UNITED KINGDOM					
QUANTITY (000 NO.)	2042	6528	4547	4131	28
VALUE (C\$000)	3855	6898	13965	16525	62
HONG KONG					
QUANTITY (000 NO.)	6722	4503	3912	3830	-17
VALUE (C\$000)	21293	4864	6518	12015	-17
FRANCE					
QUANTITY (000 NO.)	4826	5828	6197	16782	52
VALUE (C\$000)	3428	3544	3978	10959	47
JAPAN					
QUANTITY (000 NO.)	4190	3913	7708	3003	-11
VALUE (C\$000)	9032	5993	18695	8790	-1
TAIWAN					
QUANTITY (000 NO.)	7229	2486	2945	5911	-6
VALUE (C\$000)	15014	3372	4360	7506	-21
OTHER					
QUANTITY (000 NO.)	38968	13984	11826	10046	-36
VALUE (C\$000)	24443	12812	12343	10617	-24
TOTAL					
QUANTITY (000 NO.)	340133	284243	282103	317847	-2
VALUE (C\$000)	468188	346190	393413	513887	3

INTEGRATED CIRCUITS - COMMODITY CODE 638-31

IMPORT MARKET SHARES

FOREIGN COUNTRY OF EXPORT	1984	1985	1986	1987
	%	%	%	%
UNITED STATES				
QUANTITY	79.2	84.7	85.8	85.0
VALUE	81.9	88.1	88.9	83.1
REPUBLIC OF KOREA				
QUANTITY	2.0	1.2	1.0	1.2
VALUE	1.5	1.2	0.9	3.9
UNITED KINGDOM				
QUANTITY	0.6	2.5	1.6	1.3
VALUE	0.8	2.0	3.5	3.2
HONG KONG				
QUANTITY	2.0	1.7	1.4	1.2
VALUE	4.6	1.3	1.7	2.3
FRANCE				
QUANTITY	1.4	2.2	2.2	5.3
VALUE	0.7	1.0	1.0	2.1
JAPAN				
QUANTITY	1.2	1.5	2.7	0.9
VALUE	1.9	1.7	4.7	1.7
TAIWAN				
QUANTITY	2.1	0.9	1.0	1.9
VALUE	3.2	1.0	1.1	1.5
OTHER				
QUANTITY	11.5	5.8	4.2	3.2
VALUE	5.2	3.7	3.1	2.1
TOTAL				
QUANTITY	100.0	100.0	100.0	100.0
VALUE	100.0	100.0	100.0	100.0

UNIT PRICES (C\$)

FOREIGN COUNTRY OF EXPORT	1984	1985	1986	1987
UNITED STATES	1.42	1.36	1.36	1.58
REPUBLIC OF KOREA	1.04	1.29	1.26	5.17
UNITED KINGDOM	1.89	1.06	3.07	4.00
HONG KONG	3.17	1.04	1.67	3.14
FRANCE	0.71	0.61	0.64	0.65
JAPAN	2.16	1.53	2.41	2.93
TAIWAN	2.08	1.36	1.48	1.27
OTHER	0.63	0.92	1.04	1.06
ALL COUNTRIES	1.37	1.31	1.39	1.62

APPENDIX A

CANADIAN IMPORTERS

The principal 20 importers of integrated circuits accounted for 77 per cent of the total import value during 1987.

<u>Principal Importers</u> (No.)	<u>Cumulative Value</u> (\$ 000)	<u>Per Cent of Total Value</u>
5	237 373	46
10	324 227	63
20	393 783	77
All Importers (840)	513 836	100

Importers of integrated circuits during 1987 are listed below in alphabetical order. This list includes all importers except individuals and a minimal number of importers whose names were not available.

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
114590 Canada Inc.	St-Laurent, Qué.	AEG Bayly Inc.	Ajax, Ont.
116844 Canada Ltd.	Downsvieu, Ont.	AEL Microtel Ltd.	Vancouver, B.C.
128043 Canada Inc.	St-Laurent, Qué.	AT&T Canada Inc.	Burnaby, B.C.
130850 Canada Inc.	Montréal, Qué.	ATI Technologies Inc.	Willowdale, Ont.
141395 Canada Inc.	Pointe-Claire, Qué.	ATS Automation Tooling Systems Inc.	Scarborough, Ont.
154147 Canada Ltd.	New Westminster, B.C.	Accurex Technology Inc.	Kitchener, Ont.
284953 BC Ltd.	Burnaby, B.C.	Action Business Machines Ltd.	Vancouver, B.C.
3D Microcomputers Wholesale & Distribution Ltd.	Willowdale, Ont.	Adcom Electronics Ltd.	Moncton, N.B.
574522 Ontario Limited, O/A Executive Electronics	Toronto, Ont.	Addisons TV Parts Ltd.	Toronto, Ont.
688031 Ontario Ltd.	Markham, Ont.	Advance Interface Electronic Inc.	Montréal, Qué.
A And A Canada, Div. of Tandy Electronics Ltd.	Scarborough, Ont.	Advanced Micro Devices Can Ltd.	Markham, Ont.
A C Simmonds & Sons Ltd.	Barrie, Ont.	Agriculture Canada	Richmond Hill, Ont.
A E S Data Inc.	Pickering, Ont.	Air Canada	Ottawa, Ont.
A T Computer Centre Inc.	Lachine, Qué.	Alberta Microelectronic Development & Applications Centre	Winnipeg, Man.
A-Z Computer Distributors Inc.	Vancouver, B.C.	Alexander Tools Ltd.	Edmonton, Alta.
ABC Cash Register Co. Ltd.	Vancouver, B.C.	All Computers Inc.	Brantford, Ont.
ADP Dealer Services Ltd.	Don Mills, Ont.	Allanson Mfg. Co. Ltd.	Toronto, Ont.
ADT Security Systems	Willowdale, Ont.	Allen Crawford Associates Ltd.	Toronto, Ont.
		Allen-Bradley Canada Ltd.	Mississauga, Ont.
			Cambridge, Ont.

CANADIAN IMPORTERS (CONT'D)

Name	Address	Name	Address
Allied-Signal Canada Inc.	Rexdale, Ont.	Black Box Canada Corporation	Markham, Ont.
Alloycraft Ltd.	Montréal, Qué.	Blacks Eddie Ltd.	Markham, Ont.
Almicro Electronics Inc.	Winnipeg, Man.	Bomem Inc.	Vanier, Qué.
Alpine Computers Ltd.	Richmond, B.C.	Brantford Scale Ltd.	Brantford, Ont.
Alpine Electronics of Canada Inc.	Unionville, Ont.	Bristol of Canada, Division of Dominion Chain Inc.	Rexdale, Ont.
Amber Electro Design Ltd.	Montréal, Qué.	Broadcast Video Systems Corp.	Richmond Hill, Ont.
Amdahl Communication Inc.	Mississauga, Ont.	Broan Ltd.	Mississauga, Ont.
Ampex Canada Inc.	Mississauga, Ont.	Brown Manufacturing Ltd.	Scarborough, Ont.
Analytical Instrument, Division of Perkin Elmer Canada Ltée	Rexdale, Ont.	Bruel & Kjaer Canada Ltd.	Pointe-Claire, Qué.
Anatek Microcircuits Inc.	Vancouver, B.C.	Budgetron Inc.	Mississauga, Ont.
Andrew Sheret Ltd.	Victoria, B.C.	Bulldog Bag Ltd.	Richmond, B.C.
Anixter Canada Inc.	Lachine, Qué.	Burroughs Canada Inc.	North York, Ont.
Antares Electronics Inc.	Nepean, Ont.	Bytec Comterm Inc.	Pointe-Claire, Qué.
Antel Optronics Inc.	Burlington, Ont.	C A E Electronics Ltd.	St-Laurent, Qué.
Apollo Electronics Ltd.	Toronto, Ont.	C A E Machinery Ltd.	Vancouver, B.C.
Apple Canada Inc.	Markham, Ont.	C F C F Inc.	Montréal, Qué.
Applied Electronics Ltd.	Toronto, Ont.	C Itoh & Co. (Canada) Ltd.	Vancouver, B.C.
Aptec Engineering Ltd.	Downsview, Ont.	C M Peterson Company Ltd.	Montréal, Qué.
Array Technologies Inc.	Markham, Ont.	C M Q Communications Inc.	London, Ont.
Arrow Electronics Canada (1985) Ltd.	Montréal, Qué.	C N C P Telecommunications	Toronto, Ont.
Asea Inc.	St-Laurent, Qué.	C P U Electronics Systems Corp.	Toronto, Ont.
Assrann Dictating Systems of Canada Ltd.	Markham, Ont.	C S L Countronics Sales Ltd.	Mississauga, Ont.
Atari (Canada) Corp.	Markham, Ont.	C V D S Inc.	Port Coquitlam, B.C.
Atelco Inc.	Markham, Ont.	C W Tellett & Associates Ltd.	Pointe-Claire, Qué.
Audio Video Specialists Inc.	Dorval, Qué.	C-Tech Ltd.	Toronto, Ont.
Audiovox Canada Ltd.	Mississauga, Ont.	CAL Circuit Abco Inc.	Cornwall, Ont.
Automation C E G Inc.	St-Hubert, Qué.	CB Engineering Ltd.	Woodland Hills, CA, USA*
Avionics Ltd.	Carleton Place, Ont.	CLE Telecom Industries, Tanyan Inc.	Calgary, Alta.
Avtech Electro Systems Ltd.	Ottawa, Ont.	CRS Plus Inc.	Lachine, Qué.
B & J Music Ltd.	Toronto, Ont.	CTH Electronic Control Ltd.	Burlington, Ont.
B B C Brown Boveri Canada Inc.	Pointe-Claire, Qué.	Cablesquare Inc.	Brossard, Qué.
B E L-Tronics Ltd.	Mississauga, Ont.	Cadence Computer Corp.	London, Ont.
B T O Lithographing Ltd.	Montréal, Qué.	Calmos Systems Inc.	Kanata, Ont.
B T W Enterprises	Oshawa, Ont.	Canada Packers Inc.	Kanata, Ont.
B.C. Telephone Co.	Burnaby, B.C.	Canada Post Corporation	Toronto, Ont.
BBD Electronics Inc.	Mississauga, Ont.	Canada Starch Company Inc.	Ottawa, Ont.
Ballinger Microwave Canada Inc.	Nepean, Ont.	Canada Wire & Cable Ltd.	Etobicoke, Ont.
Bardeau Ltd.	Downsview, Ont.	Canadian Astronautics Ltd.	Don Mills, Ont.
Beckman Industrial Corp.	Brea, CA, USA*	Canadian General Electric Co. Ltd.	Ottawa, Ont.
Beckman Instruments Canada Inc.	Mississauga, Ont.	Canadian Linotype Co., Div. of Eltra of Canada Ltd.	Toronto, Ont.
Bell & Howell Ltd.	Weston, Ont.	Canadian Marconi Company Ltd.	Mississauga, Ont.
Bell Canada	Montréal, Qué.	Canadian Tire Corp. Ltd.	Montréal, Qué.
Bell Northern Research Ltd.	Ottawa, Ont.		Toronto, Ont.
Bell Technical Services Inc.	Willowdale, Ont.		
Bendix Avelex Inc.	St-Laurent, Qué.		
Berlet Electronics Ltd.	Mississauga, Ont.		

