UNITED STATES INTERNATIONAL TRADE COMMISSION

TANTALUM ELECTROLYTIC FIXED CAPACITORS

Determination of No Injury or Likelihood Thereof in Investigation No. AA1921-159 Under the Antidumping Act, 1921, as Amended, Together With the Information Obtained in the Investigation

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UNITED STATES INTERNATIONAL TRADE COMMISSION

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C O N T E N T S

TABLES

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

[AA1921-159]

TANTALUM ELECTROLYTIC FIXED CAPACITORS FROM JAPAN

Determination of No Injury or Likelihood Thereof

On July 22, 1976, the United States International Trade Commission received advice from the Department of the Treasury that tantalum electrolytic fixed capacitors from Japan, other than those produced and sold by Matsushita Electric Industrial Co., Ltd., are being, or are likely to be, sold in the United States at less than fair value within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160(a)). On August 3, 1976, the Commission instituted investigation No. AA1921-159 under section 201(a) of said act to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States. Notice of the institution of the investigation and of the public hearing was published in the Federal Register on August 9, 1976 (41 F.R. 33337).

In arriving at its determination, the Commission gave due consideration to written submissions from interested parties, evidence adduced at the hearing, and all factual information obtained by the Commission's staff from questionnaires, personal interviews, and other sources.

On the basis of its investigation, the Commission has determined by a vote of 5 to 1 (Commissioner Parker dissenting) that an industry in the United States is not being and is not likely to be injured, and is not prevented from being established, by reason of the importation of tantalum electrolytic fixed capacitors from Japan, other than those produced and sold by Matsushita Electric Industrial Co., Ltd., that are being, or are likely to be, sold at less than fair value within the meaning of the Antidumping Act, 1921, as amended.

Statement of Reasons for Negative Determination of Chairman Will E. Leonard, Vice Chairman Daniel Minchew, and Commissioners George M. Moore, Catherine Bedell, and Italo H. Ablondi

On August 3, 1976, the U.S. International Trade Commission instituted investigation No. AA1921-159 under section 201(a) of the Antidumping Act, 1921, as amended. The investigation was made to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established by reason of the importation into the United States of tantalum electrolytic fixed capacitors from Japan that the Department of the Treasury (Treasury) has determined is being, or is likely to be, sold at less than fair value (LTFV) within the meaning of such act. In order to find affirmatively, the Commission must find two conditions satisfied in this investigation. First, there must be injury, or likelihood of injury, to an industry in the United States, or an industry in the United States must be being prevented from being established. 1/ Second, such injury or likelihood of injury must be "by reason of" the importation into the United States of the class or kind of foreign merchandise which the Treasury has determined is being, or is likely to be, sold at LTFV.

On the basis of the information developed in the investigation, we have determined that any injury which the domestic industry may be experiencing or may be likely to experience is not by reason of LTFV imports. Therefore the second condition, that of causation, has not been satisfied, and we have made a negative determination.

1/ Prevention of the establishment of an industry is not an issue in the instant case and will not be discussed further.

The product

Capacitors are devices for storing electrical energy in an electrical circuit. Tantalum electrolytic fixed capacitors hereinafter referred to as (tantalum capacitors) are particularly well suited for applications requiring high capacity to volume ratios, high reliability, long service, and long shelf life. Since the price of tantalum capacitors is much higher than the prices of capacitors made from other materials and since the selection of capacitors is dependent upon their physical and electrical characteristics, other capacitors are seldom substituted for tantalum units.

The U.S. industry

In making this determination we consider the industry to be those facilities in the United States where tantalum capacitors are produced, as this is the industry most likely to be injured by the subject LTFV sales. Fourteen firms which operate seventeen establishments produced tantalum capacitors in the United States in 1975. No evidence was developed during the investigation which indicated that any other industry in the United States was being or was likely to be adversely affected by LTFV imports of tantalum capacitors.

LTFV sales

The Department of the Treasury, investigating U.S. imports of tantalum capacitors from Japan during the 6-month period May 1 to October 31, 1975, determined that Japanese exports of such capacitors,

with the exception of those exported by Matsushita Electric Industrial Co., Ltd., are being, or are likely to be, sold in the United States at LTFV. Fair-value comparisons were made on virtually all tantalum capacitors imported by Matsuo Electric Co., Ltd., and Nippon Electric Co., Ltd. Imports by these two firms accounted for approximately 75 percent of the value of imports from Japan during the period of Treasury's investigation. Margins were found by Treasury on 35 percent of the sales compared. Nippon Electric was found to have no sales at less than fair value on one series of capacitors, epoxy dipped, series D.

No injury by reason of LTFV imports

Market penetration of LTFV sales.--On the basis of the above, in determining the impact of LTFV sales of tantalum capacitors from Japan on the relevant U.S. industry, we have excluded from consideration imports of tantalum capacitors of Matsushita Electric Industrial Co., Ltd., as Treasury has done from its LTFV determination, and have considered the impact of 35 percent of the remaining tantalum capacitor imports from Japan, since this is the percentage which Treasury actually found to be sold at LTFV after looking at about 75 percent of such imports during the period of investigation. References to import statistics and import penetration in this statement reflect this finding.

U.S. imports of tantalum capacitors from Japan which were sold at LTFV accounted for about 1.5 percent of the quantity of apparent U.S. consumption of these capacitors during May-October 1975, the period of Treasury's investigation. The market penetration of the LTFV imports declined from about 2 percent for all of 1974 to less than 1.5 percent for all of 1975.

U.S. shipments.--U.S. producers' shipments of domestically produced tantalum capacitors declined from 441 million units in 1974 to 300 million units in 1975. This 32-percent decline in U.S. producers' shipments in that year was attributable to the recession and not to LTFV imports, which not only declined by 50 percent in absolute quantity but also experienced a market decline in their already minimal market share in 1975, as noted above.

Lost sales.--A thorough examination of transactions in the original equipment manufacturers' (OEM) market in the United States in 1975, covering 67 percent of the value of Japanese imports in that year, reveals that a Japanese-made tantalum capacitor was priced below an American-made capacitor in 25 percent of the instances in which they met in the OEM market. In two-thirds of those instances, however, the Japanese-made capacitor was not purchased.

Although one Japanese supplier of LTFV imports consistently undersold U.S. producers with respect to one type of capacitor sold to one particular OEM account, the quantity of its U.S. sales of this capacitor was so small that it could not be an identifiable cause of adverse impact on the domestic industry.

Profits.--The ratio of net operating profits to net sales of the U.S. producers of tantalum capacitors on their tantalum capacitor operations, as reported to the Commission, declined from 10 percent in 1973-74 to 5 percent in 1975, a year in which imports of these articles from Japan declined sharply and where market penetration was very low. Thus, LTFV imports are not an identifiable cause of any decline in profits.

Further, it should be noted that despite this significant decline in profits in recession year 1975, U.S. tantalum capacitor operations were twice as profitable as the operations of all manufacturers of electrical and electronic equipment in that year. U.S. producers' profits are expected to return to the higher levels that prevailed in 1973 and 1974 as the demand for capacitors continues to improve in 1976.

Prices.--The quantities of sales per order of the Japanese-made tantalum capacitors have been small compared with the quantities of sales of U.S. producers of tantalum capacitors. In general, Japanese sales did not exceed 100,000 to 200,000 units per month, whereas orders placed with U.S. producers were frequently for a million or more units per month. While price plays a significant role in what company receives the order, the effect of the small-sized orders for the Japanese tantalum capacitors is insignificant on prices of the total U.S. industry. The small decline in U.S. producers' prices for some types of tantalum capacitors in late 1975 and early 1976 from a peak in 1974 stemmed from the decreased demand occurring after a substantial buildup in inventories by OEM purchasers in 1974 and 1975 and not from LTFV imports.

No likelihood of injury by reason of LTFV imports

The phrase "is likely to be injured" as used in the Antidumping Act was intended to describe a situation in which the facts clearly demonstrate likelihood of injury unless corrective action is taken. This interpretation by the Commission was acknowledged by the Senate Committee on Finance in its report on the Trade Reform Act of 1974, which stated:

> The Commission's affirmative determinations that an industry "is likely to be injured" by less-than-fair-value imports are based upon evidence showing that the likelihood is real and imminent and not on mere supposition, speculation, or conjecture. 1/

Although information has been obtained regarding a planned expansion of Japanese capacity to produce tantalum capacitors in 1976 and 1977 and one Japanese producer has indicated that it will increase its export to the United States in 1977, these developments alone do not establish a basis for a determination of likelihood of injury by reason of LTFV sales of Japanese capacitors. 2/ To the contrary, the outlook for the U.S. industry improved significantly during the first half of 1976, when domestic producers' shipments increased from 157 million units

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1/ Trade Reform Act of 1974: Report of the Committee on Finance . . ., S. Rept. No. 93-1298 (93d Cong., 2d sess.), 1974, p. 180.

2/ During the investigation the Commission learned that Nippon Electric Co. (NEC) intended to increase its exports of tantalum capacitors to the United States significantly during 1977. However, the increase in such exports to the United States (estimated to be several millions of units) will consist almost entirely of epoxy dipped fixed capacitors. Information furnished to the Commission by the Department of the Treasury, contained in a letter dated July 7, 1976, from the U.S. Customs Service to Assistant Secretary David R. Macdonald, states that "NEC sold hermetically sealed and epoxy dipped capacitors and margins were found only on the hermetically sealed capacitors." Therefore, since no LTFV margins were found in NEC sales of epoxy dipped capacitors, Commissioners Moore and Bedell believe that NEC's anticipated increase in exports of such capacitors to the United States should not be used as a basis for a finding of likelihood of injury.

in January-June 1975 to 217 million units in January-June 1976, or by 38 percent. A continued growth in U.S. demand is anticipated as the domestic electronic industry continues to recover from the recession of 1975 and new applications are developed for tantalum capacitors.

The projected sharp growth in demand for tantalum capacitors is not confined to the United States but is expected to occur also in Japan and other major markets. Thus, only a limited share of the increased production in Japan will be available for export to the United States. Under these conditions, even though the Japanese increase their exports to the United States, it is doubtful that they will increase their share of the expanding U.S. market for tantalum capacitors to the extent that such imports from Japan would be an identifiable cause of any injury which the relevant domestic industry may suffer in the future.

Conclusion

We therefore conclude that an industry in the United States is not being and is not likely to be injured by reason of the importation of tantalum electrolytic fixed capacitors from Japan that are being or are likely to be sold at LTFV within the meaning of the Antidumping Act, 1921, as amended.

Statement of Reasons for Affirmative Determination of
Commissioner Joseph O. Parker

On July 22, 1976, the United States International Trade Commission (the Commission) received advice from the Department of the Treasury (Treasury) that tantalum electrolytic fixed capacitors from Japan, other than those produced and sold by Matsushita Electric Industrial Co., Ltd. are being, or are likely to be, sold in the United States at less than fair value (LTFV). The Antidumping Act, 1921, as amended, requires that in order to make an affirmative determination, the Commission must determine that an industry in the United States is being or is likely to be injured by reason of LTFV imports which the Secretary of the Treasury has determined are being, or are likely to be, sold at LTFV. In my judgment, these requirements of the Antidumping Act are satisfied and I have made an affirmative determination.

The product

Capacitors are devices for storing electrical energy in the form of electrons in an electric circuit. Tantalum capacitors are recognized as being especially suitable for continuous duty applications requiring a high degree of reliability, small size and large capacitance values. There are three types of tantalum electrolytic fixed capacitors, which overlap in application, but one type, solid, accounts for more than 90 percent of the market. There are five kinds of solid tantalum capacitors:

hermetically sealed, epoxy dipped, molded, chip, and resin sealed, identified by their individual packaging characteristics.

The domestic industry

As mentioned above, the application of the various types of tantalum electrolytic fixed capacitors overlap. Since many manufacturers produce several of these competing types of tantalum electrolytic fixed capacitors, I have considered all those U.S. producers that manufacture such capacitors to be the industry for the purpose of this investigation. There are 14 firms in the United States which produce tantalum capacitors.

The LTFV determination by Treasury

Section 201(a) of the Antidumping Act, 1921, as amended, (19 U.S.C. 160(a)) provides that--

> Whenever the Secretary of the Treasury . . . determines that a class or kind of foreign merchandise is being, or is likely to be, sold in the United States . . . at less than its fair value, he shall so advise the United States International Trade Commission . . ., and the Commission shall determine . . . whether an industry in the United States is being or is likely to be injured . . . by reason of the importation of such merchandise into the United States.

