

In the Matter of )  
 )  
 )  
 CERTAIN CERAMIC CAPACITORS )  
 AND PRODUCTS CONTAINING SAME )  
 )  
 )

Investigation No. 337-TA-\_\_\_\_\_

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## **I. INTRODUCTION**

1.1 Complainants Murata Manufacturing Co., Ltd. (“Murata”) and Murata Electronics North America, Inc. (“MENA”) (collectively, “Complainants”) respectfully request that the United States International Trade Commission commence an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”), to remedy the unlawful importation into the United States, the sale for importation into the United States, and/or the sale within the United States after importation by the owner, importer, or consignee of certain ceramic capacitors and products containing same.

1.2 The proposed Respondents are Samsung Electro-Mechanics Co., Ltd. (“SEMCO”) and Samsung Electro-Mechanics America, Inc. (“SEMCO America”) (collectively, “SEMCO” or “Respondents”).

1.3 Respondents have engaged in unlawful acts, including the unlicensed importation into the United States, sale for importation into the United States, and sale after importation into the United States of certain ceramic capacitors and products containing same.

1.4 A capacitor is a passive electronic component composed of one or more pairs of conductors separated by a dielectric material. The main subjects of this complaint are capacitors that have a ceramic dielectric material and are often known as ceramic capacitors. Most often, these ceramic capacitors are discrete components, known as monolithic chip capacitors, that have integral electrodes on outer surfaces of the capacitors for connection in electrical circuits.

1.5 Murata is and has historically been a leading innovator in the field of ceramic capacitors. It holds over 300 key U.S. patents and pending patent applications in this area of technology. In addition, for over 30 years, MENA manufactured ceramic capacitors in the United States at plants in Pennsylvania and Georgia. Those plants have now been substantially

shut down, however, as Murata ceased manufacturing ceramic capacitors in the United States in 2004, in part due to unfair competition from overseas manufacturers. Complainants continue to maintain a domestic industry in ceramic capacitors that exploit the patents-in-suit, as discussed further below in Section VIII. This Complaint seeks an investigation and remedies to protect that ongoing domestic industry from further injury from unfair trade practices by Respondents.

1.6 Proposed Respondents infringe at least the following claims (“the asserted claims”) of the following United States patents (“patents-in-suit”) owned by Murata:

- a. U.S. Patent No. 6,266,229 B1 (“the ’229 patent”), claims 1-4, 7-9, 11-14, 17-24, 28-31, 34-47, 51-53, 55 and 56 (Exhibit 1);
- b. U.S. Patent No. 6,014,309 (“the ’309 patent”), claim 3 (Exhibit 2);
- c. U.S. Patent No. 6,377,439 B1 (“the ’439 patent”), claims 1-3 and 5 (Exhibit 3); and
- d. U.S. Patent No. 6,243,254 B1 (“the ’254 patent”), claims 1, 2, 9-14, 19 and 20 (Exhibit 4).

1.7 Murata owns the entire right, title and interest in and to each of the patents-in-suit.

1.8 Certified copies of the ’229, ’309, ’439 and ’254 patents accompany this Complaint as Exhibits 1-4, respectively. Certified copies of the prosecution file histories of the ’229, ’309, ’439 and ’254 patents also accompany this Complaint as Appendices 1-4, respectively. Certified copies of the assignment records for the ’229, ’309, ’439 and ’254 patents also accompany this Complaint as Exhibits 5-8, respectively.

1.9 Pursuant to Section 337(a)(2) and (3), an industry exists in the United States in connection with Complainants’ ceramic capacitors covered by the patents-in-suit. This industry is supported by substantial investment by Complainants in the United States, including in

facilities, equipment, and labor, including employees in the United States who perform product engineering and quality assurance activities with respect to products covered by the patents-in-suit.

1.10 Complainants request that, after an investigation, the Commission issue (a) an exclusion order pursuant to Section 337(d) prohibiting the entry into the United States of SEMCO's ceramic capacitors and products containing same that are covered by one or more claims of the patents-in-suit; and (b) cease and desist orders pursuant to Section 337(f) to preclude Respondents from offering for sale, marketing, advertising, demonstrating, warehousing, distributing, selling and/or using such imported products in the United States.

## **II. COMPLAINANTS**

2.1 Murata is a Japanese corporation with its principal place of business at 10-1 Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, Japan 617-8555. Murata, established in 1944 and formally incorporated in 1950, is one of the largest publicly held companies in Japan. Murata has facilities worldwide, including offices in the United States, Japan, Canada, Mexico, Brazil, Germany, France, Italy, the United Kingdom, Denmark, Switzerland, the Netherlands, Spain, Sweden, Hungary, Finland, India, Singapore, Malaysia, the Philippines, Taiwan, Thailand, Vietnam, Hong Kong, Korea and China. Murata is a manufacturer of a wide variety of electronics products, including the ceramic capacitors that are the subject of this Complaint. Other products in the Murata product lineup include: noise suppression products, inductors, resistors, resonators, filters for audio visual equipment, filters for communication equipment, RF components/modules, sensors, thermistors, power supplies, sound components, and ceramic applied products.

2.2 Murata produced some of the first tubular ceramic capacitors used for temperature compensation in tube-type superheterodyne radios. These capacitors provided far superior performance to the then-conventional super-regeneration systems and represent an early success in Murata's long history of solving critical problems in the electronics industry with innovative ceramic component designs. From the introduction of transistor radios to the modern multicore microprocessor based computer, Murata has consistently been a leader in providing ceramic electronic components, providing design engineers with ever-smaller capacitors and other ceramic-based components to meet the demands of each new generation of electronic products. Murata's present day, highly-miniaturized monolithic ceramic chip capacitors and surface mount devices are important components in high performance computer, communications, audio and video products.