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
Canadian Totalisator Co, Div. of General Instrument of Can Ltd.	Hunt Valley, MD, USA*	Corman Custom Electronics Corporation	Waterloo, Ont.
Canberra-Packard Canada Ltd.	Mississauga, Ont.	Corporate Computer Systems Inc.	Markham, Ont.
Canon Canada Inc.	Mississauga, Ont.	Coulter Electronics of Canada Ltd.	Burlington, Ont.
Cantec Systems Ltd.	Ottawa, Ont.	Courier Information Systems, a Div. of Alcatel Canada Inc.	Mississauga, Ont.
Capulim Cable Technologies Ltd.	Nepean, Ont.	Crosfield Muirhead Inc.	Rexdale, Ont.
Cardinal Industrial Electronics Ltd.	Edmonton, Alta.	Crossbow Electronics Inc.	Thornhill, Ont.
Cardon Communications Inc.	Hamilton, Ont.	Crouse-Hinds Elect Const Mater, a Div. of Cooper Ind. (Can) Inc.	
Carrier Air Conditioning (Canada) Ltd.	Bramalea, Ont.	Cummins Ontario Ltd.	Scarborough, Ont.
Carsten Electronics Ltd.	Scarborough, Ont.	Cyber-Video-Com Inc.	Etobicoke, Ont.
Case Communications Ltd.	Gloucester, Ont.	Cyme International Inc.	Vancouver, B.C.
Central Dynamics Ltd.	Pointe-Claire, Qué.	D A P Électronique Canada Ltd.	St-Bruno, Qué.
Centrodyne Inc.	St-Laurent, Qué.	D G Henderson & Associates Ltd.	Vanier, Qué.
Century Computer Products Ltd.	Calgary, Alta.	D G W Electronics Corp.	London, Ont.
Century Electronics Service Ltd.	Vancouver, B.C.	D I R Electronics Inc.	Markham, Ont.
Chesters Industrial Tool Supply Ltd.	Calgary, Alta.	D Y - 4 System Inc.	Dorval, Qué.
Cincinnati Milacron-Canada Ltd.	Toronto, Ont.	D'Jovian International Merchants Ltd.	Ottawa, Ont.
Circo Craft Co. Inc.	Kirkland, Qué.	DGH Communication Systems Ltd.	Toronto, Ont.
Clarion Canada Inc.	Mississauga, Ont.	Daisy Systems Corp.	Scarborough, Ont.
Codalex Ltd.	Montréal, Qué.	Data Canada Corporation	Mountainview, CA, USA*
Coin Acceptors Canada Ltd.	Scarborough, Ont.	Data General (Canada) Ltd.	Mississauga, Ont.
Collège d'Enseignement Général et Professionnel, Le	Hull, Qué.	Data Perfect Systems Inc.	Mississauga, Ont.
Com Dev Ltd.	Cambridge, Ont.	Datapoint Canada Inc.	Vancouver, B.C.
Comodore Business Machines Ltd.	Agincourt, Ont.	Dataradio Inc.	Willowdale, Ont.
Communications Trispec Inc., Les	Montréal, Qué.	Datek Industries Ltd.	Montréal, Qué.
Comptech Systems, Div. of Comptech Canada Inc.	Mississauga, Ont.	Datem Inc.	Edmonton, Alta.
Compu Weigh Ltd.	St-Laurent, Qué.	Dehavilland Aircraft Co. of Can, Div. of Boeing of Can Ltd.	Ottawa, Ont.
Compuserve, O/B 653373 Ontario Inc.	Markham, Ont.	Denon Canada Inc.	Downsvie, Ont.
Computer Assembly Systems Ltd.	Brockville, Ont.	Department of National Defence	Markham, Ont.
Computer Consoles Inc.	Toronto, Ont.	Department of Communications	Ottawa, Ont.
Computer Logics Ltd.	Rexdale, Ont.	Deskin Sales Corp.	Ottawa, Ont.
Comsound Electronic Ltd.	Edmonton, Alta.	Develcon Electronics Ltd.	Montréal, Qué.
Concordia University	Montréal, Qué.	Dicon Systems Ltd.	Saskatoon, Sask.
Concurrent Computer Corp.	Mississauga, Ont.	Dictaphone Corporation Ltd.	Weston, Ont.
Conspec Controls Ltd.	Downsvie, Ont.	Diffracto Ltd.	Islington, Ont.
Consultronics Ltd.	Concord, Ont.	Digico Ltée.	Windsor, Ont.
Contour Computer Corp.	Toronto, Ont.	Digidyne Inc.	Laval, Qué.
Control Data Canada Ltd.	Mississauga, Ont.	Digital Equipment Co. Ltd.	Lachine, Qué.
Contronic Inc.	Mississauga, Ont.	Digital Security Controls Ltd.	Kanata, Ont.
Conway Electronics Corp.	Toronto, Ont.	Digital Systems and Applications Inc.	Downsvie, Ont.
Cooper Energy Services, Div.	Stratford, Ont.	Digital Video Systems Corp.	Toronto, Ont.
Cooper Industries Canada Inc.	St-Laurent, Qué.	Digitrol Computers Inc.	Scarborough, Ont.
Cor-Bit Computers Industries Ltd.		Dipix Systems Ltd.	Waterloo, Ont.
		Dofasco Inc.	Ottawa, Ont.
			Hamilton, Ont.