In the course of the proceeding before Treasury, Nippon Electric Co., one of the major Japanese suppliers of tantalum electrolytic fixed capacitors to the United States, sought to have the Treasury determination severed between different types of tantalum capacitors and, in effect, to eliminate from Treasury's determination tantalum electrolytic fixed capacitors identified or described as "dipped." Treasury in its determination stated ". . . it has been concluded that there is no basis for the segmentation of this determination in accordance with the claim of Nippon Electric." 1/ It further stated: "Each type of tantalum eletrolytic fixed capacitor is a clear part of the same class or kind of merchandise and therefore should be treated as such for purposes of this determination." It is my view that this determination is binding on the International Trade Commission as a matter of law and that this Commission has no authority to refine or modify the class or kind of merchandise found to be, or likely to be, sold at LTFV. The International Trade Commission has the sole responsibility of determining whether there is injury or likelihood of injury by reason of importation of that class or kind of merchandise, which in this proceeding is tantalum electrolytic fixed capacitors in any form.

In investigations conducted by Treasury to determine whether sales are being made at LTFV, it obviously does not examine

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1/ 41 F.R. 31241.

the universe. In the present case, Treasury examined sales during the period between May 1, 1975 and October 31, 1975, of a number of Japanese producers or suppliers responsible for about 85 percent of the imports during that period. It was found after excluding sales by Matsushita that about 35 percent of the imports investigated were being sold at LTFV. Treasury apparently did not find any sale of "dipped" capacitors sold by Nippon Electric to have been sold at LTFV. However, Treasury pointed out in its notice of determination that it sought, but Nippon Electric failed to supply, information with respect to its sales of "dipped" capacitors and pointed out specifically that its less than fair value determination was applicable to all tantalum electrolytic fixed capacitors regardless of their form, except for shipments by Matsushita, which were eliminated completely from the determination. Therefore, as heretofore indicated, in making my determination I necessarily have considered "dipped" capacitors as being within the class or kind of merchandise found to have been sold or likely to be sold at LTFV and, therefore, capable of visiting injury upon the U.S. industry.

Likelihood of injury

Domestic production of tantalum electrolytic fixed capacitors increased sharply between 1972 and 1973 and reached an alltime high in 1974 Japanese producers were also increasing their exports of these capacitors

to the United States, accounting for an increasing share of both total imports and apparent domestic consumption during 1972-74. With the downturn in business activity which generally affected domestic industries, the U.S. producers of tantalum capacitors sharply reduced their production in 1975. In that year inventories increased and employment and profits declined. Japanese exports of tantalum capacitors to the United States also declined in 1975, the year in which Treasury determined that such capacitors were being sold in the United States at LTFV margins ranging from 0.2 percent to 139.7 percent, with a weighted average margin of 37.3 percent. Thus, these sales at LTFV occurred at a time when the domestic industry was in a depressed and weaken position.

As a part of the Commission's investigation, price comparisons were made between domestically produced and Japanese produced tantalum capacitors. The price comparisons were made on three different basis. Almost uniformly, these comparisons indicated irrespective of the basis shown for making the comparisons, domestically produced capacitors were being undersold by imported capacitors from Japan. This price competition is intensifying. Price data submitted by 12 firms accounting for over 60 percent of the purchases of capacitors from Japan during 1974 and 1975 indicate that U.S. firms were undersold on a substantial number of occasions in years when demand was strong as well as in years when demand was weak.

As the U.S. electronics industry began to recover from the recession of 1975, U.S. producers' shipments of domestically produced tantalum capacitors increased sharply in the first half of 1976 as compared with their shipments during the corresponding period in 1975. However, during the first half of 1976, U.S. imports of tantalum capacitors from Japan (less those produced by Matsushita) increased at a more rapid rate than U.S. producers' domestic shipments with the result that the LTFV imports increased their share of apparent U.S. consumption by approximately 10 percent in January-June 1976.

During January-June 1976, U.S. producers' prices for various types of tantalum capacitors declined significantly. This decline in U.S. producers' prices is believed to be in large part responsible for the fact that the combined profits of the three major U.S. producers of tantalum capacitors declined sharply in January-June 1976 as compared with profits in the corresponding period in 1975 despite the fact that the net sales of these firms increased in the latter period.

The Commission obtained information during its investigation indicating that the Japanese capacity to produce tantalum capacitors would be increased in 1976-77 and that one of the major LTFV suppliers planned to increase its exports to the United States substantially. The projected increase in Japanese capacity to produce tantalum capacitors is believed to be far in excess of home-market demand.

Consequently the threat of sharply increased supplies from enlarged capacity poses an imminent threat of injury to the U.S. industry if such increased supplies are made available to the U.S. market at LTFV prices.

There are other factors which support the conclusion that increases in imports of capacitors from Japan will continue and threaten the U.S. industry if appropriate action is not taken to assure fair pricing by eliminating sales at LTFV. Since 1972 the Japanese have exported an increasing share of their production of tantalum electrolytic fixed capacitors to the United States. These suppliers have now established commercial relationships with some of the largest U.S. users of capacitors, users which purchase large quantities of capacitors in single transactions. Formerly, domestic producers supplied most large volume purchases, one of the areas in which the domestic industry had been better able to compete with Japanese imports. Competition in this market area is expected to intensify, and it is important that this competition not be on the basis of LTFV imports.

On the basis of the factors set forth above, I have determined that an industry in the United States is likely to be injured by reason of the importation from Japan of tantalum electrolytic fixed capacitors which Treasury has determined are likely to be sold at LTFV.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On July 22, 1976, the United States International Trade Commission received advice from the Department of the Treasury that tantalum electrolytic fixed capacitors from Japan are being, or are likely to be, sold at less than fair value (LTFV) within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160(a)). Accordingly, the Commission on August 3, 1976, instituted investigation No. AA1921-159 under section 201(a) of the act, to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States. The statute directs the Commission to make its determination by October 22, 1976.

A public hearing was held in Washington, D.C., on September 8 and 9, 1976. Notice of the institution of the investigation and hearing was duly given by posting copies of the notice at the Secretary's office in the Commission in Washington, D.C., and at the Commission's office in New York City, and by publishing the original notice in the Federal Register of August 9, 1976 (41 F.R. 33337).

The Department of the Treasury instituted its investigation after receiving a complaint on September 24, 1975, from Mr. Eugene Stewart, counsel for an unidentified complainant * * *. Treasury's withholding of appraisement notice was published in the Federal Register of April 23, 1976 (41 F.R. 16983), and its determination of sales at

less than fair value was published in the Federal Register of July 27, 1976 (41 F.R. 31240).

The Product

Description

A capacitor is a device for storing an electrical charge. It consists essentially of two conducting surfaces separated by an insulating medium (called the dielectric). The storage capability of a capacitor is commonly referred to as the capacitance or capacity. The capacitance of a capacitor depends primarily upon the surface area of its electrodes (conductors), the distance of their separation, and the dielectric constant of the medium separating the plates. Capacitors are principally used for filtering, pulse shaping, timing, tuning, coupling, and blocking in an electrical circuit.

Capacitors may be categorized as being either electrostatic or electrolytic. In electrostatic capacitors the dielectric is either gaseous, liquid, solid, or a combination of these materials. Electrolytic capacitors, on the other hand, are usually characterized by a very thin metallic oxide dielectric which is anodically formed on the surface of the positive electrode (in most cases aluminum or tantalum).

Tantalum electrolytic fixed capacitors are unique in the family of capacitors owing to the properties of tantalum and its oxide, tantalum pentoxide. Tantalum is a gray metal which is highly heat conductive. It is most often used in powder form to produce capacitors,

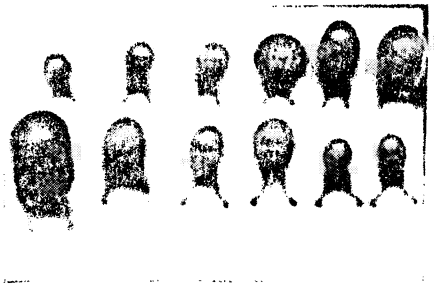
although tantalum foil is also employed in certain production processes. Because tantalum capacitors maintain their electrical characteristics over a wide range of temperatures and do not degrade when idle, they are often utilized in environments where capacitors made from other materials would not perform satisfactorily.

Tantalum electrolytic fixed capacitors are of three types: solid, wet slug, and foil. The applications for these types overlap, and, as a result, substitution of one type for another can occur.

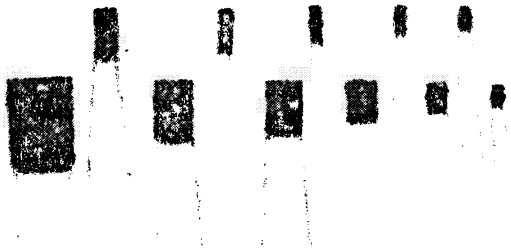
The solid type is made of tantalum powder, compressed and sintered to form a slug, solid to the naked eye but actually a compact, extremely porous structure of tiny shapes which has a large surface area available for the formation of the tantalum pentoxide dielectric. The slug is one electrode. A carbon coating, sometimes silvered, is often the other electrode. Solid tantalum electrolytic fixed capacitors, which constitute 90 percent of the tantalum capacitor market, may be hermetically sealed, dipped, molded, chip, and resin sealed because of their individual packaging characteristics. Examples are shown on the following page.

The wet-slug type consists of a solid slug (similar to but usually larger than that of the solid type) in a wet electrolyte. The foil type consists of a tantalum foil (rather than a powder) in a wet electrolyte. Both the wet-slug type and the foil type are usually designed for higher capacitance ratings than the solid type and are generally larger than the solid type.

Hermetically sealed

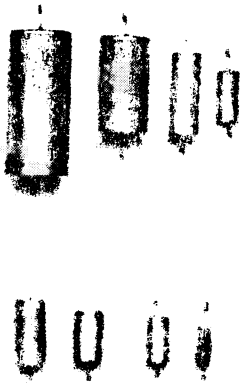


Dipped

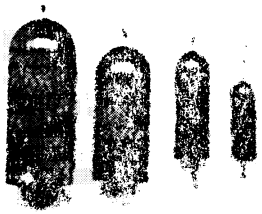


Molded

Chip



Resin sealed



Molded

Tantalum electrolytic fixed capacitors (hereinafter termed tantalum capacitors) are superior to capacitors made from other materials in their electrical and physical characteristics. Although tantalum capacitors cost more, their high capacitance per volume makes them extremely adaptable for use in small spaces. Their high reliability makes them uniquely suited for use in aerospace and life support systems and in complex systems where the probability of failure must be kept low. Since the price of tantalum capacitors is much higher than that of other types, and since the selection of tantalum capacitors is dependent upon physical and electrical characteristics, other types are seldom substituted.

Some variable tantalum capacitors are produced, but production and use are negligible by comparison to that for fixed tantalum capacitors.

U.S. tariff treatment

Since January 1, 1971, the rate of duty applicable to tantalum capacitors has been 10.0 percent ad valorem.

In addition to fully dutiable imports entered under TSUS item 685.80, tantalum capacitors are also entered under items 806.30 and 807.00. Item 806.30 provides for imports of certain metal articles which have been exported from the United States for processing and subsequently imported into the United States for further processing. Item 807.00 provides for articles assembled abroad in whole or in part from components fabricated in the United States. Imports qualifying under those provisions which have never been the subject of trade-agreement concessions are dutiable only to the extent of the value added abroad.

Nature and Extent of Sales at Less Than Fair Value

The Department of the Treasury, investigating U.S. imports of tantalum electrolytic fixed capacitors from Japan during the 6-month period from May 1 to October 31, 1975, determined that Japanese exports of such capacitors, with the exception of those exported by Matsushita Electric Industrial Co., Ltd., are being, or are likely to be, sold in the United States at less than fair value. Fair-value comparisons were made on virtually all tantalum electrolytic fixed capacitors imported by Matsuo Electric Co., Ltd., and Nippon Electric Co., Ltd., during the period of the investigation. Those two firms accounted for approximately 75 percent of the value of imports during the Treasury's investigative period. Margins were found on 35 percent of the value of the sales compared, ranging from 0.2 to 139.7 percent. The weighted average margin was 37.3 percent. Treasury did not collect data on quantity during its investigation. The statistical chart prepared by Treasury is included in appendix B.

In the case of Matsushita Electric, Treasury discovered only one instance of sales at less than fair value. In this case, the sale was of a small volume of capacitors at a margin of 0.01 percent which was deemed to be de minimus. According to the Treasury data, Matsushita accounted for about 10 percent of the value of U.S. imports during the investigative period.

Nippon Electric Co., Ltd., was found to have made no sales at less than fair value on one series of capacitors, epoxy dipped, Series D. 1/ However, Nippon Electric did sell hermetically sealed tantalum capacitors at less than fair value. Chip and dipped tantalum capacitors sold by Matsuo Electric Co. were the only other types investigated by Treasury. Treasury did not make fair-value comparisons on tantalum capacitor purchases where U.S. firms took title to the merchandise in Japan and subsequently imported it into the United States. Such transactions did not occur during the period of Treasury's investigation although the value of such entries exceeded * * * percent of the value of imports from Japan in 1975 and during January-June 1976. The kinds of capacitors sold in these transactions were molded, except chip, and dipped tantalum capacitors.