2.3 To maintain its leadership position in the industry, Murata has made significant investments in the design, development, engineering and manufacture of ceramic capacitors. Murata's consistent innovation, supported by its extensive patent portfolio, has been important to the growth of its business, remains important to its continued success and provides Murata with a competitive advantage.

2.4 MENA is a corporation organized and existing under the laws of the state of Texas and is a wholly-owned subsidiary of Murata. MENA's principal place of business is located at 2200 Lake Park Drive, Smyrna, GA 30080-7604, U.S.A. MENA has over 150 employees working in the United States. As described more fully below, MENA employees are engaged in pre- and post-sale product engineering, testing and quality assurance work with respect to Murata capacitors that are covered by the patents-in-suit.



### **III. PROPOSED RESPONDENTS**

3.1 SEMCO is a Korean corporation with its principal place of business at 314 Maetan-3-dong, Yeongtong-gu Suwon City 443-743, South Korea. SEMCO manufactures and imports infringing ceramic capacitors and/or products containing same into the United States and sells them in the United States, or sells them outside of the United States for importation into the United States. SEMCO's manufacturing facilities for ceramic capacitors are all outside of the United States. Upon information and belief, those facilities are located in Korea, China and/or the Philippines.

3.2 SEMCO America is a California corporation with its principal place of business at 3345 Michelson Drive, Suite 350, Irvine, California 92612. SEMCO America is a wholly owned subsidiary of SEMCO. SEMCO America imports infringing ceramic capacitors and/or products containing same into the United States and sells them in the United States.

### **IV. THE TECHNOLOGY AND PATENTS AT ISSUE**

#### **A. GENERAL NONTECHNICAL DESCRIPTION OF THE TECHNOLOGY<sup>1</sup>**

4.1 Three of Murata's asserted patents relate specifically to ceramic capacitors and the fourth of Murata's asserted patents relates to a low equivalent series inductance (ESL) capacitor, which covers the ceramic capacitors that are the subject of this Complaint. Capacitors can store electric charge in low frequency or D.C. applications, can pass high frequency signals, and otherwise interact with signals. Because of their importance in filters and as circuit elements, capacitors are critical components found in many electronic products. They are used with resistors in timing circuits. They are used with inductors to form resonant circuits,

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<sup>1</sup> The text of this Complaint, including the nontechnical description of the technology and the inventions as required under Commission Rule 210.12, is not and should not be misconstrued to be, an attempt to interpret either the specification or the claims of the patents-in-suit.

oscillators and filters. To satisfy the wide range of applications, capacitors must be provided which meet many different, and often quite stringent, specifications of voltage, capacitance, frequency characteristics, internal resistance, temperature variations of various capacitor characteristics, and other parameters, depending upon the application at hand.

4.2 Ceramic capacitors offer certain advantages over other types of capacitors, including the high dielectric constant of the ceramic material and the non-polar nature of the ceramic dielectric. Ceramic materials and electrode materials can be formed as thin interleaved layers and then fired or sintered to form dense multilayer structures providing very high capacitance in a small device. Such capacitor structures, often known as multilayer ceramic capacitors (MLCC), can be formed with integral electrodes to provide a highly compact structure that can readily be incorporated on printed circuit boards or within integrated circuit packages. In addition, ceramic capacitors are highly reliable, stable, and tolerant of a wide range of applied voltages temperatures, yet they can be manufactured at a low cost.

4.3 Ceramic capacitors are commonly used in applications where factors such as high capacitance, high frequency operation, extremely small size, stable electrical characteristics, and low price are important. Ceramic capacitors are critical to the production of many consumer electronics devices, including cellular telephones and other communication devices, games, automotive electronics, flat screen televisions and computers.

## **B. THE PATENTS-IN-SUIT**

### **1. The '229 patent**

#### **a. Identification and ownership by Complainant**

4.4 On July 24, 2001, United States Patent No. 6,266,229 B1 ("the '229 patent"), titled *Multilayer Capacitor*, was duly and legally issued to Yasuyuki Naito, Masaaki Taniguchi,

Yoichi Kuroda, Takanori Kondo, Michihiro Murata and Yoshitaka Tanino. A true and correct certified copy of the '229 patent is attached hereto as Exhibit 1 and incorporated herein by reference.

4.5 Murata is the assignee and owner of all right, title and interest in and to the '229 patent. A certified copy of the assignment of the '229 patent, reflecting the chain of title and identifying its ownership, is attached hereto as Exhibit 5.

4.6 Pursuant to Commission Rule 210.12, the original of the Complaint is accompanied by: (1) a certified copy of the '229 patent (Exhibit 1); (2) one certified copy and three additional copies of the prosecution history of the '229 patent (Appendix 1); (3) four copies of each reference cited therein (Appendix 5); and (4) a certified copy of the recorded assignments of the '229 patent (Exhibit 5).

4.7 The '229 patent is valid and in full force and effect.

**b. Nontechnical description of the patented inventions**

4.8 Pursuant to Commission Rule 210.12(a)(9)(v), a non-technical description of the inventions of the '229 patent is as follows:

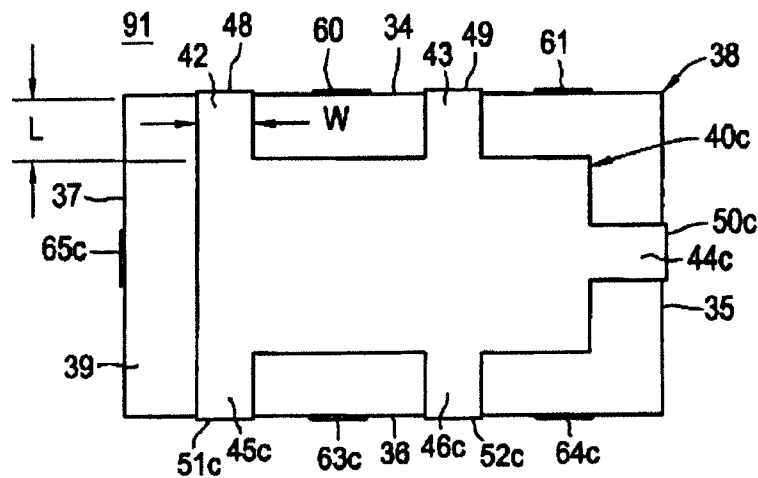
4.9 The '229 patent is generally directed to a multilayer capacitor that is better adapted for high frequency circuit applications because it can have a lower equivalent series inductance (ESL). Lower ESL is provided in some implementations by the external and internal electrode configuration, including the configuration of at least one of the leads between the external and internal electrodes.

4.10 The embodiments of the '229 patent include a multilayer capacitor made up of layered electrode plates separated by dielectric layers. The described capacitor has at least a first and a second electrode plate, with electrode plates separated from each other by a dielectric

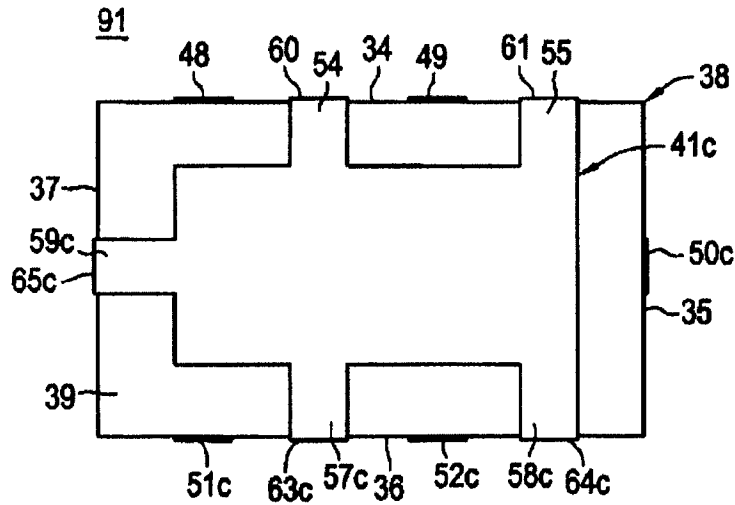
material. FIG. 13 shows one internal electrode plate configuration and FIG. 14 shows another internal electrode plate configuration and together FIGS. 12-14 illustrate one of several capacitor embodiments described in the patent. Each of the electrode plates includes a main electrode region and two or more spaced apart leads. Leads from the first and second electrode plates extend to the side walls of the capacitor body and are arranged to provide the overall capacitor with a desired level of reduced ESL. External electrodes on the sides of the capacitor body connect the leads of the first electrodes and other external electrodes connect the leads of the second electrodes.

4.11 The device is further constructed such that the relationship between the length  $L$  and width  $W$  of the leads (shown in FIG. 13 below) is carefully controlled.

**FIG. 13**



# FIG. 14



4.12 By selecting electrode plate lead dimension and arrangement, current path length can be shortened and magnetic flux induced by current flow through the device can be reduced, in turn reducing self-inductance.

## c. Foreign counterparts to the '229 patent

4.13 The following is a list of foreign counterparts to the '229 patent:

Jurisdiction	App. No.	Filing Date	Status
Japan	JP 9-306717	Nov. 10, 1997	Issued –JP2991175
Japan	JP 11-370803	Dec. 27, 1999	Issued –JP3514195
Taiwan	TW 87103544	Mar. 11, 1998	Issued –TW102843
Taiwan	TW89103544	Mar. 1, 2000	Issued – TW146671
Europe	EP1998104606	Mar. 13, 1998	EP0915488 Issued – DE69830885
Europe	EP2000117182	Aug. 10, 2000	EP1087411 (pending)
Europe	EP2000117183	Aug. 10, 2000	EP1085539 (pending)

4.14 To the best of Complainants' present knowledge, information and belief, there are no other foreign patents or foreign patent applications pending, filed, abandoned, withdrawn or rejected corresponding to the '229 patent.

## **2. The '309 patent**

### **a. Identification and ownership by Complainant**

4.15 On January 11, 2000, United States Patent No. 6,014,309 ("the '309 patent"), titled *Laminated Ceramic Electronic Parts*, was duly and legally issued to Yasushi Ueno, Yoshikazu Takagi, Kazuaki Kawabata, and Nagato Omori. A true and correct certified copy of the '309 patent is attached hereto as Exhibit 2 and incorporated herein by reference.

4.16 Murata is the assignee and owner of all right, title and interest in and to the '309 patent. A certified copy of the assignment of the '309 patent, reflecting the chain of title and identifying its ownership, is attached hereto as Exhibit 6.

4.17 Pursuant to Commission Rule 210.12, the original of the Complaint is accompanied by: (1) a certified copy of the '309 patent (Exhibit 2); (2) one certified copy and three additional copies of the prosecution history of the '309 patent (Appendix 2); (3) four copies of each reference cited therein (Appendix 6); and (4) a certified copy of the recorded assignments of the '309 patent (Exhibit 6).