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
Donovan Sales Ltd.	Vancouver, B.C.	Express Semiconductors Inc.	Mississauga, Ont.
Dover Corp. Ltd.	Toronto, Ont.	Extel Communications (Canada) Ltd.	Markham, Ont.
Dunlavin Investments Ltd.	Winnipeg, Man.	Fairchild Semiconductor Canada Inc.	Woodbridge, Ont.
Dupont of Canada Ltd.	Mississauga, Ont.	Farinon Electric of Canada Ltd.	Dorval, Qué.
Dynamedia Inc.	Montréal, Qué.	Faro Medical Technologies Inc.	St-Laurent, Qué.
Dynapro Systems Inc.	Vancouver, B.C.	Farwest Systems Corporation	Vancouver, B.C.
Dynasty Components Inc.	Ottawa, Ont.	Fathom Oceanology Ltd.	Scarborough, Ont.
E C G Canada Inc.	Dorval, Qué.	Federal Pioneer Ltd.	Toronto, Ont.
E D A Instruments Inc.	Toronto, Ont.	Ferritronics Ltd.	Richmond Hill, Ont.
E G Lomas Ltd.	Ottawa, Ont.	Fiberglass Canada Inc.	Willowdale, Ont.
E M J Data Systems Ltd.	Guelph, Ont.	Filbitron Systems Group Inc.	Markham, Ont.
EEV Canada Ltd.	Rexdale, Ont.	Filtran Ltd.	Nepean, Ont.
EIL Instruments Ltd.	Sparks, MD. USA*	Fischer & Porter Canada Ltd.	Downsview, Ont.
Echlin Canada Inc.	Niagara Falls Ont.	Fisher Controls Co. of Canada	Woodstock, Ont.
Econolite Canada Inc.	Scarborough, Ont.	Fluke Electronics Canada Inc.	Mississauga, Ont.
Éditions Ad Lib Inc., Les Edo (Canada) Ltd.	Québec, Qué.	Ford Electronics Mfg, Corp.	Markham, Ont.
Edwards, a Unit of General Signals Limited	Calgary, Alta.	Ford Glass Ltd.	Toronto, Ont.
Eicon Technologie Corporation	Owen Sound, Ont.	Ford Motor Company of Canada Ltd.	Oakville, Ont.
Eldurail Canada Inc.	St-Laurent, Qué.	Fortran Traffic Systems Ltd.	Scarborough, Ont.
Electralogics Inc.	Guelph, Ont.	Foxboro Canada Inc.	Montréal, Qué.
Électroniques Dynastie Inc., Les	New Hamburg, Ont.	Fujitsu Ten Canada Inc.	Scarborough, Ont.
Electro Sonic Inc.	St-Léonard, Qué.	Futech A S C Inc.	Laval, Qué.
Electrohome Ltd.	Willowdale, Ont.	Future Electronics Inc.	Pointe-Claire, Qué.
Electroline Television Equipment Incorporated	Kitchener, Ont.	G B Micro Electronics Inc.	Montréal, Qué.
Electromatic Composant Ltée..	Montréal, Qué.	G N Johnston Equipment Company Ltd.	Mississauga, Ont.
Electronic Wholesalers Company Ltd.	St-Laurent, Qué.	Gandalf Technologies Inc.	Nepean, Ont.
Electrovia Products Inc.	Montréal, Qué.	Gemini Technology Inc.	Vancouver, B.C.
Electrozad Supply Company Ltd.	Dorval, Qué.	Genamation Inc.	Markham, Ont.
Eli Lilly Canada Inc.	Windsor, Ont.	General Datacomm Ltd.	Willowdale, Ont.
Elma Engineering Services Ltd.	Scarborough, Ont.	General Electric Medical Systems Ltd.	Milwaukee WI, USA*
Elta Micro Systems Inc.	Ottawa, Ont.	General Instrument of Canada Ltd.	Toronto, Ont.
Emerson Electric Canada Ltd.	St-Laurent, Qué.	General Tronix Support Technologies, O/B 697912 Ont. Inc.	Markham, Ont.
Emerson Radio Canada Ltd.	Markham, Ont.	Geo Surv Inc.	Ottawa, Ont.
Enercorp Instruments Ltd.	Mississauga, Ont.	Geocom Communication Inc.	Richmond, B.C.
Entre Computer Center, O/B G C D Business Systems Ltd.	Toronto, Ont.	Geophysical Service Inc.	Richmond Hill, Ont.
Entre Computer Centre, O/B 592351 Ontario Ltd.	Mississauga, Ont.	Gestion Gertec Ltée	Pointe-Claire, Qué.
Epic Data Inc.	Toronto, Ont.	Gilbarco Canada Ltd.	Brockville, Ont.
Epitek International Inc.	Richmond, B.C.	Glenayre Electronics Ltd.	Vancouver, B.C.
Eeprom Inc.	Kanata, Ont.	Global Thermolectric Power Systems Ltd.	Bassano, Alta.
Eversonic Inc.	Willowdale, Ont.	Goldcoaster Corporation	Scarborough, Ont.
Exclusive Musical Products Canada Ltd.	Downsview, Ont.	Gould Electronics (Canada) Ltd.	St-Laurent, Qué.
Export Tool & Weld Co., Div. of Kingsbury Machine Tool (Can) Ltd.	Scarborough, Ont.		
	Rexdale, Ont.		

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
Grant Geophysical Ltd.	Calgary, Alta.	Intel Semiconductor of Canada Ltd.	Rexdale, Ont.
Great West Imports Ltd.	Richmond, B.C.	Interactive Circuit & Systems Ltd.	Ottawa, Ont.
Great West Music Corp.	Richmond, B.C.	Interalia Inc.	Calgary, Alta.
Grid Systems Canada Inc.	Toronto, Ont.	Interface Technologies Inc.	Mississauga, Ont.
Groupe DMR Inc.	Montréal, Qué.	Interfax Systems Inc.	Montréal, Qué.
Groupe Videoway Inc., Le	Montréal, Qué.	International Datacasting Co.	Ottawa, Ont.
Gtech Nord Corp.	St-Laurent, Qué.	International Geosystems Corp.	Vancouver, B.C.
H H Scott Audio Canada Ltd.	Mississauga, Ont.	International Rectifier Canada Ltd.	Markham, Ont.
H Roy Gray Ltd.	Markham, Ont.	International Simultaneous Translation Services Ltd.	Montréal, Qué.
HNU Systems (Canada) Ltd.	Ottawa, Ont.	Internav Ltd.	Sydney, N.S.
Hamilton Microsystems Inc.	Mississauga, Ont.	Interphase Technologies Inc.	Richmond, B.C.
Hamilton Rentals, Div. of Hamilton Group Ltd.	Toronto, Ont.	Irwin Toy Ltd.	Toronto, Ont.
Hamilton-Avnet International (Canada) Ltd.	Mississauga, Ont.	J B Marketing of Canada Ltd.	Cornwall, Ont.
Harding Instrument Co. Ltd.	Edmonton, Alta.	J H T Electronics Ltd.	St-Laurent, Qué.
Harris Systems Ltd.	Don Mills, Ont.	J P S Micro Systems Inc.	Markham, Ont.
Hermes Electronics Ltd.	Dartmouth, N.S.	J Pollard Mfg Ltd.	Mississauga, Ont.
Hewlett-Packard (Canada) Ltd.	Mississauga, Ont.	J V C Canada Inc.	Scarborough, Ont.
Hi-Tech Sales Ltd.	Winnipeg, Man.	J-Mar Electronics Ltd.	Toronto, Ont.
Hitachi (HSC) Canada Inc.	Mississauga, Ont.	Jaba Systems Inc.	Scarborough, Ont.
	Pointe-Claire Qué.	Jack A Frost Ltd.	Mississauga, Ont.
Hofstetter Business Products Ltd.	Scarborough, Ont.	Jatom Systems Inc.	Ottawa, Ont.
Honeywell Ltd.	Rexdale, Ont.	Jerome & Francis Co.	Vancouver, B.C.
Hugin Sweda Inc.	Willowdale, Ont.	Jervis B Webb Company of Canada Ltd.	Hamilton, Ont.
Hummingbird Communications Ltd.	North York, Ont.	Jilin Canada Trading Co. Ltd.	Toronto, Ont.
Hyundai Auto Canada Inc.	Mississauga, Ont.	Jo-Ad Industries Ltd.	Mississauga, Ont.
I B M Canada Ltd.	Markham, Ont.	John G Weiss Co. Ltd.	St-Laurent, Qué.
I S B Ltd.	Markham, Ont.	Johns Scientific Inc.	Toronto, Ont.
I T T Components, a Div. of ITT Industries of Canada Ltd.	Dorval, Qué.	Jutan International Ltd.	Willowdale, Ont.
ICL Computers Canada Ltd.	Concord, Ont.	K C E Microcomputers Inc.	Markham, Ont.
ITT Telecom Canada Inc.	Downsvie, Ont.	K C E Wholesale and Distribution Ltd.	Agincourt, Ont.
Icom Canada, a Div. of Icom America Inc.	Guelph, Ont.	K O M Inc.	Ottawa, Ont.
Idacom Electronics Ltd.	Richmond, B.C.	Kaufel Group Ltd.	Dorval, Qué.
Imapro (1986) Corp.	Edmonton, Alta.	Kaycom Inc.	St-Pierre, Qué.
Imax Systems Corporation	Ottawa, Ont.	Kaytronics Ltd.	St-Pierre, Qué.
Immediate Business Systems Inc.	Toronto, Ont.	Kemp & Associates Inc.	Carleton Place, Ont.
Indal Technologies Inc.	Birmingham, AL, USA*	Keystone Business Systems, Div. of Sanyo Canada Inc.	Winnipeg, Man.
Industrial Applications of Microelectronics Centre Inc.	Mississauga, Ont.	Keytek Keyboards Canada Inc.	Concord, Ont.
Industries C-Mac Inc., Les	Winnipeg, Man.	King Products Ltd.	Mississauga, Ont.
Infotron Canada Ltd.	Sherbrooke, Qué.	Kitstronic International Ltd.	Toronto, Ont.
Ingress Logic Systems Ltd.	Mississauga, Ont.	Kraco Enterprises Inc.	Mississauga, Ont.
Instrument Service Laboratories Ltd.	Calgary, Alta.	Kyocera Canada Inc.	Mississauga, Ont.
Integra Systems Inc.	Richmond, B.C.	L A Varah Ltd.	Calgary, Alta.
	Vancouver, B.C.	L C H Resources Inc.	Vancouver, B.C.