In making fair-value comparisons, Treasury arrived at its determination by examining exporters' delivered sales prices to distributors and to original equipment manufacturers. The prices examined included

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1/ Nippon Electric requested that the determination made herein be severed between Series D (epoxy dipped) and Series H (hermetically sealed) tantalum electrolytic fixed capacitors. Nippon Electric, whose sales of both Series D and Series H were examined, was found not to have sales at less than fair value with respect to the Series D type. The company contended that each type or series of tantalum electrolytic fixed capacitor is used for different purposes and made to different specifications and therefore should be treated separately for purposes of this determination.

The U.S. Customs Service, however, examined at least three different types of tantalum electrolytic fixed capacitors during the course of the fair value investigation. As a result of that investigation, it has been concluded that there is no basis for the segmentation of this determination in accordance with the claim of Nippon Electric. Each type of tantalum electrolytic fixed capacitor is clear a part of the same class or kind of merchandise and therefore should be treated as such for purposes of this determination.

deductions made for transportation, including ocean and air freight, marine insurance, brokerage fees, clearance fees and U.S. duties, royalty payments, technical service charges, selling expenses, and commissions incurred in the United States. Certain other adjustments requested by Nippon Electric and Matsuo Electric, such as claims for adjustments for incentive payments to distributors, were denied.

The range for Matsuo's LTFV sales to original equipment manufacturers (OEM's), as calculated by the Commission staff, 1/ is from * * * percent. The range on sales of Nippon Electric's capacitors to OEM's is * * * percent. The average weighted margin of sales at LTFV as calculated by Commission is 23.4 percent.

The Domestic Industry

Introduction

The domestic industry producing tantalum capacitors consists of approximately 14 firms which operate approximately 17 establishments in the United States in which these articles are assembled. Related industries which might be affected by reason of LTFV imports include: Producers of tantalum and tantalum powder, producers of other kinds of capacitors, and producers of end products in which tantalum capacitors are used.

Producers of tantalum and tantalum powder, the principal feeder industry, have increased prices rapidly and substantially in recent

1/ The International Trade Commission calculated percentage dumping margins as home-market price less exporter's sale price divided by home-market price. The Treasury Department calculated LTFV sales margins as home-market price less exporter's sale price divided by exporter's sale price.

years. Other feeder industries producing base metals and chemicals account for a small share of the cost of tantalum capacitors.

Industries producing other types of capacitors, while impacted upon by foreign competition, are not affected significantly by imports of tantalum capacitors owing to the unique applications of tantalum capacitors.

Industries producing end products in which tantalum capacitors are used purchase many components other than tantalum capacitors. The cost of tantalum capacitors as a share of the total cost of their end products is small--usually much less than 1 percent.

Producers

Approximately 14 U.S. firms produce tantalum capacitors. Two firms, * * * accounted for roughly * * * percent of domestic production in 1975. A third firm, * * * accounted for about * * * percent of domestic production. * * *

Nearly all of the producers are multinational firms and produce tantalum capacitors, at least in part, in foreign establishments. Most of the multinational producers complete production of some tantalum capacitors in foreign establishments and import them under item 807.00 into the United States ready for sale. Virtually all of the multinational firms utilize TSUS items 806.30 and 807.00 in their operations. In addition to foreign-made tantalum capacitors returned to the United States for sale, many of the multinational producers supply foreign markets directly from their foreign subsidiaries.

The U.S. market

Tantalum capacitors were first produced on a wide scale in the early 1960's. Since then the U. S. market increased to approximately $150 million in 1974, plunged to about $95 million in 1975, and is expected to recover to about $135 million in 1976. Recently, the total market for tantalum capacitors has been dominated by solid tantalum capacitors. They have accounted for about 80 percent of the market by value, and over 90 percent of the market by quantity.

The two major markets for tantalum capacitors are computers and office machines and communications and industrial equipment as shown in the table below.

Tantalum electrolytic fixed capacitors: U.S. shipments of domestically-produced tantalum electrolytic fixed capacitors, by value of shipments 1/ and by percent of total, by market, 1972 and 1975

Market	1972		1975	
	Value of shipments	Percent of total	Value of shipments	Percent of total
	1,000 dollars		1,000 dollars	
Communications and industrial equipment	17,580	26.4	19,955	25.2
Computer and office machines	18,208	27.4	16,000	20.2
Military/aerospace	12,593	18.9	15,781	19.9
Distributors	10,241	15.4	14,547	18.3
Consumer electronic products	7,879	11.8	13,029	16.4
Total	66,501	100.0	79,312	100.0

1/ The value of shipments reported in this table is lower than that reported in table 2 in appendix A because fewer respondents provided data.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Producers of military and aerospace equipment, distributors, and consumer electronic products account for the remainder of the market. Distributors, who account for nearly 20 percent of the market, resell to other markets, usually in much smaller quantities than those sold by manufacturers of tantalum capacitors.

The significant increase in the share of the market accounted for by distributors and producers of consumer electronic products is attributed to the increased miniaturization of electronic circuitry. With increased miniaturization, the market has spread to virtually all products in which capacitors are used and particularly those in which a large capacitance in combination with a small physical size is a prime determinant of the kind of capacitor used.

Even though tantalum capacitors are often more than double the price of other comparably rated capacitors, they constitute the largest single class of capacitor by value. In 1975 they accounted for 24 percent of the total capacitor market in terms of value.

Channels of distribution

About 80 percent of domestic producers' sales of tantalum capacitors are made directly to the end product manufacturer. The remaining sales are made to distributors of electronic components. Some domestic producers of tantalum capacitors utilize independent sales representatives to promote their capacitors, but most use direct sales personnel from their own companies to service large accounts.

In 1975 and January-June 1976, over * * * percent of the value of Japanese-made tantalum capacitors entering the U.S. market were sold

in Japan to Japanese subsidiaries of U.S. firms, which exported the articles to the parent firm in the United States in related transactions. The remaining Japanese-made capacitors entered the U.S. market through normal distribution channels, which include U.S. subsidiaries of Japanese firms and independent importers. Both Nippon Electric Co., Ltd., and Matsuo Electric Co., Ltd., utilized all of the channels mentioned.

Consideration of Injury or Likelihood Thereof

General economic conditions of the electronics industry

The U.S. markets for electronic products which utilize tantalum capacitors rose from $27.8 billion in 1971 to $34.3 billion in 1973. During 1971 through 1973 as shown in the table below, factory sales of communication and industrial products rose from $11.2 billion to $15.8 billion; factory sales of Government products rose from $10.7 billion to $10.8 billion; factory sales of replacement components rose from $0.6 billion to $0.9 billion; and factory sales of consumer products rose from $5.3 billion to $6.8 billion.

Factory sales of electronic products, 1971-75

(In billions of dollars)

Year	Communications and industrial products	Government products	Replacement components	Consumer products	Total
1971	11.2	10.7	0.6	5.3	27.8
1972	13.6	10.6	.7	6.6	31.5
1973	15.8	10.8	.9	6.8	34.3
1974	17.7	11.1	1.0	6.1	35.9
1975	18.7	12.1	.8	4.8	36.4

Source: Electronic Industries Association.

The outlook for 1974 was optimistic; production of tantalum capacitors was at a peak. Users of tantalum capacitors were consuming at a high rate and stockpiling components in expectation of a price rise at the end of the price freeze. Duplicate sourcing was widely reported.

In mid-1974 demand for products utilizing tantalum capacitors softened considerably amid a general recession not only in the United States but also in Europe and Japan. Purchasers as well as producers of tantalum capacitors were caught with overstocked inventories. Although the value of factory sales of electronic products increased slightly in 1974 and 1975, largely as a result of inflated prices, a substantial production of end products was performed utilizing components already in inventory. Production of tantalum capacitors dropped precipitously in 1975. Imports of tantalum capacitors which had increased to $12.8 million in 1973 and $24.1 million in 1974, dropped to $11.6 million in 1975.

In mid-1975, a general economic recovery began and conditions improved. As inventories became manageable, production and purchasing began a gradual upturn. By mid-1976, inventories were near normal, and production was approaching the level of 1972, the year before the peak year.

U.S. consumption

The quantity and value of U.S. apparent consumption of all tantalum capacitors, on the basis of official Government statistics, increased rapidly from an estimated 288.7 million units, valued at $70.6 million in 1971, to 835.0 million units, valued at $165.3 million in 1973.

Although the quantity consumed in 1974 increased slightly to 844.9 million units, the value decreased to $149.6 million. In 1975, U.S. apparent consumption plunged to an estimated 508.1 million units, valued at $93.9 million. During January-June 1976, estimated consumption in quantity and value increased roughly 30 percent over that during January-June 1975 (see table 1 in appendix A).

U.S. producers' shipments as reported in official statistics include some capacitors imported from foreign subsidiaries of U.S. firms and do not include the captive production of capacitors by firms which use them in making more advanced products. When these factors are taken into account, as they were in the Commission's questionnaire, the trend in apparent consumption is the same as that previously reported but the quantity of consumption is substantially less (see table 2 in appendix A).

The quantity and value of U.S. apparent consumption of solid tantalum capacitors, as obtained by questionnaires, followed the same trend as that of all tantalum capacitors (see table 3 in appendix A). The consumption table on solid tantalum capacitors is included because the greatest impact on the U.S. industry occurred in imports of solid tantalum capacitors. Imports of wet tantalum capacitors were negligible.

A comparison of U.S. apparent consumption as compiled by different methods is set forth in the following table. Consumption as compiled from the Commission's questionnaires does not contain information from one large producer, * * * who failed to report. * * * estimates its

share to be * * * percent by value of the U.S. tantalum capacitor market, but this has not been verified.

Tantalum electrolytic fixed capacitors: U.S. apparent consumption as compiled from official Government statistics, and U.S. apparent consumption of all tantalum electrolytic fixed capacitors and solid tantalum electrolytic fixed capacitors as compiled from responses to the Commission's questionnaire, 1972-75, and January-June 1975 and 1976

Year or period	As compiled from official government statistics	As compiled from responses to the Commission's questionnaire	
	Tantalum capacitors (all types)	Tantalum capacitors	Solid only
	Quantity (In thousands of units)		
1972	520,456	358,530	328,236
1973	834,991	533,039	522,555
1974	844,933	573,810	563,674
1975	1/ 508,117	333,503	325,946
Jan.-June--			
1975	1/ 226,498	174,451	170,352
1976	1/ 303,935	264,907	260,789
	Value (In thousands of dollars)		
1972	1/ 109,720	75,247	64,289
1973	165,349	111,571	97,959
1974	149,608	135,565	120,773
1975	1/ 93,948	93,703	79,094
Jan.-June--			
1975	1/ 40,948	53,278	45,260
1976	1/ 54,424	57,653	50,181

1/ Estimated by the U.S. International Trade Commission.

Source: Compiled from official statistics of the U.S. Department of Commerce, and from responses to questionnaires of the U.S. International Trade Commission, except as noted.

The U.S. electronics industry suffered a general lull during 1970 through 1971 which probably resulted in the consumption of tantalum capacitors being at or near a cyclical low. During 1972 through 1973,

activity in the electronics sector was vigorous. Industry sources state that demand for tantalum capacitors peaked cyclically in 1973. In mid 1974, a severe cutback in activity in the worldwide electronics sector brought to a temporary end the vigorous growth in demand for tantalum capacitors. In mid-1975, however, activity increased and the electronics sector displayed strong signs of a recovery. With the recovery, increased demand for tantalum capacitors was evidenced during January-June 1976 as compared with January-June 1975.

U.S. production and shipments

U.S. production as compiled from responses to the Commission's questionnaire surged from 283.4 million units in 1972 to 439.3 million units in 1973. Then it leveled off at 446.4 million units in 1974, and dropped to 297.0 million units in 1975. During January-June 1976, production was 218.9 million units, about 36 percent higher than during the same period in 1975 (see table 4 in appendix A). During 1972-75, dipped types accounted for roughly 20 percent of production, molded (except chip) for 38 percent, hermetically sealed for just over 34 percent, chip types for less than 3 percent, and other solid types for less than 8 percent. The wet types accounted for under 4 percent.

U.S. producers were requested to report their capacity utilization during 1972 through 1975 and January-June 1976. They were instructed to consider full capacity utilization to be a two-shift, 5-day, 52-week work schedule.

All of the major manufacturers except * * * reached peak capacity utilization (which was in a range of 75-104 percent) in 1973, and then retreated. * * * peaked in 1974 at * * * percent. By 1975, all of the major firms except * * * were operating in a range of 25-50 percent of full capacity. * * * was operating at * * * percent of full capacity in the production of solid tantalum capacitors but at * * * percent of capacity in wet tantalum capacitors. During January-June 1976, all major producers recovered to a range of 40-78 percent. U.S. producers' production in their foreign plants followed the same pattern but increased as a percent of domestic production from * * * percent in 1972 to * * * percent in 1975 (see table 5 in appendix A).