4.18 The '309 patent is valid and in full force and effect.

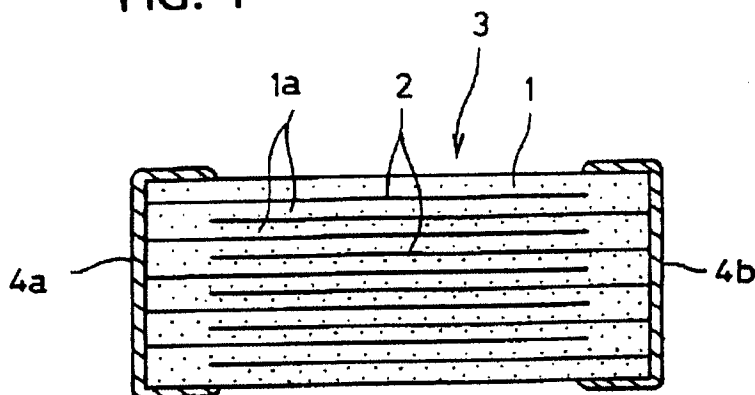
### **b. Nontechnical description of the patented inventions**

4.19 Pursuant to Commission Rule 210.12(a)(9)(v), a non-technical description of the inventions of the '309 patent is as follows:

4.20 The '309 patent describes ceramic parts such as a multilayer ceramic capacitor or a multilayer ceramic varistor. The multilayer ceramic part is made up of layers of internal

electrodes separated by ceramic layers and external electrodes that connect to the internal electrodes, as illustrated in FIG. 1 of the patent reproduced below. The patent describes how to select characteristics of the internal electrodes and of the ceramic layers to avoid manufacturing and reliability problems.

**FIG. 1**



More specifically, controlling the ratio of the thickness of the internal electrodes to the thickness of the ceramic layer can suppress delamination and cracking from occurring during sintering. Alternately, controlling the ratio of the total volume of the internal electrodes to the total volume of the ceramic element can enhance the strength of the part against thermal stress.

**c. Foreign counterparts to the '309 patent**

4.21 The following is a list of foreign counterparts to the '309 patent:

<b>Jurisdiction</b>	<b>App. No.</b>	<b>Filing Date</b>	<b>Status</b>
Japan	JP 9-135823	May 9, 1997	Rejected
China	CN1998101752	May 4, 1998	Issued – CN 1094241
Korea	KR19980016155	May 6, 1998	Issued – KR 10-0271910

4.22 To the best of Complainants' present knowledge, information and belief, there are no other foreign patents or foreign patent applications pending, filed, abandoned, withdrawn or rejected corresponding to the '309 patent.

### **3. The '439 patent**

#### **a. Identification and ownership by Complainant**

4.23 On April 23, 2002, United States Patent No. 6,377,439 B1 ("the '439 patent"), titled *Electronic Multilayer Ceramic Component*, was duly and legally issued to Hiroshi Sekidou, Yoshikazu Takagi, and Yasunobu Yoneda. A true and correct certified copy of the '439 patent is attached hereto as Exhibit 3 and incorporated herein by reference.

4.24 Murata is the assignee and owner of all right, title and interest in and to the '439 patent. A certified copy of the assignment of the '439 patent, reflecting the chain of title and identifying its ownership, is attached hereto as Exhibit 7.

4.25 Pursuant to Commission Rule 210.12, the original of the Complaint is accompanied by: (1) a certified copy of the '439 patent (Exhibit 3); (2) one certified copy and three additional copies of the prosecution history of the '439 patent (Appendix 3); (3) four copies of each reference cited therein (Appendix 7); and (4) a certified copy of the recorded assignments of the '439 patent (Exhibit 7).

4.26 The '439 patent is valid and in full force and effect.

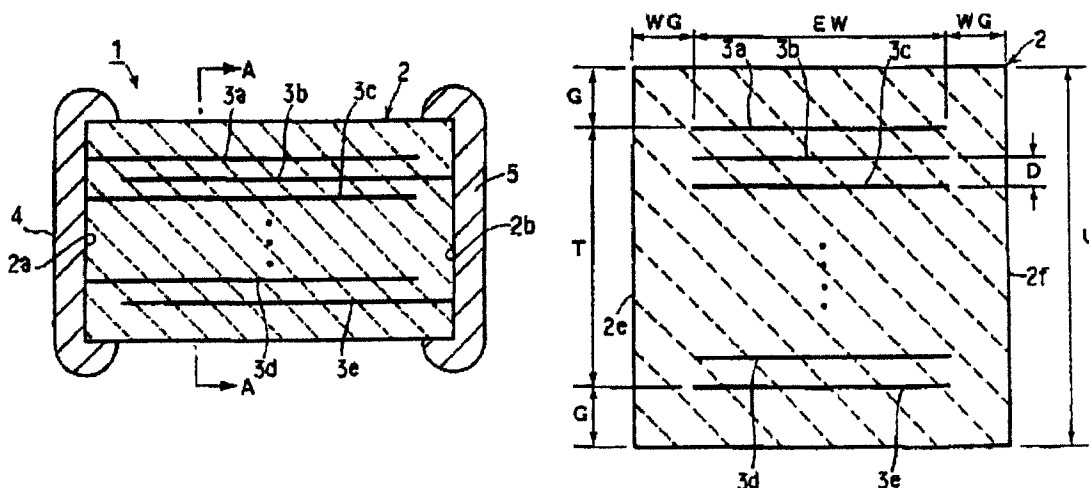
#### **b. Nontechnical description of the patented inventions**

4.27 Pursuant to Commission Rule 210.12(a)(9)(v), a non-technical description of the inventions of the '439 patent is as follows:

4.28 The '439 patent is directed to a multilayer ceramic component, such as a multilayer ceramic capacitor, which is less susceptible to the cracking or delamination and has



high thermal shock resistance and high reliability. The patent describes a multilayer ceramic component having a number of overlapping internal electrodes embedded in a sintered ceramic block. The inner electrodes are electrically connected to external electrodes formed on the outside faces of the component.