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
L S I Logic Corporation of Canada Inc.	Calgary, Alta.	McDonnell Douglas Computer System Company Inc.	Willowdale, Ont.
Lamontagne Geophysics Ltd.	Toronto, Ont.	McCallister Petroleum Services Ltd.	Calgary, Alta.
Lanpar Technologies Inc.	Markham, Ont.	Measurex Can Ltd.	Longueuil, Qué.
Lavalin Inc.	Montréal, Qué.	Medtronic of Canada Ltd.	Mississauga, Ont.
Leasametric (Canada) Inc.	Mississauga, Ont.	Memotec Data Inc.	Montréal, Qué.
Leeds & Northrup Canada, Div. General Signal Ltd.	Rexdale, Ont.	Merlan Scientific Ltd.	Georgetown, Ont.
Leigh Instruments Ltd.	Carleton Place, Ont.	Metrone Corporation	Montréal, Qué.
Leitch Video Limited	Don Mills, Ont.	Michelin Tires (Canada) Ltd.	New Glasgow, N.S.
Lenbrook Industries Ltd.	Pickering, Ont.	Micros Computer Systems Inc.	Mississauga, Ont.
Linear Technology Inc.	Burlington, Ont.	Microscape Electronics Inc.	Mississauga, Ont.
Lloyds Electronics Ltd.	Don Mills, Ont.	Milgray Int'l. Inc.	Freeport, NY, USA*
Logic-One Ltd.	Mississauga, Ont.	Minicom Data Corporation	Markham, Ont.
London Drugs Ltd.	Richmond, B.C.	Minolta Business Equipment (Canada) Ltd.	Scarborough, Ont.
Lowrey Industries Corporation	Markham, Ont.	Minolta Canada Inc.	Mississauga, Ont.
Lumonics Inc.	Kanata, ont.	Miscoe Data Inc.	Mississauga, Ont.
Lynch Transcom Inc.	St-Jérôme, Qué.	Mission Electronics of Canada Inc.	Mississauga, Ont.
M A Electronics Canada Inc.	Mississauga, Ont.	Mitel Corporation	Kanata, Ont.
M D A Technologies Ltd.	Richmond, B.C.	Mits Computer Systems Ltd.	Bromont, Qué.
MCC Powers a Unit of Mark Controls Limited	Mississauga, Ont.	Mitsubishi Electric Sales Canada Inc.	Calgary, Alta.
MacLean Hunter Paging, Div. of MacLean Hunter Ltd.	Rexdale, Ont.	Mobex-Irwin Company	Markham, Ont.
Macdonald Dettwiler & Associates Ltd.	Richmond, B.C.	Mobile-Data International Inc.	Toronto, Ont.
Magnasonic Inc.	Don Mills, Ont.	Mobiltex Data Ltd.	Richmond, B.C.
Magus Data Technology Inc.	Richmond Hill, Ont.	Modcomp Canada Ltd.	Calgary, Alta.
Mai Canada Ltd.	Unionville, Ont.	Modern Electronics Inc.	Mississauga, Ont.
Maison des Semiconductors Ltée	Pointe-Claire Qué.	Modern Power Conversion Inc.	Vancouver, B.C.
Manitoba HVDC Research Centre	Winnipeg, Man.	Modu-Tronics Inc.	Markham, Ont.
Manitoba Hydro	Winnipeg, Man.	Mona Electronic International Co. Ltd.	Scarborough, Ont.
Mannesmann Tally Corp.	Kent, WA., USA*	Montréal Circuits Inc.	Vancouver, B.C.
Mansoor Electronics Ltd.	Markham, Ont.	Moog Canada Ltd.	St-Laurent, Qué.
Martin Electronic Marketing Corporation	Surrey, B.C.	Moore Instrument Co. Ltd.	Brampton, Ont.
Marubeni Canada Ltd.	Toronto, Ont.	Mors Technologie Inc.	Brampton, Ont.
Master Technology Corp.	Vancouver, B.C.	Mosaid Systems Inc.	Montréal, Qué.
Masters Workshop Corp.	Rexdale, Ont.	Mosler Canada, Div. Wabco Standard Ltd.	Kanata, Ont.
Matrox Electronic Systems Ltd.	Dorval, Qué.	Motorola Canada Limited	Stoney Creek, Ont.
Matsushita Electric of Canada Ltd.	Mississauga, Ont.	Multiflex Inventions & Technology Development Inc.	Brampton, Ont.
Matsushita Industrial Canada Ltd.	Toronto, Ont.	Multilek Inc.	North York, Ont.
Mattel Canada Inc.	Toronto, Ont.	Multitone Electronics Ltd.	Mississauga, Ont.
McCurdy Radio Industries Ltd.	Toronto, Ont.	Murata Erie North America Ltd.	Nepean, Ont.
McCurdy Telecommunication Products Ltd.	Scarborough, Ont.	Mux Lab Inc.	Downsview, Ont.
		N B I P Forest Products Inc.	Trenton, Ont.
		N D Graphic Products Ltd.	Montréal, Qué.
		N E I Canada Ltd.	Dalhousie, N.B.
			Downsview, Ont.
			Toronto, Ont.