The quantity and value of U.S. shipments of domestically produced tantalum capacitors as reported in responses to the Commission's questionnaire followed the same trend as U.S. production (see table 6 in appendix A). The quantity and value of shipments as supplied by respondents to the Commission's questionnaire rose from 296.4 million units valued at $74.5 million in 1972, to 440.6 million units valued at $128.4 million in 1974, then dipped to 300.0 million units valued at $95.2 million in 1975.

The quantity and value of reported shipments was down from 238.2 million units valued at $64.7 million in May to October 1974, to 137.0 million units valued at $40.6 million in the same period of 1975. In contrast, an increase was recorded from 156.7 million

units valued at $53.7 million in January-June 1975, to 217.1 million units valued at $55.3 million in January-June 1976.

At the end of 1971, U.S. producers' inventories of tantalum capacitors were 64.3 million units. Inventories dropped with the economic upswing in 1972 to 58.9 million units. As the U.S. producers increased their output to meet anticipated demand, inventories climbed to 68.8 million units in 1973, and to 83.1 million units in 1974, before production was curtailed (see table 7 in appendix A). At the end of 1975, inventories were still high at 80.6 million units and on June 30, 1976, they were at a record level of 90.8 million units.

Purchasers of tantalum capacitors were also caught with large inventories because the demand for their end products did not meet growth expectations. This information, reported by industry sources, is substantiated by the modest growth in the major markets for tantalum capacitors in 1974 and 1975 and is discussed in the section of this year report entitled "General economic conditions of the electronics industry."

U.S. exports

The quantity and value of U.S. exports of tantalum capacitors, according to official statistics, increased from an estimated 18.0 million units, valued at $5.4 million in 1971, to 44.4 million units, valued at $16.7 million in 1974, before decreasing to 33.3 million units, valued at $12.7 million in 1975. During the first half of 1976, the quantity and value of exports are estimated to have decreased by about 25

percent over the same period in 1975. As a share of domestic shipments, the quantity of exports was about 7 percent during 1971 through 1975; the value remained at about 7 percent during 1971 through 1973, but increased to 13 percent in 1975. The quantity of exports was much lower than the quantity of imports during 1971 through 1975, and the value was marginally higher except in 1973, 1974, and 1976, when the value of imports was higher.

The quantity and value of U.S. exports of tantalum capacitors as reported by respondents to the Commission's questionnaire followed the same trend but fluctuated over greater extremes (see table 8 in appendix A). The quantity ranged from 11 percent to 22 percent of the value of domestic shipments, and the value ranged from 8 percent to 16 percent. The disparity is attributed in large part to the variation in quantity and value of domestic shipments (which included certain imports) as reported in official statistics and the domestic shipments as reported by producers in response to the Commission's questionnaire. Differences in the reporting of exports in this case do not significantly affect apparent consumption and the ratio of imports to consumption.

Hermetically sealed tantalum capacitors accounted for about 50 percent of the quantity of exports and about 60 percent of the value. Resin-sealed tantalum capacitors accounted for about 30 percent of the quantity of exports and about 20 percent of the value. Each of the other types accounts for less than 10 percent.

U.S. imports

The quantity and value of U.S. imports of tantalum capacitors according to official government statistics increased from 50.8 million units, valued at $4.0 million in 1971, to 217.7 million units, valued at $24.1 million in 1974, before decreasing to 91.4 million units, valued at $11.6 million in 1975. Imports increased significantly during January-June 1976 over the same period in 1975. Imports as a share of U.S. apparent consumption increased from an estimated 17.6 percent in quantity and 5.7 percent in value in 1971, to 25.8 percent in quantity and 16.1 percent in value in 1974. The share decreased to an estimated 18.0 percent in quantity and 12.4 percent in value in 1975. During January-June 1976 the share increased to an estimated 23.2 percent in quantity but decreased to 15.6 percent in value. The penetration was marginally higher in quantity during January-June 1976 than during January-June 1975, and marginally lower in value.

U.S. imports of finished capacitors by domestic producers accounted for about one-third of total imports (see table 9 in appendix A). Data on imports of capacitors subject to further assembly or processing (that is, unfinished) in the United States were not collected but are known to be appreciable. U.S. producers imported only solid tantalum capacitors during the period of this investigation. Hermetically sealed and dipped capacitors were the principal types imported.

Japan, the second largest source of tantalum capacitors, increased its share of total imports from 4.0 percent by quantity and 3.6 percent by value in 1971, to 16.4 percent by quantity and 12.7 percent by value

in 1975 (see table 10 in appendix A). The Japanese share of both quantity and value of imports during January-June 1976 increased by approximately three percentage points over the same period in 1975.

Imports of tantalum capacitors from Japan as reported by U.S. subsidiaries of Japanese firms and independent importers who are original equipment manufacturers accounted for the largest share of the value of total imports from Japan.

* * * * * * *

Dipped tantalum capacitors from Japan accounted for * * * of the value of imports from Japan during 1971-75. Hermetically sealed capacitors and chip capacitors, the other types for which LTFV margins were found by the Treasury, each accounted for * * * percent of the total (see table 11 in appendix A).

Mexico, the largest source of imported tantalum capacitors, accounted for over 80 percent of the value of imports during 1971 through 1974, and 76 percent of the value in 1975 (see table 12 in Appendix A). Most U.S. producers operate foreign subsidiaries in Mexico which are integrated with their U.S. operations through the use of TSUS items 806.30 and 807.00. A significant share of the imports entered under item 807.00 are finished tantalum capacitors ready for sale.

West Germany, Canada, and Taiwan were the other major sources of imports during 1971 through 1975. Imports of capacitors produced by foreign subsidiaries of U.S. firms accounted for the bulk of the imports from those countries.

Employment

Employment in U.S. establishments where tantalum capacitors are produced increased from 9,660 persons in 1972 to 12,767 persons in 1974, before decreasing to 9,653 persons in 1975, according to data provided in response to the Commission's questionnaire (see table 13 in appendix A). Those persons employed in operations involving tantalum capacitors and production and related workers engaged in the manufacture of all products as well as tantalum capacitors experienced a similar rise and fall in employment. Employment increased in tantalum capacitor categories during January-June 1976.

The reduction in the average number of employees from 1974 to 1975 and from May-October 1974 to May-October 1975 (the period of Treasury's investigation) is shown in the following table. The decline in employment in operations involving the production of tantalum capacitors was more severe than that in operations involving the production of all products made in the establishments.

Tantalum electrolytic fixed capacitors: Reduction in average number of employees in establishments where tantalum electrolytic fixed capacitors were produced, 1974 to 1975, and May-October 1974 to May-October 1975

(In percent)

Period of reduction	All employees		Production and related workers	
	All products	Tantalum electroltyic fixed capacitors	All products	Tantalum electrolytic fixed capacitors
1974 to 1975	***	***	***	***
May-October-- 1974 to 1975	***	***	***	***

Source: Computed from data supplied in response to questionnaires of the U.S. International Trade Commission.

Man-hours worked in establishments where tantalum capacitors were produced followed the same trend as that reported for employment during 1972 to 1975 (see table 14 in appendix A). The average number of hours worked per employee is shown below.

Tantalum electrolytic fixed capacitors: Average hours worked per employee in establishments where tantalum electrolytic fixed capacitors were produced, 1974 and 1975

(Average hours worked per employee)

Year	All employees		Production and related workers	
	All products	Tantalum electrolytic fixed capacitors	All products	Tantalum electrolytic fixed capacitors
1974	***	***	***	***
1975	***	***	***	***

Source: Computed from data supplied in response to questionnaires of the U.S. International Trade Commission.

The average number of man-hours worked by those employed in tantalum capacitors operations was slightly less than the number of man-hours worked by employees in operations involving all products made in the establishments.

Financial experience of domestic producers

Profit-and-loss and other financial data were received from 7 domestic producers of tantalum capacitors representing approximately 80 percent of the total value of shipments of tantalum capacitors produced in the United States. Profit-and-loss data were requested on all tantalum capacitors as opposed to segregating wet tantalum capacitors from solid capacitors since approximately 90 percent of the quantity of domestic production of tantalum capacitors are of the solid type.

This section will not discuss the overall operations of the establishments producing tantalum capacitors since all but one of the respondents reported their operations on tantalum capacitors to be the same as the overall establishment's operations.

Total net sales and intracompany transfers of tantalum capacitors increased from $77.0 million in 1972 to $106.9 million in 1973, to $133.1 million in 1974 and then decreased to $90.7 million in 1975 (see tables 15 and 16 in appendix A). The reduction in sales in 1975 is the combined effect of reduced sales reported by all of the respondents in that year. With one exception, the percentage decrease in sales of tantalum capacitors by company in 1975 over 1974 ranged from 12 to 39 percent. The exception,

* * * * * * *

Net operating profits followed a trend similar to that of net sales, increasing during the first 3 years of the period and then decreasing substantially in the final year. Net operating profits rose from $3.9 million in 1972 to $11.0 million in 1973, to $12.9 million in 1974, and then dropped to $4.5 million in 1975. The trend for the ratio of net operating profits to net sales differed slightly from sales and operating profits by leveling off in 1974, and then decreasing in 1975. The ratio of net operating profits to net sales was 5.1 percent in 1972, 10.3 percent in 1973, 9.7 percent in 1974, and 5.0 percent in 1975.

Net profit before income taxes and after other income and expense items reported by the 7 respondents increased from $3.6 million in 1972 to $12.8 million in 1974, and then declined to $4.0 million in 1975.

* * * * * * *

A table of the ratios of net profits before income taxes to net sales of the tantalum capacitors industry with manufacturers of all electrical and electronic equipment follows below.

Ratios of net profit before income taxes to net sales for all manufacturers of electrical and electronic equipment and the tantalum capacitors industry, 1972-75

(Percent)

Item	1972	1973	1974	1975
All manufacturers of electrical and electronic equipment	7.2	7.9	6.2	2.8
Tantalum capacitor industry 1/	4.7	10.4	9.6	4.4
* * *	***	***	***	***

1/ * * *
2/ * * *

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic producers.

* * * * * * *

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Financial data were also collected from domestic producers for the periods July-December 1974 and 1975; the latter period covers the major portion of the period of the Treasury investigation (May 1 through Oct. 31, 1975). Net sales dropped substantially from $60.7 million during July-December 1974, to $36.6 million in July-December 1975. Net operating profits and the ratio of net operating profit to net sales also showed a significant decline during the period of the LTFV sales. Net operating profits went from $5.8 million or 9.6 percent of sales for July-December 1974, to $341,000 or 1.0 percent of sales for July-December 1975. Net profit before income taxes also showed a sharp decline from $5.7 million to $23,000 during July-December 1975 compared with the corresponding period in 1974.

Only the major producers were able to provide useable profit-and-loss figures for the first 6 months of 1976. The following table shows profit-and-loss data for January-June 1975 and 1976.

* * * * * * *

Total profits showed a decline from $5.0 million for January-June 1975 to $4.0 million for January-June 1976, with return on sales declining from 11.7 percent to 8.6 percent, respectively. It appears that a combination of increasing costs and the leveling off of prices are contributing factors in the decline in profitability for January-June 1976.

The Japanese Industry

There are presently 13 known producers of tantalum capacitors in Japan. The four largest producers, Nippon Electric Co., Ltd., Matsuo Electric, Co., Ltd., Nichicon-Sprague K.K., and Matsushita Electric Industrial Co., Ltd., accounted for about 75 percent of Japan's estimated capacity to produce tantalum capacitors in 1975. 1/ * * *

The table below shows the approximate capacity of the 13 producers in 1975 as estimated by a source in the United States and by a source in Japan.

Tantalum electrolytic fixed capacitors: Estimated capacity in Japan in 1975

(In thousands of units)

Japanese producers	Annual capacity in 1975 as estimated by representatives from--	
	United States	Japan
Nippon Electric Co., Ltd	***	***
Matsuo Electric Co., Ltd	***	***
Nichison-Sprague K. K	***	***
Matsushita Electric Industrial Co., Ltd	***	***
Taiyo Yuden Dc. Ltd	***	***
Marcon Electronics Co., Ltd	***	***
Fujitsu, Ltd	***	***
Towa Chikudenki		***
Nippon Chemical Industrial Co., Ltd	***	***
Elna Fox Electronics Co	***	***
Hitachi, Ltd	***	***
Oki Electric Industry Co., Ltd	***	***
Omori Denki Seisakusho Co., Ltd	***	***
Total capacity, all producers	***	***

Source: * * *

1/ * * *

In 1975, the full capacity of the Japanese firms to produce tantalum capacitors was probably within 25 percent of the capacity of U.S. firms. However, the Japanese produced somewhere in the range of 56 percent and 74 percent of full capacity.