4.29 According to the patent, the ratio of the width of a side gap region between the ends of the inner electrodes and one of the side faces of the sintered ceramic block to the width of the inner electrodes is selected to be within a specified range. The ratio between the thickness of a region in which the plurality of inner electrodes are formed to the thickness of one of the outer ceramic layers is also held to a specified range. Controlling these ratios reduces the component's susceptibility to cracking and delamination and improves thermal shock resistance and reliability.

#### c. Foreign counterparts to the '439 patent

4.30 The following is a list of foreign counterparts to the '439 patent:

Jurisdiction	App. No.	Filing Date	Status
Japan	JP 11-202039	July 15, 1999	Rejected

Korea	KR20000040516	July 14, 2000	Issued – KR 10-0337162
Taiwan	TW89113063	July 1, 2000	Issued – TW156219
Malaysia	PI20003162	July 11, 2000	Issued – MY116815

4.31 To the best of Complainants' present knowledge, information and belief, there are no other foreign patents or foreign patent applications pending, filed, abandoned, withdrawn or rejected corresponding to the '439 patent.

#### **4. The '254 patent**

##### **a. Identification and ownership by Complainant**

4.32 On June 5, 2001, United States Patent No. 6,243,254 B1 ("the '254 patent"), titled *Dielectric Ceramic Composition and Laminated Ceramic Capacitor Using the Same*, was duly and legally issued to Nobuyuki Wada, Masamitsu Shibata, Takashi Hiramatsu, and Yukio Hamaji. A true and correct certified copy of the '254 patent is attached hereto as Exhibit 4 and incorporated herein by reference.

4.33 Murata is the assignee and owner of all right, title and interest in and to the '254 patent. A certified copy of the assignment of the '254 patent, reflecting the chain of title and identifying its ownership, is attached hereto as Exhibit 8.

4.34 Pursuant to Commission Rule 210.12, the original of the Complaint is accompanied by: (1) a certified copy of the '254 patent (Exhibit 4); (2) one certified copy and three additional copies of the prosecution history of the '254 patent (Appendix 4); (3) four copies of each reference cited therein (Appendix 8); and (4) a certified copy of the recorded assignments of the '254 patent (Exhibit 8).

4.35 The '254 patent is valid and in full force and effect.

**b. Nontechnical description of the patented inventions**

4.36 Pursuant to Commission Rule 210.12(a)(9)(v), a non-technical description of the inventions of the '254 patent is as follows:

4.37 The '254 patent is directed to certain dielectric ceramic compositions and multilayer ceramic capacitors that use that ceramic as a dielectric. The ceramic composition facilitates use of nickel electrodes and facilitates highly reliable and stable ceramic capacitors. Using nickel electrodes in a ceramic capacitor reduces production costs as compared to using electrodes made of more expensive metals such as silver or palladium. When nickel is used for the inner electrodes, the capacitor is sintered in a reducing environment to prevent oxidation of the nickel internal electrodes. Sintering in such a reducing environment may cause a dielectric that uses barium titanate as a principal component to be made semiconducting. Selecting a desirable ratio between barium and titanium concentrations in the dielectric can suppress such semiconducting properties.

**c. Foreign counterparts to the '254 patent**

4.38 The following is a list of foreign counterparts to the '254 patent:

<b>Jurisdiction</b>	<b>App. No.</b>	<b>Filing Date</b>	<b>Status</b>
Japan	JP 10-227203	Aug. 11, 1998	Issued – JP3709914
Japan	JP 10-227202	Aug. 11, 1998	Issued – JP3336967
Taiwan	TW88113529	Aug. 7, 1999	Issued – TW132110
China	CN1999117792	Aug. 11, 1999	Issued – CN1093103
Korea	KR19990032926	Aug. 11, 1999	Issued – KR324722
Germany	DE19937999	Aug. 11, 1999	Issued – DE19937999
United Kingdom	GB199918739	Aug. 9, 1999	Issued – GB2340488

4.39 To the best of Complainants' present knowledge, information and belief, there are no other foreign patents or foreign patent applications pending, filed, abandoned, withdrawn or rejected corresponding to the '254 patent.

**V. UNFAIR ACTS OF PROPOSED RESPONDENTS – PATENT INFRINGEMENT AND IMPORTATION**

**A. PROPOSED RESPONDENTS' PRODUCTS**

5.1 Pursuant to Commission Rule 210.12(b), the original of this Complaint is accompanied by SEMCO's June 2009 product catalog, entitled "Multilayer Ceramic Capacitors," which identifies samples of the imported articles that are the subject of the Complaint. See Exhibit 9. In addition, attached as Exhibits 10-12 are data sheets for the following accused SEMCO ceramic capacitors: CL05B104KP5NNNC and CL05X105KQ5NNNC, and CL31B106KAHNNNE. And attached as Exhibit 13 are photographs of the following accused SEMCO ceramic capacitors: CL10Y104MR5NJNB, CL10Y105MR5NJNB, CL21B104MO5NJNB, and CL21Y225MR5NJNB. Evidence of the unfair importation of SEMCO capacitors is included in the attached Declaration of Dr. David Hughes, hereto as Exhibit 14.

5.2 On information and belief, SEMCO offers an extensive product line of ceramic capacitor products of various specifications. SEMCO currently offers at least the model numbers identified in the product catalog attached hereto as Exhibit 9. Proposed Respondents import into the United States, sell for importation into the United States, and/or sell after importation into the United States SEMCO ceramic capacitors that embody the inventions disclosed and claimed in the patents-in-suit.

5.3 Further, on information and belief, SEMCO manufactures ceramic capacitors in foreign facilities. In the "Manufacturing Site" section of its June 2009 Product Catalog entitled

“Multilayer Ceramic Capacitors,” SEMCO identifies manufacturing facilities in Korea, China and the Philippines. See Exhibit 9.