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
NCR Canada Ltd.	Mississauga, Ont.	Pacific Microcircuits Ltd.	White Rock, B.C.
NEC Canada Inc.	Mississauga, Ont.	Pacific Semiconductors Inc.	Vancouver, B.C.
Narco Medical Services, Div. of Air-Shields (Canada) Ltd.	Downsview, Ont.	Pamap Graphics Ltd.	Victoria, B.C.
National Business Systems Inc.	Mississauga, Ont.	Paradyne Corporation	Toronto, Ont.
National Semiconductor Canada Ltd.	Rexdale, Ont.	Patch Computers Ltd.	Richmond, B.C.
Navtel, a Division of Associated Test Equipment Ltd.	Concord, Ont.	Patron Components Inc.	Agincourt, Ont.
Nelma Data Corp.	Mississauga, Ont.	Pelko Electric Inc.	Weston, Ont.
Network Data Systems Ltd.	Markham, Ont.	Per-Tech Systems Inc.	Mississauga, Ont.
New Brunswick Telephone Company Ltd.	Saint John, N.B.	Philco-Ford of Canada Ltd.	Markham, Ont.
Newbridge Communication Networks Corp.	Ottawa, Ont.	Philips Electronics Ltd.	Scarborough, Ont.
Nexus Engineering Corporation	Burnaby, B.C.	Philips Information Systems Ltd.	St-Laurent, Qué.
Niagara College	Welland, Ont.	Phoenix Geophysics Ltd.	Markham, Ont.
Nikon Canada Inc.	Mississauga, Ont.	Phonic Ear Ltd.	Mississauga, Ont.
Nissan Automobile Co. (Canada) Ltd.	Mississauga, Ont.	Pinpoint Retail Systems Inc.	Toronto, Ont.
Noma Industries Ltd.	Scarborough, Ont.	Pioneer Electronics of Canada Inc.	Markham, Ont.
Norand Corporation	Cedar Rapids IA, USA*	Pitch Instrument Inc.	Toronto, Ont.
Norpak Corporation	Kanata, ont.	Pitechnos Inc.	Lévis, Qué.
Northern Technologies Ltd.	Markham, Ont.	Poetker Communications Ltd.	Kitchener, Ont.
Northern Telecom Ltd.	Islington, Ont.	Positron Industries Inc.	Montréal, Qué.
Novatel Communications Ltd.	Calgary, Alta.	Prelco Electronics Ltd.	Montréal, Qué.
Oerlikon Aérospatiale Inc.	St-Jean-sur-Richelieu, Qué.	Premier Fastener Ltd.	Rexdale, Ont.
Office Overload Ltd.	Toronto, Ont.	Pressenk Instruments Inc.	St-Laurent, Qué.
Ogivar Inc.	St-Laurent, Qué.	Prestec Electronics Ltd.	Ottawa, Ont.
Olivetti Canada Ltd.	Markham, Ont.	Prestige Electronics Corp.	Rexdale, Ont.
Omni Forest Services Inc.	Vancouver, B.C.	Primonics Inc.	St-Laurent, Qué.
Omron Canada Inc.	Scarborough, Ont.	Priva Computers Inc.	Vineland Station, Ont.
Oncourse International Inc.	Thornhill, Ont.	Prodatel Communications Inc.	Montréal, Qué.
Ontario Centre for Microelectronics	Ottawa, Ont.	Programmable Control, Div. of Gould Electronics Canada Ltd.	Mississauga, Ont.
Ontor Ltd.	Toronto, Ont.	Promac Controls Inc.	Scarborough, Ont.
Optimum Controls Co. of Can., Div. Combustion Eng Can Inc.	Ottawa, Ont.	Pure Data Ltd.	Markham, Ont.
Raychem Canada Ltd.	Mississauga, Ont.	Q Tron Ltd.	Calgary, Alta.
Optotek Ltd.	Kanata, Ont.	Quadrom Software Systems Inc.	Montréal, Qué.
Orcatech Inc.	Kanata, Ont.	Queale Electronics Ltd.	Victoria, B.C.
Ordinateur Irisco du Québec Inc.	Ste-Foy, Qué.	Queens University	Kingston, Ont.
Ore Sorters (Canada) Ltd.	Peterborough, Ont.	R B D Sheppard Agencies Ltd.	Georgetown, Ont.
P C World, Division of Helix Circuits Inc.	Scarborough, Ont.	R H Nichols Co. Ltd.	Woodbridge, Ont.
P E A C Media Research Inc.	Don Mills, Ont.	R M S Industrial Controls Inc.	Port Coquitlam, B.C.
PIP Retail Systems Inc.	Toronto, Ont.	R N Longman Sales Inc.	Mississauga, Ont.
PV Tron Inc.	Lachine, Qué.	R Theta Inc.	Mississauga, Ont.
Pachena Scientific & Industrial Electronics Inc.	Vancouver, B.C.	RCA Inc.	Toronto, Ont.
Pacific Communications Ltd.	Vancouver, B.C.	RFM Electro Sales Inc.	Mississauga, Ont.
		Racal-Decca Canada Inc.	Mississauga, Ont.
		Radio Shack, Division of Inter-Tan Canada Ltd.	Barrie, Ont.
		Rairtronic Components & Computer Services Ltd.	Vancouver, B.C.
		Rauland-Borg Canada Inc.	Mississauga, Ont.
		Raybel Électronique Inc.	Montréal, Qué.
		Raytheon Canada Ltd.	Waterloo, Ont.

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

Name	Address	Name	Address
Reba Equipment Enterprises Ltd.	Toronto, Ont.	Science Aztec Inc.	Charny, Qué.
Recherche Contractuelles	Longueuil, Qué.	Scintrex Ltd.	Concord, Ont.
Coreco Inc.		Sears Canada Inc.	Toronto, Ont.
Recognition Equipment (Canada) Ltd.	Markham, Ont.	Semad Electronics International Ltd.	Downsview, Ont.
Redarr Ltd.	Wellesley, Ont.	Semi Tech Microelectronics Corporation	Markham, Ont.
Relcon Inc.	Brampton, Ont.	Senstar Security Systems Inc.	Kanata, Ont.
Reliance Division-Reliance Electric Ltd.	Stratford, Ont.	Sentrol Systems Ltd.	Downsview, Ont.
Reltek Incorporated	Kanata, Ont.	Sharp Electronics of Canada Ltd.	Mississauga, Ont.
Remanco Systems Inc.	Markham, Ont.	Shriro (Canada) Ltd.	Montréal, Qué.
Renmark Electronics Ltd.	Richmond Hill, Ont.	Siemens Electric Limited	Mississauga, Ont.
Repco Electronics Co. Ltd.	Pointe-Claire, Qué.	Siltronics Ltd.	Kanata, Ont.
Repco Radio Ltd.	Pickering, Ont.	Sioc Ltd.	Mississauga, Ont.
Reuters Limited	Toronto, Ont.	Skotel Corp.	Brossard, Qué.
Richard Besner & Associés Ltée.	St-Laurent, Qué.	Skyswitch Satellite Communications Co.	Kanata, Ont.
Richardson Electronics Canada Ltd.	Brampton, Ont.	Skywave Electronics Ltd.	Kanata, Ont.
Richvale Block & Ready Mix, Div. of Canfarge Ltd.	Thornhill, Ont.	Smith-Corona (Canada) Ltd.	Scarborough, Ont.
Robert Morse Appliances Ltd.	Edmonton, Alta.	Société d'Équipement de Satellites A E D Ltée.	Montréal, Qué.
Rockwell International Canada Ltd.	Georgetown, Ont.	Sofpak Inc.	Nepean, Ont.
Roco Distributors Ltd.	Toronto, Ont.	Sony of Canada Ltd.	Willowdale, Ont.
Roland Music Canada Ltd.	Vancouver, B.C.	Source Electronics Ltd.	Rexdale, Ont.
Rolm Canada Inc.	Richmond, B.C.	Space Electronics Sales Corp.	Montréal, Qué.
Ronan Engineering Ltd.	Willowdale, Ont.	Spar Aerospace Products Ltd.	Toronto, Ont.
Ros-Star Ltd.	Toronto, Ont.	Sparton of Canada Ltd.	London, Ont.
Rosgol Industries Ltd.	Maple, Ont.	Spectravision Int'l Inc.	Brampton, Ont.
Ross Video Ltd.	Montréal, Qué.	Sperry Inc.	Winnipeg, Man.
Ryantronics Reg'd	Iroquois, Ont.	Spilsbury Communications Ltd.	Rockland, Ont.
S E D research Ltd.	Mississauga, Ont.	Stanley Canada Inc.	Vancouver, B.C.
S Litton Systems (Canada) Ltd.	Saskatoon, Sask.	Stetron International Inc.	Windsor, Ont.
S M I Support Measures Inc.	Rexdale, Ont.	Stromberg Carlson Corp.	Markham, Ont.
S R Telecom Inc.	Manotick, Ont.	Studer Revox Canada Ltd.	Rochester, NY, USA*
S-P International Ltd.	St-Laurent, Qué.	Sumitomo Canada Ltd.	Toronto, Ont.
SAB Nife Corporation	Burnaby, B.C.	Sun Microsystems of Canada Inc.	Toronto, Ont.
SED Systems Inc.	Scarborough, Ont.	Sur-Gard Systèmes de Sécurité Ltée.	Markham, Ont.
STC Canada Inc.	Saskatoon, Sask.	Systèmes de Bronzage Solana Inc., Les	St-Laurent, Qué.
STC Scientific Tube Corporation	Rexdale, Ont.	T R Services Ltd.	Laval, Qué.
STD Electric Industries Ltd.	Montréal, Qué.	T-Dak Electronics Inc.	Mississauga, Ont
STS Systems Ltd.	Scarborough, Ont.	Tai Wah Electronic (Canada) Inc.	Lachine, Qué.
Saftronics Ltd.	Dorval, Qué.	Talkie Tooter (Canada) Ltd.	Scarborough, Ont.
Sanders Canada Inc.	Stratford, Ont.	Taltek Electronics Ltd.	Vancouver, B.C.
Sanyo Canada Inc.	Ottawa, Ont.	Tandem Computers Canada Inc.	Montréal, Qué.
Sayal Purchasing Services Inc.	Toronto, Ont.	Targa Electronic Systems Inc.	Markham, Ont.
Saynor Electronics Limited	Scarborough, Ont.		Ottawa, Ont.
Scicom Systems Inc.	Don Mills, Ont.		