In 1976, some of the Japanese firms increased capacity. A recent article in Electronic News (Monday, Apr. 5, 1976) reported that Nippon Electric was to be producing at its full capacity of 25 million units per month as of June 1976 and that the company was to expand production capability by an additional 20 percent or to 360 million units annually by the fall of 1976. June production was said to be aimed primarily at meeting demand growth in TV and audio markets while the fall expansion was said to be directed toward miniature capacitors for pocket cameras, digital watches, calculators, and mini tape players. A spokesman for Nippon Electric was also quoted as saying that, although Nippon was principally committed to Japan's domestic industry, the company would, in the near future, expand its exports from 25 to 30 percent of total output, more than half of which would be destined for Europe with the remainder to be exported to U.S. markets. According to a posthearing brief submitted on behalf of Nippon Electric, that firm expects to reach a capacity of * * * million units in epoxy-dipped capacitors alone by 1977.

The Electronic News article indicates with respect to the remaining companies in the Japanese industry that the majority was only gradually stepping up production, generally by way of plant modernization, and that very few companies planned expansion through new hirings or plant investments. The reluctance to expand was said to be the result of two major

factors. First, despite the present recessionary climate in Japan with accompanying layoffs, there is a short supply of workers needed at assembly plants because priority for the available supply of workers goes to Japanese home electronics makers who are currently producing TV's and audio equipment at peak levels. Secondly, while the tremendous demand for CB radios, particularly in the United States, has created a booming new market, electronic makers are still not completely confident that the CB boom will continue to sustain a growth in demand sufficient to justify the expansion of production facilities for components.

Annually, production increased from 92.8 million units valued at $20.9 million in 1972, to 315.6 million units valued at $45.1 million in 1974, before falling off to 241.3 million units valued at $28.7 million in 1975 (see table 17 in appendix A).

The Japanese industry, unlike the U.S. industry, utilizes a large share of its production in end products made by the firms in the industry. In Japan, Nippon Electric Co., Fujitsu, and Hitachi are major producers of computers. Nippon Electric, Matsushita, and Fujitsu are major producers of communications equipment. All of the foregoing firms also produce consumer electronic goods and industrial products. In all, approximately * * * percent of the production of tantalum capacitors by these firms in 1975 was consumed within the producing firm according to a spokesman for Nippon Electric Co. The spokesman stated that Nippon Electric Co. estimates that * * * percent of its production will be utilized in Japan in 1976 and subsequent years, and about * * * percent of its production will be exported to the United States.

Consideration of the causal relationship between LTFV imports and the alleged injury

Market penetration of LTFV sales

U.S. imports of tantalum capacitors from Japan as a share of total U.S. apparent consumption accounted for an estimated 0.7 percent by quantity in 1971, as reported in official Government statistics. The share of tantalum capacitor imports increased to 3.8 percent in 1974 before decreasing to an estimated 2.9 percent in 1975. During January-June 1976 imports from Japan increased to 4.5 percent of apparent consumption as compared to 3.5 percent during January-June 1975. The value of U.S. imports from Japan as a share of the total value of U.S. apparent consumption is considerably lower than the share by quantity (see table 18 in appendix A).

U.S. imports from Japan entered by Matsushita Electric Industrial Co., Ltd., accounted for about * * * percent of the total value of imports from Japan in 1974 and * * * percent in 1975. Matsushita's sales were found by the Treasury to be at fair value. Official Government statistics show that imports from Japan less those from Matsushita are * * * share of U.S. apparent consumption.

U.S. imports from Japan found to be sold at LTFV margins amounted to an estimated 35 percent of the value of total imports from Japan during the period of the Treasury investigation. If this percentage is applied to total imports from Japan throughout the period from 1971 to June 30, 1976, the share of U.S. apparent consumption accounted for by these sales is as follows:

Thirty-five percent of the quantity and value of total imports from Japan (less those of Matsushita Electric Industrial Co., Ltd.) as a share of U.S. apparent consumption, by quantity and value, 1972-75, and January-June 1975 and 1976

(Percent)

Year or period	Quantity	Value
1972	***	***
1973	***	***
1974	***	***
1975	***	***
January-June--		
1975	***	***
1976	***	***

Source: Computed from official statistics of the U.S. Department of Commerce and from the response of Matsushita Electric Co. of America Inc. to the questionnaire of the U.S. International Trade Commission.

Penetration of the U.S. market for solid tantalum capacitors, as reported in responses to the Commission's questionnaire, follows the same trend as reported previously except that penetration is higher by reason of a lower apparent consumption caused by the elimination of the double counting of imports, i.e., counting as domestic shipments and as imports. In 1974 penetration peaked at * * * percent by quantity and * * * percent by value. During January-June 1976, penetration was * * * percent by quantity and * * * percent by value (see table 19 in appendix A).

Evidence of sales lost by domestic producers to imports from Japan

U.S. producers have complained of underselling by sources providing Japanese-made tantalum capacitors. The names of selected firms purchasing

the Japanese capacitors were provided to the Commission, and a questionnaire was mailed to 17 of the major users of tantalum capacitors. Of the 12 firms responding, 6 reported comparisons between the prices of Japanese-made products and U.S.-made products.

* * * * * * *

Purchases of the firms responding to the questionnaire accounted for 10 percent of the sales of domestically produced tantalum capacitors in 1974 and 13 percent in 1975 and January-June 1976. The purchases accounted for 62 percent of total imports of tantalum capacitors from Japan in 1974, 67 percent in 1975, and 53 percent during January-June 1976. A table of reported transactions indicating which producer was the low bidder is on the following page. As indicated the competitiveness of the Japanese-made product became increasingly intensive. Twenty percent of the transactions of the reporting firms involved a lower bid by the supplier of the Japanese-made product. In 1975 and during January-June 1976, 25 percent of the transactions involved lower bids by the supplier of the Japanese article. The margins of underselling by the Japanese supplier range from 6 percent to 25 percent in 72 percent of the transactions as shown on the frequency distribution chart on the next page.

Tantalum electrolytic fixed capacitors: Underselling by U.S. firms and U.S. subsidiaries of Japanese firms, 1972-75, and January-June 1976

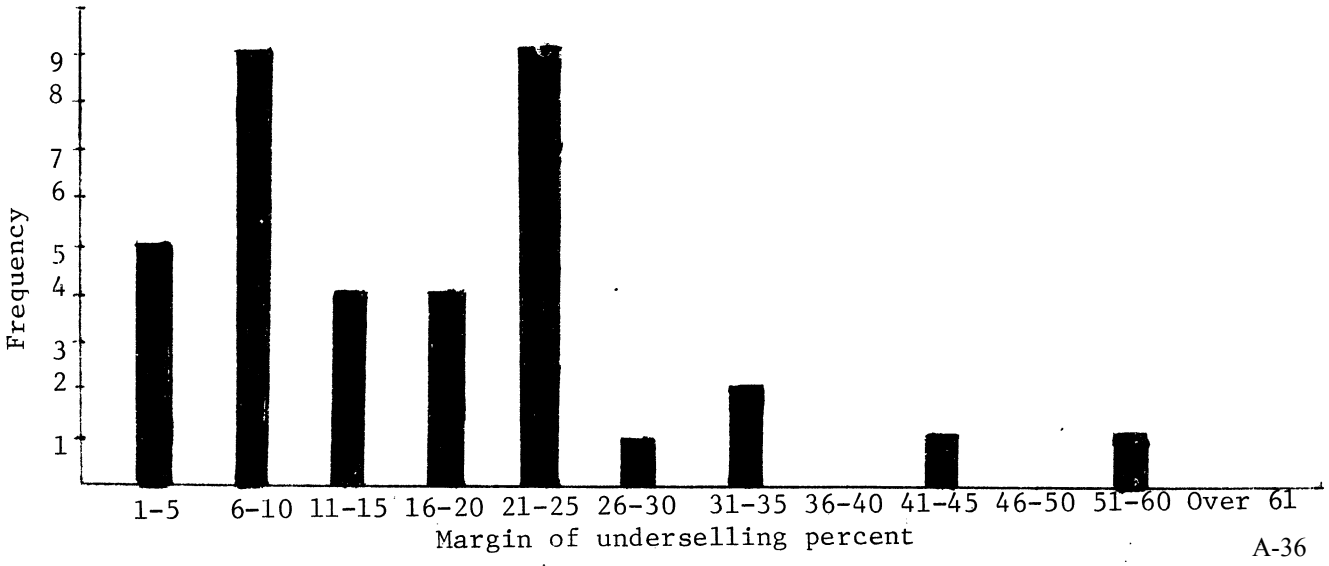
(Numbers of transactions)

Period and total number of transactions	United States undersold Japanese	United States undersold United States	Japanese undersold United States	Japanese undersold Japanese	No underselling
1972:					
9	0	9	0	0	0
1973:					
16	1/ 7	8	1	0	0
1974:					
26	1/ 5	14	2/ 6	0	1
1975:					
61	2/ 4	33	3/ 16	0	8
January-June 1976:					
55	6	27	3/ 13	2	7

1/ The low bidder lost the order in 2 transactions.
2/ The low bidder lost the order in 1 transaction.
3/ The low bidder lost the order in 8 transactions.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Frequency Distribution of Margins of Underselling



Source: Computed from responses to questionnaires of the U.S. International Trade Commission.

Prices

All average weighted prices of Japanese importers * * * are lower than the average weighted delivered prices of domestic producers for 1972 to 1976. Those revealed on the plots presented in this section, for hermetically sealed capacitors, were * * * percent; and for epoxy-dipped, case size A capacitors, * * * percent. Prices for largest quantities sold in each quarter for hermetically sealed capacitors, all case sizes, indicate that * * * The quantities sold by the Japanese are extremely small, averaging * * * percent of those quantities sold by the domestic producers. For epoxy-dipped capacitors of which large quantities are sold, the Japanese price their product lower, but generally they never sell orders in excess of * * * units. * * *

Pricing practices

All domestic producers and all importers sell to original equipment manufacturers (OEM's) and to distributors. The greatest number of sales in quantity and value go to OEM's. All prices are negotiated, thus little or no importance is to be placed on published price lists. When these lists are used by marketing managers, they serve as a means to compute

minimum prices, that is, prices under which the sale should not be made. Therefore the prices reported to the Commission staff are prices trusted to be representative of actual activity in the market place, and especially in the OEM market.

There are three specific kinds of capacitors to which the staff directed its attention for 1972 through June 1976--hermetically sealed, dipped, and chip. For these three kinds, the Commission asked for quantity and prices in three categories: (1) the average price weighted by quantity and the total quantity sold, (2) the lowest price for any order not under 10,000 units and the total quantity sold at that price of that particular size, capacitance, voltage rating, and tolerance, and (3) the price of the particular size, capacitance, voltage, and tolerance sold in greatest quantity in the quarter and the total quantity of all of that particular capacitor sold at that price.

* * * domestic producers * * * reported extremely detailed price information covering almost all categories for which data were requested. Although there are about 14 domestic producers of tantalum capacitors and about 11 domestic producers of solid tantalum capacitors, the 5 producers reporting prices in detail to the Commission account for about 85 percent of the domestic solid tantalum capacitor sales.

Five of seven importers reporting to the staff supplied price information in useful detail. These five account for approximately 1 percent of the U.S. sales of tantalum capacitors and virtually all of the value of Japanese imports during the period of LTFV sales.

Epoxy dipped capacitors account for the largest share of imported capacitors from Japan. Case sizes A and B, epoxy dipped, account for at least * * * percent of total sales reported of epoxy-dipped tantalum capacitors during the LTFV period. Sales of case sizes A and B hermetically sealed tantalum capacitors by the domestic producers account for about * * * percent of the hermetically sealed market. * * *

Average weighted prices

* * * case size A occupies a rather large amount of the sales of those kinds of capacitors. In the accompanying figure 1, it is evident that the domestic producers' prices are higher * * *. Price ranges for the domestic producers are * * * cents from 1972 through mid-1976, while * * * primarily in 1974 through 1976, range from * * * cents. Domestic producers frequently ship in quantities over * * * whereas * * * in any one order.

Analysis on the domestic producers' data indicate a mean value of * * * cents for the time series as opposed to a mean of * * * cents for * * * . See figure 1. Because these are average weighted prices, it must be understood that they are only illustrative of the general trend in this highly complex pricing behavior.

Figure 1.--Weighted average prices of selected domestic producers * * * of hermetically sealed tantalum capacitors, case size A, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Case size B sales are another large part of the hermetically sealed market. For * * *, case size B represents * * * percent of its hermetically sealed capacitor market. Generally speaking, * * * prices its capacitors * * * than the domestically produced product. The weighted average mean price of about * * * cents of the domestic product over the imported product indicates a margin of underselling of about * * * percent over time in case size B.