5.4 SEMCO’s ceramic capacitors are imported into the United States, either by SEMCO, SEMCO America, or by a third-party distributor. At this time, Complainants are not aware of the identities of all of SEMCO’s third-party distributors.

5.5 SEMCO’s ceramic capacitors are also assembled into downstream products overseas and thereafter imported into the United States as part of larger downstream consumer electronics products. For example, upon information and belief, SEMCO sells in the United States modules or other products that contain infringing ceramic capacitors.

5.6 Thus, the proposed Respondents import into the United States, sell for importation into the United States, and/or sell after importation into the United States the accused ceramic capacitors either by themselves or in downstream products.

## **B. INFRINGEMENT OF THE '229 PATENT**

5.7 Upon information and belief, multiple SEMCO products infringe claims 1-4, 7-9, 11-14, 17-24, 28-31, 34-47, 51-53, 55 and 56 of the '229 patent. As a specific example, SEMCO capacitor Nos. CL10Y104MR5NJNB, CL10Y105MR5NJNB, CL21B104MO5NJNB, and CL21Y225MR5NJNB infringe the asserted claims of the '229 patent.

5.8 Upon information and belief, SEMCO’s capacitors are manufactured outside of the United States, including but not limited to Korea, and then imported into the United States.

5.9 Upon information and belief, after importation, ceramic capacitors designed and manufactured by SEMCO are sold in the United States by SEMCO America and third-party distributors acting on behalf of SEMCO and/or SEMCO America.

5.10 The aforesaid acts of Respondents constitute acts of infringement.

5.11 A claim chart demonstrating that SEMCO's capacitor Nos. CL10Y104MR5NJNB, CL10Y105MR5NJNB, CL21B104MO5NJNB, and CL21Y225MR5NJNB infringe claims 1, 28 and 51 of the '229 patent is attached hereto as Exhibit 15 to the Declaration of Dr. Ian Burn (the Burn Declaration is attached hereto as Exhibit 15).

**C. INFRINGEMENT OF THE '309 PATENT**

5.12 Upon information and belief, multiple SEMCO products infringe claim 3 of the '309 patent. As a specific example, Complainants are informed and believe that SEMCO capacitor No. CL31B106KAHNNNE infringes the asserted claim of the '309 patent.

5.13 Upon information and belief, SEMCO's capacitors are manufactured outside of the United States, including but not limited to Korea, China, and the Philippines and then imported into the United States.

5.14 Upon information and belief, after importation, ceramic capacitors designed and manufactured by SEMCO are sold in the United States by SEMCO America and third-party distributors acting on behalf of SEMCO and SEMCO America.

5.15 The aforesaid acts of Respondents constitute acts of infringement.

5.16 A claim chart demonstrating that SEMCO's capacitor No. CL31B106KAHNNNE infringes claim 3 of the '309 patent is attached hereto as Exhibit 5 to the Declaration of Dr. Ian Burn.

**D. INFRINGEMENT OF THE '439 PATENT**

5.17 Upon information and belief, multiple SEMCO products infringe claims 1-3 and 5 of the '439 patent. As a specific example, Complainants are informed and believe that SEMCO capacitor No. CL05X105KQ5NNNC infringes the asserted claims of the '439 patent.

5.18 Upon information and belief, SEMCO's capacitors are manufactured outside of the United States, including but not limited to Korea, China, and the Philippines and then imported into the United States.

5.19 Upon information and belief, after importation, ceramic capacitors designed and manufactured by SEMCO are sold in the United States by SEMCO America and third-party distributors acting on behalf of SEMCO and SEMCO America.

5.20 The aforesaid acts of Respondents constitute acts of infringement.

5.21 A claim chart demonstrating that SEMCO's capacitor No. CL05X105KQ5NNNC infringes claim 1 of the '439 patent is attached hereto as Exhibit 20 to the Declaration of Dr. Ian Burn.

#### **E. INFRINGEMENT OF THE '254 PATENT**

5.22 Upon information and belief, multiple SEMCO products infringe claims 1, 2, 9-14, 19 and 20 of the '254 patent. As a specific example, capacitor No. CL05B104KP5NNNC infringes the asserted claims of the '254 patent.

5.23 Upon information and belief, SEMCO's capacitors are manufactured outside of the United States, including but not limited to Korea, China, and/or the Philippines and then imported into the United States.

5.24 Upon information and belief, after importation, ceramic capacitors designed and manufactured by SEMCO are sold in the United States by SEMCO America and third-party distributors acting on behalf of SEMCO and SEMCO America.

5.25 The aforesaid acts of Respondents constitute acts of infringement.

5.26 A claim chart demonstrating that SEMCO's capacitor No. CL05B104KP5NNNC infringes claim 1 of the '254 patent is attached hereto as Exhibit 10 to the Declaration of Dr. Ian Burn.

## **VI. SPECIFIC INSTANCES OF UNLAWFUL IMPORTATION AND SALE**

6.1 On information and belief, SEMCO designs, manufactures and tests infringing ceramic capacitors at its facilities in Korea, China, and/or the Philippines. Some of those infringing foreign-manufactured capacitors are then imported into the United States. SEMCO's capacitors have been imported into the United States and are widely available for purchase in the United States, either through SEMCO, SEMCO America, or third-party distributors. Evidence of this foreign manufacture, importation and availability is described in the Declaration of David Hughes attached as Exhibit 14.

6.2 For example, SEMCO Model Nos. CL10Y104MR5NJNB, CL10Y105MR5NJNB, CL21B104MO5NJNB, and CL21Y225MR5NJNB purchased from SEMCO infringe one or more claims of the '229 patent. SEMCO Model No. CL31B106KAHNNNE purchased from T-SAN Electronics, Inc. ("T-SAN") in Torrance, California infringes one or more claims of the '309 patent. SEMCO Model No. CL05X105KQ5NNNC purchased from T-SAN in Torrance, California infringes one or more claims of the '439 patent. SEMCO Model No. CL05B104KP5NNNC purchased from T-SAN in Torrance, California infringes one or more claims of the '254 patent.