\*Non-resident importer

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>	<u>Name</u>	<u>Address</u>
Target Electronics, O/B 655282 Ontario Limited		Udisco Ltd.	Montréal, Qué.
Tartini Musical Imports Ltd.	Concord, Ont.	Unilock Ltd.	Georgetown, Ont.
Tatson International (Canada) Inc.	Port Coquitlam, B.C.	Unisys Canada Inc.	Toronto, Ont.
Taurus Computer Products Inc.	Scarborough, Ont.	United Carr, Div. of TRW Canada Ltd.	North York, Ont.
Teac Canada Ltd.	Ottawa, Ont.	Univac Development & Mfg, Div.	Stoney Creek, Ont.
Tech-Rep Electronics Ltd.	Mississauga, Ont.	Sperry Rand Canada Ltd.	Dorval, Qué.
Tecrad Inc.	St-Laurent, Qué.	University of Waterloo	Waterloo, Ont.
Tectrol Inc.	Ancienne Lorette, Qué.	Update Electronic Inc.	Don Mills, Ont.
Tee-Comm Electronics Inc.	Downsview, Ont.	Valera Electronics Inc.	Gloucester, Ont.
Teklogix Inc.	Mount Royal Qué.	Valtrie Marketing Inc.	Woodbridge, Ont.
Tektronix Canada Inc.	Mississauga, Ont.	Vantage Electronic Corp.	Richmond, B.C.
Tele-Radio Systems Ltd.	Barrie, Ont.	Vapor Canada Inc.	St-Laurent, Qué.
Telecommunications Technology Inc.	Woodbridge, Ont.	Varian Canada Inc.	Georgetown, Ont.
Telecompute Integrated Systems Inc.	Milpitas, CA, USA*	Veeco-Lambda Inc.	St-Laurent, Qué.
Teleglobe Canada	Etobicoke, Ont.	Ventes Électroniques Meridien Inc., Les	Montréal, Qué.
Telemus Electronic Systems Inc.	Montréal, Qué.	Versatech Electronics Inc.	Montréal, Qué.
Teltone Corporation	Nepean, Ont.	Viewstar Division of GSW Inc.	Scarborough, Ont.
Terrier Electronics Co. Ltd.	Toronto, Ont.	Vipco Electronic Industries Inc.	Downsview, Ont.
Texas Instruments Inc.	Etobicoke, Ont.	Viscount Industries Ltd.	Vancouver, B.C.
Thinkway Trading Corporation	Ottawa, Ont.	Vtech Computers (Canada) Ltd.	Richmond, B.C.
Thomson & Nielsen Electronics Ltd.	Markham, Ont.	W Carsen & Company Ltd.	Don Mills, Ont.
Thomson C S F Canada Ltée.	Kanata, Ont.	W E S Electronics Ltd.	Winnipeg, Man.
Thought Technology Ltd.	Montréal, Qué.	Wackid Radio	Ottawa, Ont.
Tiac Manufacturing Inc.	Montréal, Qué.	Wandel & Goltermann Inc.	Scarborough, Ont.
Tie Telecommunications Canada Limited	Port Moody, B.C.	Wang Canada Ltd.	Richmond Hill, Montréal, Qué.
Timeplex Canada Inc.	Markham, Ont.	Westburne Industrial Enterprises Ltd.	Burnaby, B.C.
Tokyo Electric Canada Ltd.	Rexdale, Ont.	Western Audiovox Corp.	Hamilton, Ont.
Toronto Sun Publishing Corp.	Toronto, Ont.	Westinghouse Canada Ltd.	Thornhill, Ont.
Toshiba of Canada Limited	Willowdale, Ont.	White Oak Trading Limited	Willowdale, Ont.
Tri-Tel Associates Ltd.	Willowdale, Ont.	Willer Engineering Ltd.	Mississauga, Ont.
Triad Systems Canada Ltd.	Woodbridge, Ont.	Woodbridge Foam Corp., The	Vancouver, B.C.
Trillium Telephone Systems Inc.	Kanata, Ont.	Hugo Technology (Canada) Ltd.	Calgary, Alta.
Trio-Kenwood Canada Inc.	Mississauga, Ont.	X1 Consultants Ltd.	North York, Ont.
Triple Crown Electronics Inc.	Mississauga, Ont.	Xerox Canada Inc.	Scarborough, Ont.
Trivar Inc.	Mississauga, Ont.	Yamaha Canada Music Ltd.	Scarborough, Ont.
Tulsa Computer Products Ltd.	Willowdale, Ont.	Yorkville Sound Limited	Scarborough, Ont.
Tymeshare Inc.	Cupertino, CA. USA*	York Electronics Corp. of Canada	Markham, Ont.
		Zanin Électronique Inc.	St-Laurent, Qué.
		Zavitz Technology Inc.	Pointe-Claire, Qué.
		Zenith Radio Canada Ltd.	Toronto, Ont.
		Zesta Engineering Ltd.	Toronto, Ont.

\*Non-resident importer

APPENDIX B

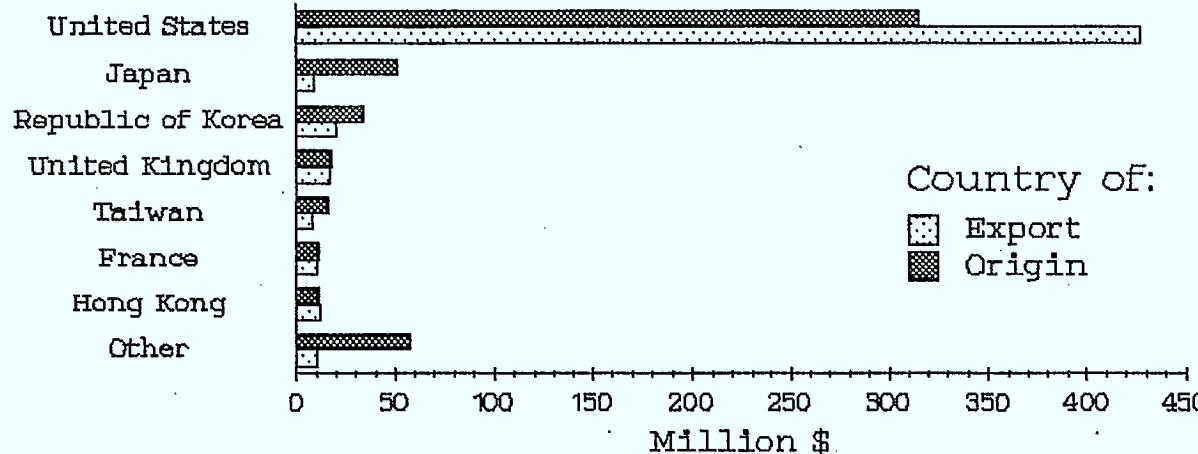
FOREIGN EXPORTERS TO CANADA

Foreign exporters to Canada of integrated circuits are identified in most instances by country of origin. These data differ from that on page 8 of this report which are based on country of export as published by Statistics Canada. These data vary to the extent that shipments of integrated circuits are transhipped through another country (i.e. country of export). The following table illustrates the difference between the imports of integrated circuits based on country of export and country of origin. It should be noted, however, that although the data for a specific country (e.g. United States) may differ when looking at imports based on country of export (\$427.2 million) versus country of origin (\$314.9 million), the total imports from all countries for integrated circuits in 1987 were \$513.8 million regardless of country of export or origin.

1987 IMPORTS BY MAJOR FOREIGN  
COUNTRY OF EXPORT AND ORIGIN

<u>Foreign Country</u>	<u>Country of Export (\$ 000)</u>	<u>Country of Origin (\$ 000)</u>
United States	427 163	314 878
Japan	8 790	50 857
Republic of Korea	20 262	33 554
United Kingdom	16 525	18 003
Taiwan	7 506	15 810
France	10 959	11 666
Hong Kong	12 015	11 565
Other	<u>10 617</u>	<u>57 514</u>
<b>TOTAL</b>	<b><u>513 837</u></b>	<b><u>513 837</u></b>

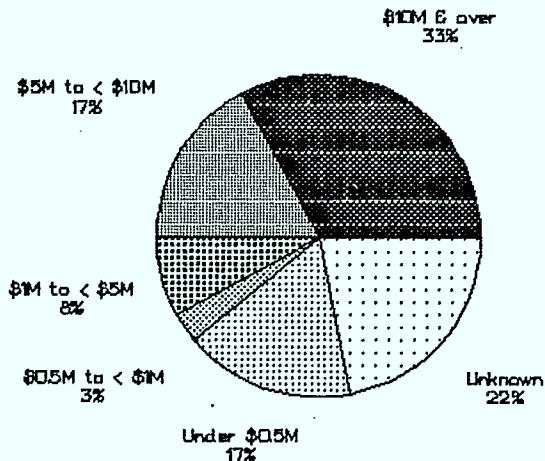
COUNTRY OF EXPORT VERSUS COUNTRY OF ORIGIN



FOREIGN EXPORTERS TO CANADA  
INTEGRATED CIRCUITS

Major exporters to Canada of integrated circuits are listed in descending order of dollar value by major country of origin. These exporters accounted for 57 per cent or \$293 million of the total value of imports to Canada in 1987. The following pages identify these major foreign exporters by country and are grouped according to their level of 1987 exports to Canada if integrated circuits.