Time series fitted by ordinary least squares regression techniques were used to analyze the price data. The positive slopes of the equations representing price trends of case size B indicate that the domestic producers and the importers have experienced rising prices since 1972. This is not surprising even though slight decreases in 1976 prices occurred. Those decreases were not substantial enough to make the slope of the regression negative. The equations used to test the data were significant but had low R^2 chiefly owing to the erratic pricing behavior of the product. 1/

The case size C, hermetically sealed capacitor is priced higher than the other case sizes averaging, for all firms, about * * * cents per capacitor. Quantities sold in 1975 by the * * * indicate that the quantity sold of case size C * * * those sold of case sizes A and B combined. * * * prices every capacitor in every quarter * * * than its domestic competitor but sells only about * * * percent of what

1/ Time-series analysis by ordinary least squares techniques estimates the linear relationship inherent in the changes in the price data as time varies. R^2 is a measure of the total variation of each price from the estimated linear relationship.

* * * Sprague and Union Carbide sell combined in this particular case size. Regression runs on those price paths shown in figure 2 indicate that the mean is * * * cents for the importer and * * * for the domestic producers as a group, a difference of * * * percent.

The price trends in figures 1 and 2 are probably representative for the industry during much of the entire period. In 1972 the industry was seeing high prices for its products possibly owing to the recovery from the 1970-71 recession and in part owing to increased demand for tantalum capacitors in computers. Prices decreased slowly in early 1973, and price controls set by the U.S. Government probably kept prices low. Purchases ran very high for importers and for domestic producers until prices began to rise again in early 1974 and stayed high until late 1975. During this period, production slowed as inventories were consumed. Prices appear to be declining again in 1976.

The analysis of prices for epoxy-dipped capacitors involves more importers * * * Case size A epoxy-dipped tantalum capacitors cost around * * * cents a piece. Of the four case sizes reported to the staff, * * * sells * * * percent of all its epoxy dipped in this case size A; * * * percent. This case size is roughly * * * of sales reported for * * *. The mean price for the Japanese epoxy-dipped case size A is about * * * percent * * * than the domestic product's mean price.

1/ Matsushita, sold in the United States by Panasonic Co., was exempted from Treasury's determination of sales at less than fair value.

Figure 2.--Weighted average prices of selected domestic producers and importers of hernetically sealed tantalum capacitors, case size C, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

The slopes of the regressions done on these data indicate that the Japanese tended to increase prices slightly faster than the domestic producers, but both experienced constant increases over time. The F values 1/ indicate that the regressions are significant, although R^2 is low.

In general * * * the domestic product. * * * prices are competitive with

* * * * * * *

Total sales of case size A

* * * * * * *

Case sizes C and D, epoxy-dipped capacitors depict an extremely wide price range among domestic producers, from roughly * * * cents. Therefore, within these two case sizes a lack of standardization throughout the industry limits the analysis of these case sizes to merely pointing out the wide variability in price. See figure 3.

1/ F values are ratios which describe the closeness of the data to the regression line through the data.

Figure 3.--Weighted average prices of selected domestic producers and importers of epoxy-dipped tantalum capacitors, case size C, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Prices of largest quantities sold

The hermetically sealed capacitor in case size A is the capacitor usually sold * * * from 1972 through mid-1976.

* * * * * * *

Regression analyses were performed because there were such vast amounts of data gathered. Case size A prices show, * * * The price means * * * Neither Durbin-Watsons 1/ nor R^2 is high, indicating no correlation of price in period 1 with price in period 2, and wide scatter in the data. For case size B,

* * * * * * *

Capacitors of case size B sold by * * * generally ranged in price from about * * * cents, with definite increases in prices for the

1/ Durbin-Watson is a ratio that describes how price is correlated in period 2 with price in period 1.

Figure 4.--Prices of largest quantities sold in each quarter by selected domestic producers and importers of hermetically sealed tantalum capacitors, case size A, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

increases in prices for the second, third and fourth quarters of 1974, and the first quarter of 1975. * * * The price mean for case size C for the * * * Market shares for * * * In conclusion, for prices of large quantity sales for hermetically sealed capacitors, all case sizes tend to be * * *

The number of Japanese firms selling epoxy dipped capacitors in the United States is greater than those selling hermetically sealed capacitors. Generally speaking, importers * * * price * * * in case sizes A and B, in which they sell in quantities * * * than they price in sizes C and D. (See fig. 5 for data on case size A.) The orders for * * * Prices of case sizes C and D show an erratic pattern. * * * The mean for the Japanese prices for case sizes C and D ranges from * * * percent * * * than the mean of the domestic producers' prices.

Figure 5.--Prices of largest quantities sold in each quarter by selected domestic producers and importers of epoxy-dipped tantalum capacitors, case size A, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Lowest prices charged in each quarter

The Commission requested the participants in this case to describe their lowest prices in order to observe more clearly whether underselling was occurring. A surprising picture developed. In case sizes A, B, and C hermetically sealed capacitors (see figure 6), * * * This might indicate that in tightly competitive bidding, the domestic producers could * * * because of larger capability of supply; or the larger number of accounts bid upon by the domestic producers * * * These results might indicate that the competition between the U.S. producers affects pricing by * * *, as seen in the part of this report on lost sales.

The slopes of the regression lines depicting the lowest prices of quantities sold per quarter show that the prices have tended to rise over time for both domestic producers and importers, although there were slight declines in 1976.

In the cases of epoxy-dipped capacitors, as seen in figure 7, * * *. The Japanese prices appear to be about * * * percent * * * on the average than the domestically produced capacitors * * *.

Figure 6.--Lowest prices charges by selected domestic producers and importers for hermetically sealed tantalum capacitors, case size A, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Figure 7.--Lowest prices charged by selected domestic producers and importers for epoxy dipped tantalum capacitors, case A, 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Specific kinds of dipped capacitors

The Commission requested domestic producers and importers to supply specific data on types of dipped capacitors very common in the market. Figures 8-11 represent those results for * * * companies.

The price path for * * * for dipped tantalum capacitors of 1 microfarad 1/ and 35 volts, plus or minus 20 percent, indicates where the price * * *. In mid-1973, purchases of tantalum capacitors began to soar perhaps because of inventory increases by OEM's. Nevertheless, prices rose and peaked in mid-1974, then began to fall rather significantly in 1975. On figure 8, * * * generally priced their capacitor * * * than * * * and sold roughly * * * units, respectively, in 1975, while * * *.

The prices shown in figure 8 display peaks and troughs for * * * a rather steady trend for * * *. * * * seemed to begin * * * its prices before * * * prices even peaked; however, it may not be fruitful to surmise that * * *, because the quantities which it supplied are * * *.

A little larger capacitor of 4.7 microfarads, 20 volts, shown in figure 10, again displays an erratic pattern for the * * * and an explicit price path for the * * *. It appears that the bottom fell out of the price of this kind of capacitor in early 1975. Lead times (change in price owing to change in demand) vary widely in this industry. It could take as long as 4 to 6 months for decreased demand

1/ A microfarad is a millionth of a farad. A farad is the capacitance of a capacitor in which a charge of 1 coulomb produces a charge of 1 volt in the potential difference between its terminals.

Figure 8.--Weighted averages of prices for specific kinds of dipped tantalum capacitors, 1 microfarad, 35 volts (-/+ 20 percent), 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commsision.

Figure 9.--Weighted averages of prices for specific kinds of dipped tantalum capacitors, 4.7 microfarads, 20 volts (-/+ percent), 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Figure 10.--Weighted averages of prices for specific kinds of dipped tantalum capacitors, 6.8 microfarads, 20 volts (-/+ 20 percent), 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Figure 11.--Weighted averages of prices for specific kinds of dipped tantalum capacitors, 6.8 microfarads, 35 volts (-/+ 20 percent), 1972-75, January-June 1976

* * * * * * *

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

to show its effect on prices, therefore, the fall in price may indicate a drop in demand as many as 6 months or as few as 4 months before the price fall. See figure 11.

Percentages sold by case size for hermetically sealed and epoxy dipped

Among prices reported to the Commission for companies which account for about 80 percent of the value of the tantalum capacitors market, nearly * * * percent of * * *, as reported to the Commission, is hermetically sealed capacitors, with the Japanese penetration * * *. Roughly * * * is hermetically sealed and another * * * is epoxy dipped, case size A. For the epoxy-dipped Japanese capacitors, the * * * are the greater share of the market, with the case size D, epoxy dipped capacitor for * * * representing * * * of sales reported to the staff.

It would appear that * * * the U.S. market in * * * case sizes, areas where competition with the domestic companies is not so intense, and where * * *. * * * tends to price its product in a * * *.

In the following table, selected producers of tantalum capacitors display their average quantities sold for 1975. From this table, it is possible to calculate the percentage share approximately attributed to each kind of capacitor in the hermetically sealed and epoxy-dipped capacitors market, as reported to the Commission.

Approximate quantities of tantalum capacitors sold by selected producers in 1975

(Millions of units)

Kind of capacitor	* * *	* * *	* * *	* * *
Hermetically sealed:				
Case size A	***	***	***	***
Case size B	***	***	***	***
Case size C	***	***	***	***
Epoxy dipped:				
Case size A	***	***	***	***
Case size B	***	***	***	***
Case size C	***	***	***	***
Case size D	***	***	***	***

Source: Compiled from responses to the questionnaire of the U.S. International Trade Commission.

* * * * * * *

Factors other than price

Responses were received from twelve of the principal domestic users of tantalum capacitors relating to the quantitative and qualitative factors other than price which were considered by these OEM's to be of significant importance in their decision to purchase Japanese tantalum capacitors.

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* * * * * * *

The responses indicated that product quality was stressed as the most important factor in two of twelve cases, while product availability was cited as the principal consideration four times.

* * * * * * *

With respect to the consideration given quality as it affects the purchase decision of U.S. purchasers of Japanese-made tantalum capacitors, all domestic users have established some type of qualification (or verification) system which they use to evaluate a vendor's (either foreign or domestic) to produce a component which will either meet or exceed a certain set of product standards. As might be expected, those users whose tantalum capacitor purchases are destined to be incorporated in computer, communications, aerospace, or other

high reliability equipment would demand higher quality than the manufacturer of consumer electronic products or in applications requiring lower reliability.

Price suppression

There are thousands of negotiated prices in the tantalum electrolytic fixed capacitor market each year. Three categories of prices for 10 kinds of capacitors of * * * companies were analyzed. Regressions on the trends developed from that data reveal a steadily rising trend in prices from 1972's depressed prices (before the entry of the Japanese into the market) to a very high priced capacitor market in 1974 and early 1975. There does exist some decrease in prices for some kinds of capacitors, * * * in late 1975 and early 1976. These price * * * follow a pattern of decreases in quantity supplied to the market in 1975. That is, mid-1974 was the peak period for U.S. shipments, domestic plus imported, and early 1975 * * * It may be concluded that there is a lag of 6 months * * * This would indicate that the * * * prices would be predictable after a decrease of quantity supplied in 1975 for both domestic producers and importers.

In making a determination of price suppression, reference should be made to the section of this report on lost sales, wherein OEM's described individual transactions between Japanese-made and the U.S.-made products. The Japanese undersold the domestic product in * * * percent of the

transactions where U.S. producers and the Japanese suppliers competed in 1975 and in January-June 1976. These transactions covered * * * percent of the value of all Japanese imports during 1975, * * * percent of all Japanese imports in January-June 1976, and * * * percent of U.S. consumption in 1975.

In comparison, a domestic product undersold a domestic product in * * * percent of the transactions reported to the Commission in 1975. Those transactions covered * * * percent of the domestic producers' shipments in 1975 and in January-June 1976.

APPENDIX A

Statistical Tables

Table 1.--Tantalum electrolytic fixed capacitors: U.S. factory shipments, imports for consumption, exports of domestic merchandise, and apparent consumption, 1972-75, January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	Shipments	Imports	Exports	Apparent consumption	Ratio (percent) of imports to consumption
	Quantity				
1972	456,846	95,610	1/ 32,000	1/ 520,456	1/ 18.4
1973	714,568	162,131	41,708	834,991	19.4
1974	671,712	217,658	44,437	844,933	25.8
1975	1/ 450,000	91,367	33,250	1/ 508,117	1/ 18.0
Jan.-June--					
1975	1/ 200,000	48,874	22,376	1/ 226,498	1/ 21.6
1976	1/ 250,000	70,590	1/ 16,665	1/ 303,925	1/ 23.2
	Value 2/				
1972	110,896	6,624	1/ 7,800	1/ 109,720	1/ 6.0
1973	164,721	12,800	12,172	165,349	7.7
1974	142,213	24,099	16,704	149,608	16.1
1975	1/ 95,000	11,608	12,660	93,948	1/ 12.4
Jan.-June--					
1975	1/ 42,000	6,854	7,906	1/ 40,948	1/ 16.7
1976	1/ 52,000	7,719	1/ 5,795	1/ 54,424	1/ 14.2

1/ Estimated by the U.S. International Trade Commission.