6.3 Upon information and belief, additional SEMCO capacitors may infringe one or more of the patents-in-suit. Complainants believe that it is likely that, after a reasonable opportunity for further investigation and discovery, they will be able to show that additional



SEMCO capacitors infringe one or more of the patents-in-suit under circumstances that would give rise to further violations of Section 337.

## **VII. HARMONIZED TARIFF SCHEDULE INFORMATION**

7.1 The accused products are believed to fall within the following classifications of the Harmonized Tariff Schedules (HTS) of the United States: 8532 and 8532.24.00. These HTS numbers are illustrative only and are not exhaustive of the products accused of infringement in this Complaint. These HTS numbers are not intended to limit the scope of the Investigation.

## **VIII. THE DOMESTIC INDUSTRY**

8.1 A domestic industry, as defined by 19 U.S.C. § 1337 (a)(3), exists as a result of conduct by Complainants in the United States that exploits the '229, '309, '439 and '254 patents and that relates to products that employ the patented technologies. Murata is in the process of further establishing and expanding that domestic industry, including by seeking relief from and overcoming the unfair trade practices identified in this Complaint.

8.2 Within the United States, Murata has made and maintains significant investment in plant and equipment, significant employment of labor and capital, and substantial investment in the exploitation of the patents-in-suit through engineering, research and development, testing and quality assurance. Of the Murata capacitor products that have been developed and supported by Murata's significant and substantial investments in the United States, as described herein, a significant portion practice the inventions of the '229, '309, '439 and '254 patents.

### **A. TECHNICAL PRONG**

#### **1. The '229 patent**

8.3 Murata's ceramic capacitors were designed, developed and manufactured by Murata and enable the practice of the '229 patent. For example, Murata's capacitor No.

LLA185C70G105M embodies at least claims 1, 28 and 51 of the '229 patent. A claim chart demonstrating how this product practices exemplary claims 1, 28 and 51 of the '229 patent is attached hereto as Exhibit 17 to the Declaration of Dr. Ian Burn. Moreover, a number of additional Murata capacitor products embody the inventions of the '229 patent and are among the products developed and supported by the significant and substantial investments made and maintained by Murata in the United States, as described herein.

## **2. The '309 patent**

8.4 Murata's ceramic capacitors were designed, developed and manufactured by Murata and enable the practice of the '309 patent. For example, Murata's capacitor No. GRM21BB31C475K embodies at least claim 3 of the '309 patent. A claim chart demonstrating how this product practices exemplary claim 3 of the '309 patent is attached hereto as Exhibit 7 to the Declaration of Dr. Ian Burn. Moreover, a number of additional Murata capacitor products embody the inventions of the '309 patent and are among the products developed and supported by the significant and substantial investments made and maintained by Murata in the United States, as described herein.

## **3. The '439 patent**

8.5 Murata's ceramic capacitors were designed, developed and manufactured by Murata and enable the practice of the '439 patent. For example, Murata's capacitor No. GRM1552C1H102J embodies at least claim 1 of the '439 patent. A claim chart demonstrating how this product practices exemplary claim 1 of the '439 patent is attached hereto as Exhibit 22 to the Declaration of Dr. Ian Burn. Moreover, a number of additional Murata capacitor products embody the inventions of the '439 patent and are among the products developed and supported

by the significant and substantial investments made and maintained by Murata in the United States, as described herein.

#### **4. The '254 patent**

8.6 Murata's ceramic capacitors were designed, developed and manufactured by Murata and enable the practice of the '254 patent. For example, Murata's capacitor No. GRM155B30J105KE18D embodies at least claim 1 of the '254 patent. A claim chart demonstrating how this product practices exemplary claim 1 of the '254 patent is attached hereto as Confidential Exhibit 12 to the Declaration of Dr. Ian Burn. Moreover, a number of additional Murata capacitor products embody the inventions of the '254 patent and are among the products developed and supported by the significant and substantial investments made and maintained by Murata in the United States, as described herein.

#### **B. ECONOMIC PRONG**

##### **1. Significant investment in plant and equipment**

8.7 A domestic industry exists in the United States by virtue of Complainants' significant investments in plant and equipment devoted to pre- and post-sale product engineering, testing, and quality assurance of ceramic capacitors that embody and exploit the technology covered by one or more claims of each of the Asserted Patents.

8.8 MENA has facilities in the United States for testing and quality assurance for ceramic capacitors that exploit one or more claims of each of the patents-in-suit. Those facilities also house product engineers who perform pre- and post-sale product engineering work for MENA's U.S. customers. The Declaration of Lanney McHargue attached as Confidential Exhibit 16 summarizes further information concerning these facilities.

## **2. Significant employment of labor and capital**

8.9 Complainants employ in the United States a significant number of persons involved in pre- and post-sale product engineering, testing, and quality assurance of ceramic capacitors that exploit at least one claim of each of the patents-in-suit. These employees include full-time employees dedicated to the design, testing and quality assurance regarding ceramic capacitor products covered by the patents-in-suit as well as employees responsible for product engineering and technical support of the patented products. The Declarations of Lanney McHargue, Woody Wilder, and Frank Yang attached as Confidential Exhibits 16-18, respectively, summarize information concerning these employees.