UNITED STATES FOREIGN EXPORTERS TO CANADA 1987  
(descending order of value)



\$10 Million and Over  
(\$102.3 million)

Motorola  
Control Data Corp.  
Intel Corporation  
Northern Telecom Inc.  
Future Electronics

\$5 Million < \$10 Million  
(\$51.8 million)

Hamilton Avnet  
IBM  
National Semi Conductor  
RCA Corporation  
Texas Instruments Inc.  
Arrow Electronics Inc.

\$1 Million < \$5 Million  
(\$26.3 million)

Matrox International  
Micron Technology Inc.  
Signetics Corporation  
Fairchild Semi-Conductor  
Digital Equipment Corp.  
Samsung Semi Conductor U.S.A.  
Analog Devices  
Zynos Co.  
LSI Logic Corp.  
Toshiba America Inc.  
California Devices  
Thomson Comp. Corp.  
Zeus Components

\$0.5 Million < \$1 Million  
(\$10.7 million)

Sperry Unisystems Corp.  
Cal Circuit ABCO Inc.  
Chips and Technologies  
Mitsubishi Electric  
NEC Electronics Inc.  
NCR Corporation  
Exar Integrated System Corp.  
American Microsystem Inc.  
GTE Microcircuits Inc.  
Burr Brown Corp.  
Zilog Inc.  
Ferranti Interdesign  
Fujitsu Micro Computer

Total companies identified with exports of \$0.5 Million and over - \$191.1 million

Total companies identified with exports under \$0.5 Million - \$ 53.2 million

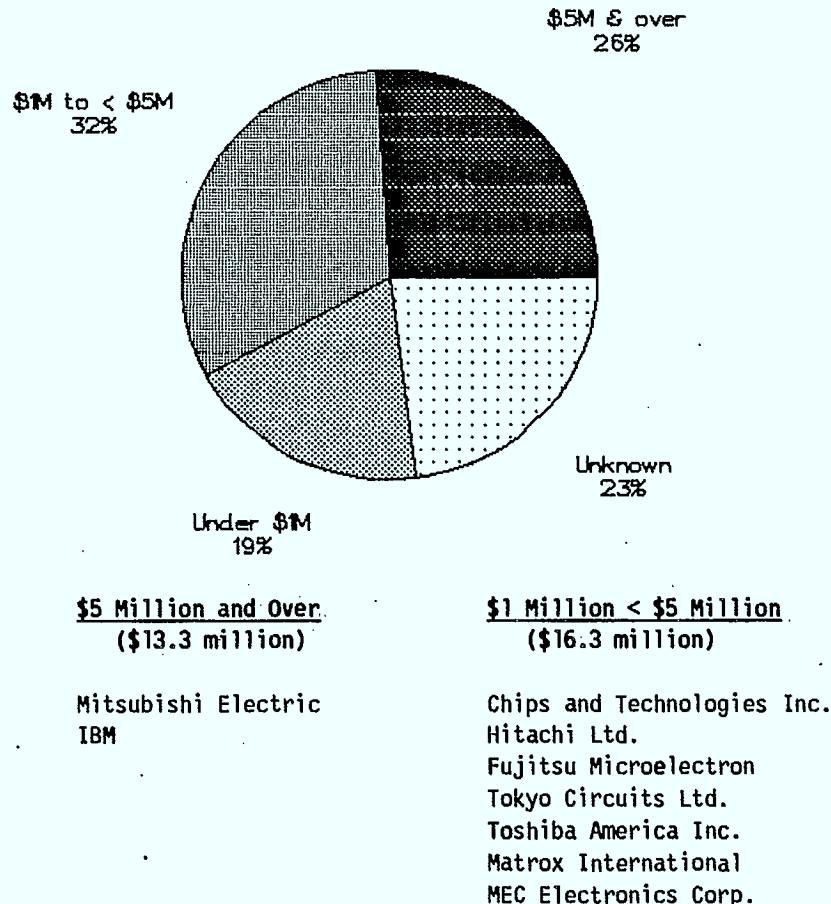
Not Known (1) - \$ 70.6 million

TOTAL - Country of Origin - UNITED STATES - \$314.9 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted.

JAPAN FOREIGN EXPORTERS TO CANADA 1987  
(descending order of value)



Total companies identified with exports of \$1 Million and Over - \$29.6 million

Total companies identified with exports Under \$ 1.0 Million - \$ 9.6 million

Not Known (1) - \$11.6 million

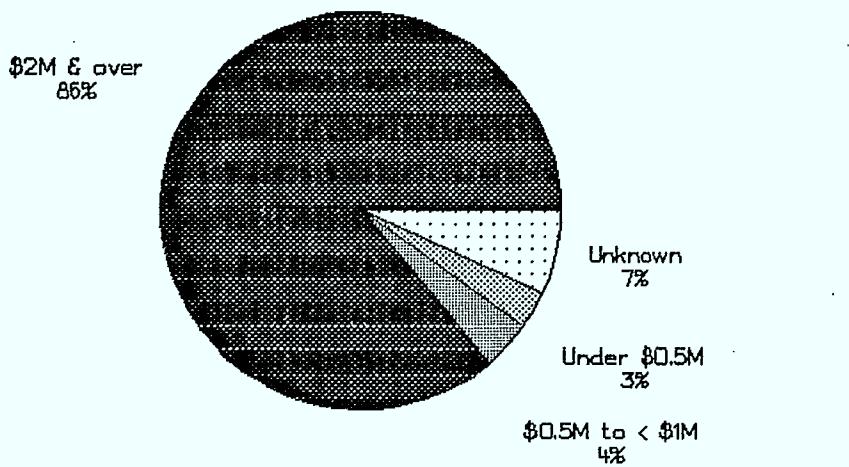
TOTAL - Country of Origin - JAPAN - \$50.9 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted.

APPENDIX B-III

REPUBLIC OF KOREA FOREIGN EXPORTERS TO CANADA 1987  
(descending order of value)



\$2 Million and Over  
(\$28.9 million)

Northern Telecom Ltd.  
San Sung Semiconductor Inc.  
Signetics Corp.

\$0.5 Million < \$1 Million  
(\$1.3 million)

Matrox International Corp.  
Fairchild Semiconductor

Total companies identified with exports of \$0.5 Million and Over - \$30.2 million

Total companies identified with exports of Under \$0.5 Million - \$ 1.0 million

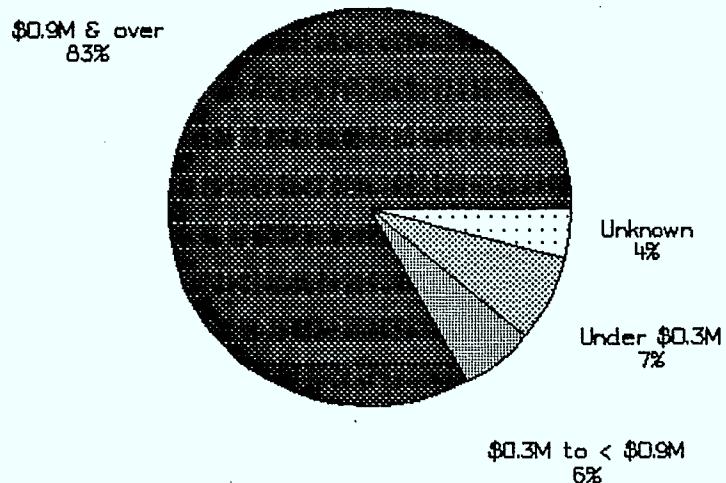
Not Known (1) - \$ 0.7 million

Total - Country of Origin - REPUBLIC OF KOREA - \$33.6 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted. There were no companies with exports to Canada with values between \$1 million and \$2 million.

UNITED KINGDOM FOREIGN EXPORTERS TO CANADA 1987  
(descending order of value)



\$900 000 and Over  
(\$15.0 million)

Mitel Telecom Ltd.  
Welwyn Electronics  
Plessey Semiconductor

\$300 000 < \$900 000  
(\$1.1 million)

Integrated Power  
STC Components  
BAL Components

Total companies identified with exports of \$300 000 and Over - \$16.1 million

Total companies identified with exports of Under \$300 000 - \$ 1.3 million

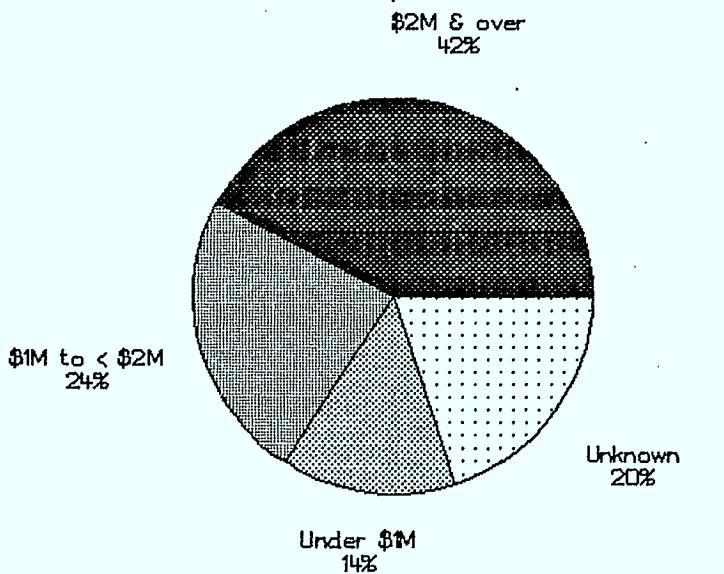
Not Known (1) - \$ 0.7 million

TOTAL - Country of Origin - UNITED KINGDOM - \$18.0 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted.