2/ The value of shipments is reported f.o.b. plant, of exports f.a.s. U.S. port of export, and of imports f.a.s. foreign port of export. Therefore, the data on apparent consumption are not normalized at the consumption level and are not precise.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Tantalum electrolytic fixed capacitors: U.S. shipments, imports for consumption, exports of domestic merchandise, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	Shipments	Imports	Exports	Apparent consumption	Ratio (percent) of imports to consumption
	Quantity				
1972	296,374	95,610	33,454	358,530	26.7
1973	435,447	162,131	64,539	533,039	30.4
1974	440,628	217,658	84,476	573,810	37.9
1975	300,039	91,367	57,901	333,503	27.4
May-Oct.--					
1974	238,170	115,796	45,206	308,760	37.5
1975	136,996	40,122	26,009	151,109	26.6
Jan.-June--					
1975	156,674	48,874	31,097	174,451	28.0
1976	217,132	70,590	22,815	264,907	26.6
	Value 1/				
1972	74,531	6,624	5,908	75,247	8.8
1973	107,584	12,800	8,813	111,571	11.5
1974	128,397	24,099	16,931	135,565	17.8
1975	95,156	11,608	13,061	93,703	12.4
May-Oct.--					
1974	64,683	13,095	9,075	68,703	19.1
1975	40,613	4,827	5,749	39,691	12.2
Jan.-June--					
1975	53,697	6,854	7,273	53,278	12.9
1976	55,311	7,719	5,377	57,653	13.4

1/ The value of shipments is reported f.o.b. plant, of exports f.a.s. U.S. port of export, and of imports f.a.s. foreign port of export. Therefore, the data on apparent consumption are not normalized at the consumption level and are not precise.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Note.--The disparity in data on shipments and on exports reported in table 1 and in this table is accounted for by the absence of data from * * *, the absence of imported capacitors from the statistics, the absence of shipments from firms making only wet tantalum capacitors, and reporting techniques.

Table 3.--Solid tantalum electrolytic fixed capacitors: U.S. shipments, imports for consumption, exports of domestic merchandise, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	Shipments	Imports 1/	Exports	Apparent consumption	Ratio (percent) of imports to consumption
	Quantity				
1972	265,102	95,610	32,476	328,236	29.1
1973	424,018	162,131	63,594	522,555	31.0
1974	429,081	217,658	83,065	563,674	38.6
1975	291,331	91,367	56,752	325,946	28.0
May-Oct.--					
1974	232,349	115,796	44,452	303,693	38.1
1975	132,128	40,122	25,540	146,710	27.3
Jan.-June--					
1975	152,121	48,874	30,643	170,352	28.7
1976	212,564	70,590	22,365	260,789	27.1
	Value 2/				
1972	62,602	6,624	4,937	64,289	10.3
1973	92,789	12,800	7,630	97,959	13.1
1974	111,940	24,099	15,266	120,773	20.0
1975	78,900	11,608	11,414	79,094	14.7
May-Oct.--					
1974	56,437	13,095	8,155	61,377	21.3
1975	32,657	4,827	5,005	32,479	14.9
Jan.June--					
1975	44,886	6,854	6,480	45,260	15.1
1976	47,225	7,719	4,763	50,181	15.4

1/ * * *

2/ The value of shipments is reported f.o.b. plant, of exports f.a.s. U.S. port of export, and of imports f.a.s. foreign port of export. Therefore, the data on apparent consumption are not normalized at the consumption level and are not precise.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Note.-- * * *

Table 4.--Tantalum electrolytic fixed capacitors: U.S. production, by kind, 1972-75, and January-June 1975 and 1976

(Quantity in thousands of units)

Year or period	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total		
1972	46,290	115,562	91,810	19,609	273,271	10,147	283,418
1973	79,198	179,196	135,719	33,626	427,739	11,543	439,282
1974	84,540	169,928	151,334	29,033	434,835	11,526	446,361
1975	51,945	112,277	99,821	24,247	288,290	8,713	297,003
Jan.-June							
1975	21,992	62,069	62,465	10,323	156,849	4,512	161,361
1976	50,772	81,400	68,734	13,302	214,208	4,689	218,897

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Table 5.--Tantalum electrolytic fixed capacitors: U.S. producers' foreign production, by kind, 1972-75, and January-June 1975 and 1976

(Quantity in thousands of units)

Year or period	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total solid		
1972	6,015	2,251	13,992	4,741	26,999	0	26,999
1973	14,863	5,719	27,964	13,593	62,139	0	62,139
1974	13,403	6,459	41,950	11,310	73,122	0	73,122
1975	13,606	6,317	20,253	9,217	49,393	0	49,393
Jan.-June--							
1975	6,205	2,527	16,261	4,796	29,789	0	29,789
1976	8,174	5,296	11,851	4,460	29,781	0	29,781

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

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Table 6.--Tantalum electrolytic fixed capacitors: U.S. producers' shipments, by kind, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total		
	Quantity						
1972	46,531	115,460	103,111	21,097	286,199	10,175	296,374
1973	77,661	174,369	130,643	41,345	424,018	11,429	435,447
1974	79,334	172,548	145,715	31,484	429,081	11,547	440,628
1975	54,683	113,125	96,969	26,554	291,331	8,708	300,039
May-Oct.--							
1974	41,829	93,169	79,168	18,183	232,349	5,821	238,170
1975	26,967	48,703	42,315	14,134	132,119	4,838	136,957
Jan.-June--							
1975	22,000	63,058	55,661	11,402	152,121	4,553	156,674
1976	50,553	81,207	66,882	13,922	212,564	4,568	217,132
	Value 1/						
1972	7,220	21,121	27,956	6,305	62,602	11,929	74,531
1973	12,468	28,808	38,754	12,579	92,609	14,975	107,584
1974	15,356	30,513	54,039	12,032	111,940	16,457	128,397
1975	9,970	19,523	38,457	10,950	78,900	16,256	95,156
May-Oct.--							
1974	8,336	15,929	26,723	5,449	56,437	8,246	64,683
1975	4,943	8,109	15,004	4,601	32,657	7,956	40,613
Jan.-June--							
1975	4,204	11,444	23,605	5,633	44,886	8,811	53,697
1976	8,644	12,031	20,419	6,131	47,225	8,086	55,311

1/ The value of shipments is reported f.o.b. plant.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Note.--The disparity between shipments reported in Table 1 and this table is accounted for by the absence of data from * * *, the absence of imported capacitors from the statistics, the absence of shipments from firms making only wet tantalum capacitors, and reporting techniques.

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Table 7.--Tantalum electrolytic fixed capacitors: U.S. producers' domestic inventories, by kind, on December 31, 1971, through 1975, and June 30, 1975, and 1976

(Quantity in thousands of units)

Date	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total solid		
December 31--							
1971	11,839	11,750	25,817	13,892	63,298	1,014	64,312
1972	9,058	12,371	25,584	11,865	58,878	1,059	58,878
1973	13,273	18,194	19,162	15,926	66,555	2,209	68,764
1974	21,392	13,272	32,574	14,071	81,309	1,754	83,063
1975	21,023	13,765	34,419	9,680	78,887	1,726	80,613
June 30--							
1975	23,360	13,519	36,350	10,418	83,647	1,753	85,400
1976	24,852	14,321	38,326	11,433	88,932	1,824	90,756

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

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Table 8.--Tantalum electrolytic fixed capacitors: U.S. exports of tantalum electrolytic fixed capacitors, by kind, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total		
	Quantity						
1972	901	5,346	16,079	10,150	32,476	978	33,454
1973	2,985	15,422	26,265	18,922	63,594	945	64,539
1974	9,598	3,514	44,176	25,777	83,065	1,411	84,476
1975	2,135	5,278	27,556	21,783	56,752	1,149	57,901
May-Oct.--							
1974	5,185	2,001	23,657	13,609	44,452	754	45,206
1975	1,026	2,365	11,807	10,342	25,540	469	26,009
Jan.-June--							
1975	868	2,708	15,768	11,299	30,643	454	31,097
1976	1,334	2,100	14,770	4,161	22,365	450	22,815
	Value 1/						
1972	152	444	3,438	903	4,937	971	5,908
1973	429	1,076	4,070	2,055	7,630	1,183	8,813
1974	1,177	580	10,817	2,692	15,266	1,665	16,931
1975	418	770	7,658	2,568	11,414	1,647	13,061
May-Oct.--							
1974	654	323	5,758	1,420	8,155	920	9,075
1975	211	320	3,263	1,211	5,005	744	5,749
Jan.-June--							
1975	175	432	4,518	1,355	6,480	793	7,273
1976	239	306	3,486	732	4,763	614	5,377

1/ The value of exports was report f.a.s. U.S. port of export.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Note.--The disparity between export data reported in table 1 and this table is accounted for by the absence of data from * * *, the absence of shipments from firms making only wet tantalum capacitors, and reporting techniques.

Table 9.--Tantalum electrolytic fixed capacitors: U.S. producers' imports, by kind, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year of period	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total		
	Quantity						
1972	6,015	2,251	7,257	9,178	24,701	0	24,701
1973	14,863	5,719	18,347	11,396	50,325	0	50,325
1974	13,403	6,459	43,044	8,514	71,420	0	71,420
1975	13,606	6,317	21,983	5,767	47,673	0	47,673
May-Oct.--							
1974	8,438	2,583	22,690	3,558	37,269	0	37,269
1975	9,953	2,526	10,047	2,018	24,544	0	24,544
Jan.-June--							
1975	6,205	2,527	14,190	2,732	25,654	0	25,654
1976	8,174	5,296	9,686	3,030	26,186	0	26,186
	Value 1/						
1972	706	250	489	1,177	2,622	0	2,622
1973	1,826	720	1,358	1,370	5,274	0	5,274
1974	1,715	968	5,377	1,551	9,611	0	9,611
1975	1,678	936	3,487	1,132	7,233	0	7,233
May-Oct.--							
1974	1,076	387	2,614	852	4,929	0	4,929
1975	1,164	374	1,502	396	3,436	0	3,436
Jan.-June--							
1975	814	374	2,250	574	4,012	0	4,012
1976	1,061	653	1,354	718	3,786	0	3,786

1/ The value of imports was reported f.a.s. foreign port of export.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

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Table 10.--Tantalum electrolytic fixed capacitors: U.S. imports for consumption from all sources and from Japan, 1972-75, January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	All sources	Japan	Ratio (percent) Japan to all sources
	Quantity		
1972	95,610	7,032	7.4
1973	162,131	18,272	11.3
1974	217,658	32,154	14.8
1975	91,367	14,948	16.4
Jan.-June--			
1975	48,874	7,851	16.1
1976	70,590	13,769	19.5
	Value 1/		
1972	6,624	402	6.1
1973	12,800	1,282	10.0
1974	24,099	3,052	12.7
1975	11,608	1,471	12.7
Jan.-June--			
1975	6,854	935	13.6
1976	7,719	1,302	16.9

1/ The value of imports was reported f.a.s. foreign port of export.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 11.--Tantalum electrolytic fixed capacitors: U.S. imports from Japan of tantalum electrolytic fixed capacitors, by kind, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	Solid types					Other types	Total
	Dipped	Molded except chip	Hermetically sealed	Other solid	Total		
	Quantity						
1972	***	***	***	***	***	***	***
1973	***	***	***	***	***	***	***
1974	***	***	***	***	***	***	***
1975	***	***	***	***	***	***	
May-Oct.--							
1974	***	***	***	***	***	***	***
1975	***	***	***	***	***	***	***
Jan.-June--							
1975	***	***	***	***	***	***	***
1976	***	***	***	***	***	***	***
	Value 2/						
1972	***	***	***	***	***	***	***
1973	***	***	***	***	***	***	***
1974	***	***	***	***	***	***	***
1975	***	***	***	***	***	***	***
May-Oct.--							
1974	***	***	***	***	***	***	***
1975	***	***	***	***	***	***	***
Jan.-June--							
1975	***	***	***	***	***	***	***
1976	***	***	***	***	***	***	***

1/ Quantity estimated based on value of imports and estimated unit price.
2/ The value of imports was reported f.a.s. foreign port of export.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Note.--The disparity between data reported in tables 10, 11, 17, and 18 and this table is accounted for by the selection of reporting firms. Firms other than subsidiaries of Japanese firms and certain independent importers were not required to report.