## **3. Substantial investment in exploiting the patents-in-suit through engineering, research and development and quality assurance work**

8.10 Complainants have made and will continue to make, substantial investments in the United States in pre- and post-sale product engineering as well as research and development, testing and quality assurance related to existing and future ceramic capacitor products that exploit the patents-in-suit. The Declarations of Lanney McHargue, Woody Wilder, and Frank Yang attached as Confidential Exhibits 16-18, respectively, summarize additional information concerning these expenditures.

## **IX. LICENSES**

9.1 Murata has not licensed any of the patents-in-suit.

## **X. RELATED LITIGATION**

10.1 There has been no foreign or domestic court or agency litigation involving any of the patents-in-suit.

## **XI. RELIEF REQUESTED**

WHEREFORE, by reason of the foregoing, Complainants respectfully request that the United States International Trade Commission:

a. Institute an immediate investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to violations of that section based upon the unlawful importation into the United States, the sale for importation and/or the sale within the United States after importation by Respondents of certain ceramic capacitors and products containing same that infringe any claims of the patents-in-suit;

b. Schedule and conduct a hearing on said unlawful acts and, following said hearing:

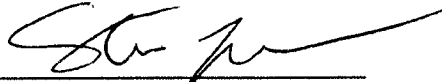
c. Issue a permanent exclusion order pursuant to Section 337(d) of the Tariff Act of 1930, as amended, excluding from entry into the United States all ceramic capacitors that are manufactured, imported or sold for importation by or on behalf of Respondents and that infringe any claim of the patents-in-suit, and all products that contain such infringing ceramic capacitors.

d. Issue permanent cease and desist orders pursuant to Section 337(f) of the Tariff Act of 1930, as amended, directing Respondents to cease and desist from marketing, advertising, demonstrating, sampling, warehousing inventory for distribution, offering for sale, selling, distributing, licensing, or using any ceramic capacitors that infringe any claim of the patents-in-suit; and

e. Grant such other and further relief as the Commission deems just and proper under the law, based on the facts determined by the investigation and the authority of the Commission.

Dated: October 1, 2009

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'SJR', is written over a horizontal line.

Steven J. Routh  
Sten A. Jensen  
Steven E. Adkins  
T. Vann Pearce  
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**VERIFICATION OF COMPLAINT**

I, Tsuyoshi Kunotsubo, declare, in accordance with 19 C.F.R. §§ 201.8, 210.4 and 210.12(a), under penalty of perjury, that the following statements are true:

1. I am Team Leader of Legal & License section of Intellectual Department of Complainant Murata and am duly authorized to sign this Complaint on behalf of Complainants;

2. I have read the foregoing Complaint;

3. To the best of my knowledge, information, and belief, formed after an inquiry reasonable under the circumstances, the foregoing Complaint is well-founded in fact and is warranted by existing law or by a non-frivolous argument for the extension, modification, or reversal of existing law or the establishment of new law;

4. The allegations and other factual contentions have evidentiary support or, as specifically identified, are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery; and

5. The foregoing Complaint is not being submitted for an improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of the investigation.

Executed at Kyoto, Japan on October 1, 2009.

Tsuyoshi Kunotsubo  
Tsuyoshi Kunotsubo

*IN THE MATTER OF CERTAIN CERAMIC CAPACITORS AND  
PRODUCTS CONTAINING SAME*

**Investigation No. 337-TA-\_\_\_\_\_**

**EXHIBITS TO COMPLAINT**

<b>EXHIBIT NO.</b>	<b>EXHIBIT TITLE</b>	<b>PUBLIC OR CONFIDENTIAL</b>
1	Certified copy of the '229 patent	Public
2	Certified copy of the '309 patent	Public
3	Certified copy of the '439 patent	Public
4	Certified copy of the '254 patent	Public
5	Certified copy of the assignment of the '229 patent	Public
6	Certified copy of the assignment of the '309 patent	Public
7	Certified copy of the assignment of the '439 patent	Public
8	Certified copy of the assignment of the '254 patent	Public
9	SEMCO's June 2009 product catalog: "Multilayer Ceramic Capacitors"	Public
10	Data sheet for accused SEMCO ceramic capacitor No. CL05B104KP5NNNC	Public
11	Data sheet for accused SEMCO ceramic capacitor No. CL05X105KQ5NNNC	Public
12	Data sheet for accused SEMCO ceramic capacitor No. CL31B106KAHNNNE	Public
13	Photographs of the accused SEMCO ceramic capacitor Nos. CL01Y104MR5NJNB, CL10Y105MR5NJNB, CL21B104MONJNB and CL21Y225MR5NJNB.	Public
14	Declaration of Dr. David Hughes	Public
15	Declaration of Dr. Ian Burn	Public <sup>1</sup>
16	Declaration of Lanney McHargue	Confidential
17	Declaration of Woody Wilder	Confidential
18	Declaration of Frank Yang	Confidential

<sup>1</sup> There are 22 exhibits attached to the Declaration of Dr. Ian Burn. The declaration itself and Exhibits 1-10 and 13-22 are not confidential. However, Exhibits 11 and 12 to the Burn declaration are Confidential Exhibits.



**APPENDICES TO COMPLAINT**

<b>APPENDIX NO.</b>	<b>APPENDIX TITLE</b>	<b>PUBLIC OR CONFIDENTIAL</b>
1	One certified copy and three additional copies of the prosecution history of the '229 patent	Public
2	One certified copy and three additional copies of the prosecution history of the '309 patent	Public
3	One certified copy and three additional copies of the prosecution history of the '439 patent	Public
4	One certified copy and three additional copies of the prosecution history of the '254 patent	Public
5	Four copies of each reference cited in the prosecution history of the '229 patent	Public
6	Four copies of each reference cited in the prosecution history of the '309 patent	Public
7	Four copies of each reference cited in the prosecution history of the '439 patent	Public
8	Four copies of each reference cited in the prosecution history of the '254 patent	Public