TAIWAN FOREIGN EXPORTERS TO CANADA 1987  
(descending order of value)



\$2 Million and Over  
(\$6.7 million)

GTE Microcircuits  
RCA Corp

\$1 Million < \$2 Million  
(\$3.8 million)

Texas Instruments Inc  
ASE Enterprises  
IBM

Total companies identified with exports of \$1 Million and Over - \$10.5 million

Total companies identified with exports Under \$1 Million - \$2.3 million

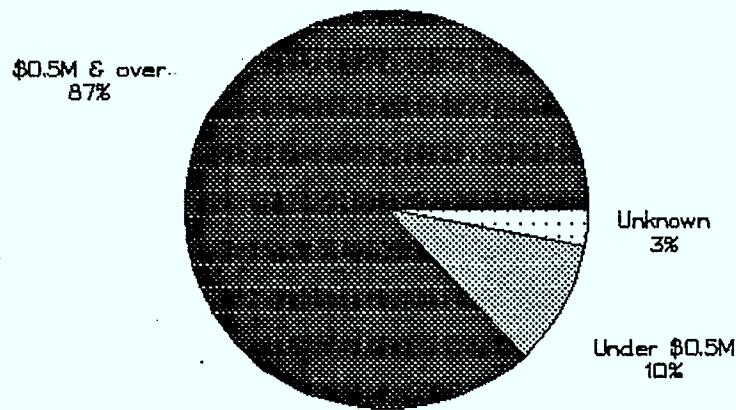
Not Known (1) - \$3.1 million

**TOTAL - Country of Origin - TAIWAN** - \$15.8 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted.

FRANCE FOREIGN EXPORTERS TO CANADA 1987  
(descending order of value)



\$0.5 Million and Over  
(\$10.1 million)

Texas Instruments  
Starintex Airtran

Total Companies identified with exports of \$0.5 Million and Over - \$10.1 million

Total Companies identified with exports Under \$0.5 Million - \$ 1.1 million

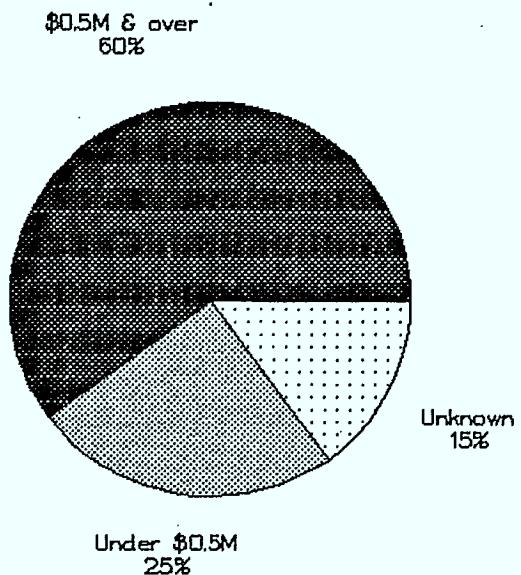
Not Known (1) - \$ 0.4 million

TOTAL - Country of Origin - France - \$11.7 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted.

HONG KONG FOREIGN EXPORTERS TO CANADA 1987  
(descending order)



\$0.5 Million and Over  
(\$6.9 million)

Northern Telecom  
Yau Shing Enterprise  
P.C. Electronics Ltd.

Total companies identified with exports of \$0.5 Million and Over - \$ 6.9 million

Total Companies identified with exports Under \$0.5 Million - \$ 2.9 million

Not Known (1) - \$ 1.7 million

Total - Country of Origin - Hong Kong - \$11.6 million

(1) These represent transactions for which the name of the foreign exporter has not been captured on the computer system. In many instances, however, these include foreign exporters already identified above.

N.B. The minimum total 1987 value of exports to Canada for the group of foreign exporters is bracketted.

APPENDIX C

UNITED STATES' TOTAL IMPORTS - 1988

<u>Description</u>	<u>Quantity</u> (000 No.)	<u>Value</u> (C\$ Million)	Canada's Share	
			<u>Quantity</u> (000 No.)	<u>Value</u> (C\$ Million)
Unmounted chips, dice and wafers and transistors	-	29.2	-	*
Unmounted chips, dice and wafers for diodes and rectifiers	-	22.0	-	-
Photosensitive diodes and rectifiers	63 352	50.7	562	8.6
Zener Diodes	1 194 814	61.1	724	2.1
Diodes and rectifiers	36 962	11.9	-	-
Thyristors	282 520	62.6	1	*
Diodes and rectifiers, other max current 0.5 amps	1 194 088	77.7	49	0.1
Diodes and rectifiers, other	944 611	248.9	2 052	2.6
Unmounted chips, dice and wafers for monolithic integrated circuits	-	395.8	-	16.0
Monolithic integrated circuits, linear	1 514 661	983.2	2 391	7.7
Bipolar monolithic integrated circuits memories	173 846	316.9	98	1.2
TTL bipolar monolithic integrated circuits except memories	2 416 037	1 099.7	608	2.8
ECL bipolar monolithic integrated circuits except memories	46 070	174.5	105	2.8
Bipolar monolithic integrated circuits, nspf	61 237	129.0	638	7.7

\* Less than \$100,000

APPENDIX CUNITED STATES' IMPORTS - 1988 (Cont'd)

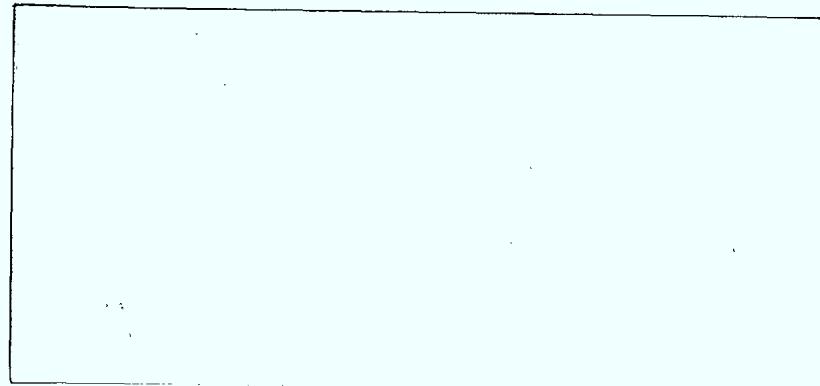
<u>Description</u>	Total Quantity (000 No.)	Imports Value (C\$ Million)	Canada's Quantity (000 No.)	Share Value (C\$ Million)
MOS random access memories, not over 9,000 bits	30 891	94.5	39	0.8
MOS random access memories, over 9,000 not over 20,000 bits	91 627	214.7	72	0.3
MOS random access memories, over 20,000 not over 40,000 bits	948	9.0	2	*
MOS random access memories, over 40,000 not over 80,000 bits	106 948	388.5	347	0.6
MOS random access memories, over 80,000 not over 300,000 bits	225 300	1 076.4	129	0.5
MOS random access memories, over 300,000 bits	49 475	913.4	6 534	78.2
MOS memories, except random access	279 951	1 091.4	64	0.4
Microprocess, MOS	197 850	688.5	584	8.9
MOS integrated circuits, other	1 312 544	2 541.0	40 797	480.3
Monolithic integrated circuits, other	76 713	352.1	1 828	18.6
Unmounted chips, dice & wafers for integrated circuits, other	-	104.4	-	1.3
Integrated circuits other than monolithic	192 601	614.8	1 581	10.8
Wafers without circuits or device thereon	11 864	231.4	42	4.4
Parts of semiconductors	-	721.0	-	231.4
<b>TOTAL</b>	<b>-</b>	<b><u>12 704.3</u></b>	<b>-</b>	<b><u>888.1</u></b>

\* Less than \$100,000

HF3221/.A1/C3  
Canada. Dept. of Regional  
Import profile :  
investment opportunities.  
AEBH 89106 ISTC

ISTC 1551 (8/88)

DATE DUE - DATE DE RETOUR



INDUSTRY CANADA / INDUSTRIE CANADA



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