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Table 12.--Tantalum electrolytic fixed capacitors: U.S. imports for consumption, by source, 1972-75, and January-June 1976

(Quantity in thousands of units; value in thousands of dollars)

Source	1972	1973	1974	1975	January-June 1976
	Quantity				
Mexico	75,779	127,726	169,447	61,470	33,955
Japan	7,032	18,272	32,154	14,948	13,769
West Germany	942	18	2,407	9,468	18,483
Canada	0	0	2,059	884	174
Taiwan	10,134	10,508	6,524	2,458	231
All other	1,723	5,607	5,067	2,139	3,978
Total	95,610	162,131	217,658	91,367	70,590
	Value 1/				
Mexico	5,628	10,275	19,742	8,819	4,583
Japan	402	1,282	3,052	1,471	1,302
West Germany	130	14	267	836	1,504
Canada	0	0	336	244	37
Taiwan	308	358	248	98	10
All other	156	871	454	140	283
Total	6,624	12,800	24,099	11,608	7,719

1/ The value of imports was reported f.a.s. foreign port of export.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 13.--Tantalum electrolytic fixed capacitors: Employment as indicated in U.S. establishments where tantalum electrolytic fixed capacitors are produced, 1972-75, and January-June 1975 and 1976

(In numbers of persons)

Year or period	Total, all employees		Production and related workers	
	All products	Tantalum electrolytic fixed capacitors	All products	Tantalum electrolytic fixed capacitors
1972	9,660	4,767	7,129	3,438
1973	11,687	5,789	8,826	4,411
1974	12,767	6,144	9,817	4,831
1975	9,653	4,049	7,475	3,310
May-Oct.--				
1974	12,090	5,494	10,353	4,879
1975	9,076	3,740	7,173	3,239
Jan-June--				
1976	8,800	4,344	7,123	3,767

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Table 14.--Tantalum electrolytic fixed capacitors: Man-hours as indicated below expended in U.S. establishments where tantalum electrolytic fixed capacitors are produced, 1972-75

(In thousands of man-hours)

Year	Total, all employees		Production and related workers	
	All products	Tantalum electrolytic fixed capacitors	All products	Tantalum electrolytic fixed capacitors
1972	18,101	7,734	14,564	6,740
1973	23,075	10,004	18,580	8,792
1974	25,437	10,837	20,708	9,714
1975	19,500	7,418	15,422	6,452

Source: Compiled from responses to the questionnaires of the U.S. International Trade Commission.

Table 15.--Aggregate profit-and-loss experience of 7 domestic producers of tantalum electrolytic fixed capacitors, 1972-75, July-December 1974 and 1975, and January-June 1976

Year or period	Net sales	Cost of goods sold	Gross profit	General, selling, and administrative expense	Net operating profit	Other income or (expense) net	Net income before taxes	Ratio of net operating profit or (loss) to net sales
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent
1972	77,018	61,429	15,589	11,682	3,907	(328)	3,579	5.1
1973	106,913	82,622	24,291	13,242	11,049	76	11,125	10.3
1974	133,102	103,946	29,156	16,278	12,878	(90)	12,788	9.7
1975	90,672	71,417	19,255	14,745	4,510	(520)	3,990	5.0
July-Dec.--								
1974	60,701	47,193	13,508	7,701	5,807	(147)	5,660	9.6
1975	36,615	30,540	6,075	5,734	341	(318)	23	1.0
Jan.-June--								
1975 1/	42,624	31,455	11,169	6,177	4,992	-	4,992	11.7
1976 1/	46,328	36,371	9,957	5,967	3,990	-	3,990	8.6

1/ Represents data from * * *.

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic producers.

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Table 16.--Profit-and-loss experience of 7 domestic producers of tantalum electrolytic fixed capacitors, 1972-75, July-December 1974 and 1975

Year and company	Net sales	Cost of goods sold	Gross profit	General, selling, & administrative expenses	Net operating profit or (loss)	Other income or (expense) net	Net profit or (loss) before taxes	Ratio of net operating profit or (loss) to net sales
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent
1972								
Corning Glass Works	***	***	***	***	***	***	***	***
Hilton Industries, Inc	***	***	***	***	***	***	***	***
Components, Inc	***	***	***	***	***	***	***	***
P.R. Mallory & Co., Inc	***	***	***	***	***	***	***	***
Sprague Electric Co	***	***	***	***	***	***	***	***
Tansitor Electronics	***	***	***	***	***	***	***	***
Union Carbide Corp	***	***	***	***	***	***	***	***
Total	77,018	61,429	15,589	11,682	3,907	(328)	3,579	5.1
1973								
Corning Glass Works	***	***	***	***	***	***	***	***
Hilton Industries, Inc	***	***	***	***	***	***	***	***
Components, Inc	***	***	***	***	***	***	***	***
P.R. Mallory & Co., Inc	***	***	***	***	***	***	***	***
Sprague Electric Co	***	***	***	***	***	***	***	***
Tansitor Electronics	***	***	***	***	***	***	***	***
Union Carbide Corp	***	***	***	***	***	***	***	***
Total	106,913	82,622	24,291	13,242	11,049	76	11,125	10.3
1974								
Corning Glass Works	***	***	***	***	***	***	***	***
Hilton Industries, Inc	***	***	***	***	***	***	***	***
Components, Inc	***	***	***	***	***	***	***	***
P.R. Mallory & Co., Inc	***	***	***	***	***	***	***	***
Sprague Electric Co	***	***	***	***	***	***	***	***
Tansitor Electronics	***	***	***	***	***	***	***	***
Union Carbide Corp	***	***	***	***	***	***	***	***
Total	133,102	103,946	29,156	16,278	12,878	(90)	12,788	9.7

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Table 16.--Profit-and-loss experience of 7 domestic producers of tantalum electrolytic fixed capacitors, 1972-75, July-December 1974 and 1975

Year and company	Net sales	Cost of goods sold	Gross profit	General, selling, & administrative expenses	Net operating profit or (loss)	Other income or (expense) net	Net profit or (loss) before taxes	Ratio of net operating profit or (loss) to net sales
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent
1975								
Corning Glass Works	***	***	***	***	***	***	***	***
Hilton Industries, Inc	***	***	***	***	***	***	***	***
National Components, Inc	***	***	***	***	***	***	***	***
P.R. Mallory & Co., Inc	***	***	***	***	***	***	***	***
Sprague Electric Co	***	***	***	***	***	***	***	***
Transitor Electronics	***	***	***	***	***	***	***	***
Union Carbide Corp	***	***	***	***	***	***	***	***
Total	90,672	71,417	19,255	14,745	4,510	(520)	3,990	5.0
July-December 1974								
Corning Glass Works	***	***	***	***	***	***	***	***
Hilton Industries, Inc	***	***	***	***	***	***	***	***
National Components, Inc	***	***	***	***	***	***	***	***
P.R. Mallory & Co., Inc	***	***	***	***	***	***	***	***
Sprague Electric Co	***	***	***	***	***	***	***	***
Transitor Electronics	***	***	***	***	***	***	***	***
Union Carbide Corp	***	***	***	***	***	***	***	***
Total	60,701	47,193	13,508	7,701	5,807	(147)	5,660	9.6
July-December 1975								
Corning Glass Works	***	***	***	***	***	***	***	***
Hilton Industries, Inc	***	***	***	***	***	***	***	***
National Components, Inc	***	***	***	***	***	***	***	***
P.R. Mallory & Co., Inc	***	***	***	***	***	***	***	***
Sprague Electric Co	***	***	***	***	***	***	***	***
Transitor Electronics	***	***	***	***	***	***	***	***
Union Carbide Corp	***	***	***	***	***	***	***	***
Total	36,615	30,540	6,075	5,734	341	(318)	23	0.9

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic producers.

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Table 17.--Tantalum electrolytic fixed capacitors (all types): Japanese production for consumption and export, 1972-75, and, by quarters, January 1973-March 1976

Year or period	Quantity	Value
	1,000 units	1,000 dollars
1972:		
Total	92,812	20,925
1973:		
January-March	38,719	8,514
April-June	47,191	9,434
July-September	57,578	10,215
October-December	68,528	10,781
Total	212,016	38,944
1974:		
January-March	78,216	12,129
April-June	89,160	13,275
July-September	92,029	11,736
October-December	56,158	7,922
Total	315,563	45,062
1975:		
January-March	35,574	5,120
April-June	55,616	5,775
July-September	75,342	9,085
October-December	74,753	8,725
Total	241,285	28,705
1976:		
January-March	95,147	9,790

Source: Quarterly reports of the Electronic Industries Association of Japan.

Table 18.--Tantalum electrolytic fixed capacitors: U.S. apparent consumption, total U.S. imports from Japan, imports from Japan less those of Matsushita Electric Industrial Co., Ltd., estimated imports from from Japan of capacitors sold at margins, 1972-75, January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	U.S. apparent consumption	Total U.S. imports from Japan	Ratio (percent) columns 2 and 1	Total U.S. imports from Japan less those from Matsushita	Ratio (percent) columns 4 and 1	35 percent of column 4 1/	Ratio (percent) columns 6 and 1
	1	2	3	4	5	6	7
	Quantity						
1972	2/ 520,456	7,032	2/ 1.4	***	***	***	***
1973	834,991	18,272	2.2	***	***	***	***
1974	844,933	32,154	3.8	***	***	***	***
1975	2/ 508,117	14,948	2/ 2.9	***	***	***	***
January-June--							
1975	2/ 226,498	2/ 7,851	3.5	***	***	***	***
1976	2/ 303,935	2/ 13,769	4.5	***	***	***	***
	Value						
1972	2/ 109,720	402	2/0.4	***	***	***	***
1973	165,349	1,282	0.8	***	***	***	***
1974	149,608	3,052	2.0	***	***	***	***
1975	2/ 93,948	1,471	2/ 1.6	***	***	***	***
January-June --							
1975	2/ 40,948	935	2/ 2.3	***	***	***	***
1976	2/ 54,424	1,302	2/ 2.4	***	***	***	***

1/ Thirty-five percent of column 4 is an estimate of the Japanese-made articles sold at a margin based on the determination by the Treasury.

2/ Estimated by the U.S. International Trade Commission.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 19.--Solid tantalum electrolytic fixed capacitors: U.S. apparent consumption, total U.S. imports from Japan, imports from Japan less those of Matshshita Electric Industrial Co., Ltd., estimated imports from Japan of capacitors sold at margins, 1972-75, May-October 1974 and 1975, and January-June 1975 and 1976

(Quantity in thousands of units; value in thousands of dollars)

Year or period	U.S. apparent consumption	Total U.S. imports from Japan	Ratio (percent) columns 2 and 1	Total U.S. imports from Japan less those from Matsushita	Ratio (percent) columns 4 and 1	35 percent of column 4 1/	Ratio (percent) columns 6 and 1
	1	2	3	4	5	6	7
	Quantity						
1972	328,236	7,032	2.1	***	***	***	***
1973	522,555	18,272	3.5	***	***	***	***
1974	563,674	32,154	5.7	***	***	***	***
1975	325,946	14,948	4.6	***	***	***	***
May-Oct.--							
1974	303,693	18,021	5.9	***	***	***	***
1975	146,710	7,005	4.8	***	***	***	***
Jan.-June--							
1975	170,352	7,851	4.6	***	***	***	***
1976	260,789	13,769	5.3	***	***	***	***
	Value						
1972	64,289	402	0.6	***	***	***	***
1973	97,959	1,282	1.3	***	***	***	***
1974	120,773	3,052	2.5	***	***	***	***
1975	79,094	1,471	1.9	***	***	***	***
May-Oct.--							
1974	61,377	1,733	2.8	***	***	***	***
1975	32,479	612	1.8	***	***	***	***
Jan.-June--							
1975	45,260	935	2.1	***	***	***	***
1976	50,181	1,302	2.6	***	***	***	***

1/ The value of tantalum electrolytic fixed capacitors imported from Japan during the period of Treasury's investigation, less those provided by Matsushita Electric Industrial Co., Ltd., were found to have margins which amounted to 35 percent of the total less those of Matsushita.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

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APPENDIX B

Treasury letter relating to LTFV sales and Memorandum, Sample Calculation for Distribution Sales by Matsuo, and Statistical Chart Relating to the Determination of Sales at LTFV

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

ASSISTANT SECRETARY

DOCKET NUMBER

'76 JUL 22 PM 2:27

JUL 22 1976 #401

Dear Mr. Chairman:

In accordance with section 201(a) of the Antidumping Act, 1921, as amended, you are hereby advised that tantalum electrolytic fixed capacitors from Japan are being, or are likely to be, sold at less than fair value within the meaning of the Act.

The United States Customs Service will make available to the International Trade Commission as promptly as possible the files on sales or likelihood of sales at less than fair value of the tantalum electrolytic fixed capacitors subject to this determination for the Commission's use in connection with its investigation as to whether an industry in the United States is being, or likely to be, injured, or is prevented from being established, by reason of the importation of this merchandise into the United States.

Since some of the data in this file is regarded by the U.S. Treasury Department to be of a confidential nature, it is requested that the U.S. International Trade Commission consider all information therein contained for the official use of the International Trade Commission only, and not to be disclosed to others without prior clearance with the U.S. Treasury Department.

Sincerely yours,

David R. Macdonald
Assistant Secretary
(Enforcement, Operations
and Tariff Affairs)

The Honorable
Will E. Leonard
International Trade Commission
Washington, D.C. 20436

Enclosure (Will follow)

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