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9 **UNITED STATES DISTRICT COURT**
10 **NORTHERN DISTRICT OF CALIFORNIA**

12 **DEPENDABLE COMPONENT SUPPLY**
13 **CORP., Plaintiff, on behalf of itself and others**
14 **similarly situated,**

15 v.

16 **MURATA MANUFACTURING CO., LTD.;**
17 **MURATA ELECTRONICS NORTH AMERICA,**
18 **INC.; PANASONIC CORPORATION;**
19 **PANASONIC CORPORATION OF NORTH**
20 **AMERICA; PANASONIC ELECTRONIC**
21 **DEVICES CO. LTD; PANASONIC**
22 **ELECTRONIC DEVICES CORPORATION OF**
23 **AMERICA; SUMIDA CORPORATION;**
24 **SUMIDA ELECTRIC CO., LTD.; SUMIDA**
25 **AMERICA COMPONENTS, INC.; TAIYO**
26 **YUDEN CO., LTD.; TAIYO YUDEN (U.S.A.)**
27 **INC.; TDK CORPORATION; TDK-EPC**
28 **CORPORATION; and TDK U.S.A.**
CORPORATION, Defendants.

Case No.

CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

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1 Plaintiff Dependable Component Supply Corp. (“Dependable Component” or Plaintiff) brings this
2 action on behalf of itself and on behalf of a class of all persons and entities similarly situated (the “Class”
3 or the “Direct Purchaser Class”), for damages and injunctive relief under U.S. antitrust laws against
4 defendants Murata Manufacturing Co., Ltd.; Murata Electronics North America, Inc.; Panasonic
5 Corporation; Panasonic Corporation of North America; Panasonic Electronic Devices Co. Ltd; Panasonic
6 Electronic Devices Corporation of America; Sumida Corporation; Sumida Electric Co., Ltd.; Sumida
7 America Components, Inc.; Taiyo Yuden Co., Ltd.; Taiyo Yuden (U.S.A.) Inc.; TDK Corporation; TDK-
8 EPC Corporation; and TDK U.S.A. Corporation (collectively and hereinafter “Defendants”). Based on
9 investigation of its counsel, Plaintiff alleges on information and belief as follows:

10 I. NATURE OF THE ACTION

11 1. This action arises out of a scheme perpetrated by Defendants, leading Japanese
12 manufacturers of discrete inductors, to fix and stabilize the prices of inductors since at least January 2003
13 until the summer of 2014 (the “Class Period”).¹

14 2. Discrete inductors are passive electronic components fixed to a circuit board that store and
15 regulate energy in a circuit using principles of electromagnetism (“Inductors”). Along with capacitors
16 and resistors, Inductors are one of the most common passive linear elements in electronic circuits and thus
17 are ubiquitous in thousands of products that rely on electronic circuits for power. Products such as laptop
18 and desktop computers, cars, televisions, wireless handsets, video game consoles, and wireless LAN boxes
19 contain dozens of Inductors.

20 3. Defendants formed a cartel to stabilize prices of Inductors as a reaction to a series of shocks
21 to the market for Inductors that began in the late 1990s resulting from increased competition from Korean
22 and Taiwanese manufacturers. The global recession of 2001 exacerbated these effects, as demand for the
23 consumer electronics goods plummeted.

24
25 ¹ Plaintiff’s investigation is ongoing, and Plaintiff has conservatively chosen a start to the Class Period.
26 Plaintiff purchased millions of dollars of Inductors from Defendants prior to January 1, 2003, and now
27 strongly suspects that prices from 1999 through 2002 were supra-competitive. Plaintiff reserves the
28 right to amend his allegations concerning Class Period following further investigation and full
discovery in this litigation.

1 4. Defendants' cartel activity arose out of a need to protect profits of these Japan-based
2 companies from the competition introduced by a trade treaty, the Information Technology Agreement,
3 which erased tariff protections starting in 1997. The need to stabilize prices became especially prominent
4 following the global recession in 2001, when sales of Inductors to North America dropped by 35%.

5 5. Despite these dramatic changes in the competitive environment, which started in 2001 and
6 worsened in 2003 when China ratified the Information Technology Agreement, prices for Inductors
7 remained stubbornly high during the Class Period. This is because Defendants exchanged competitively
8 sensitive information, such as price and anticipated volume of sales, with their competitors and reached
9 agreements to maintain artificially high prices.

10 6. Defendants' scheme was orchestrated through their participation in industry groups, such
11 as the Japan Electronics and Information Technology Industries Association ("JEITA"). Each of the
12 Defendants is a member of JEITA, which was formed in 2000, and has been used as a pretext for collusion
13 repeatedly by Japanese electronics manufacturers.

14 7. There are two consolidated cases in this District that concern allegations of price fixing the
15 capacitors and resistors industries, *In re Capacitors Antitrust Litigation*, Case No. 14-3264 JD (N.D. Cal.),
16 and *In re Resistors Antitrust Litigation*, Case No. 15-3820 JD (N.D. Cal.). Only the Panasonic Defendants
17 are defendants in the *Capacitors* and *Resistors* cases, and are named in the instant action concerning
18 Inductors. On information and belief, the *Capacitors* and *Resistors* actions arise out of the same
19 underlying investigation.

20 8. Through JEITA meetings, Defendants exchanged competitively sensitive information and
21 reached agreements just as some Defendants did in cartels concerning capacitors and resistors, two other
22 electronic components that were subject to the same economic forces and opportunities for collusion as
23 those that led to cartel activity in Inductors. Indeed, in *Resistors* it is alleged that certain Defendants
24 started to exchange competitively sensitive information concerning resistors in July of 2003, for many of
25 the same reasons that Defendants did so with Inductors.

26 9. It has been reported that the Panasonic Defendants were amnesty applicants under the
27 Department of Justice's ("DOJ") Antitrust Criminal Penalty Enhancement and Reform Act of 2004
28 ("ACPERA") program in both the *Capacitors* and *Resistors* cases. It has not yet been reported that

1 Panasonic is an ACPERA applicant concerning cartel activity in the Inductor industry, but on information
2 and belief the Panasonic Defendants have strong motivation to have provided information on cartel
3 activity in the Inductor market as part of negotiating terms with regulators who are otherwise scrutinizing
4 their behavior and weighing punishment for their participation in cartel activity in capacitors and resistors.
5 Plaintiff's investigation is ongoing, and Plaintiff expressly reserves the right to amend to add additional
6 facts.

7 10. On January 4, 2018, mLex first publicly reported that certain Japanese companies received
8 investigative subpoenas from the DOJ's office in the Northern District of California relating to an
9 investigation of price-fixing activity in the Inductors market. Upon information and belief, the Inductors
10 investigation arose out of the capacitors and resistors investigations, which became public (at least with
11 respect to capacitors) in the summer of 2014. mLex reported that Panasonic stated that it had not received
12 a subpoena.

13 11. Inductors, along with capacitors and resistors, are the basic components of an electric
14 circuit that are ubiquitous in modern day personal electronics such as computers, televisions, routers, set-
15 top boxes, video game consoles, and automobiles. In short, the fates of capacitors, resistors, and Inductors
16 are linked. The same global economic forces that shaped the capacitor and resistors market—and caused
17 Japanese manufacturers to collude—drove Defendants to conspire with respect to the prices of Inductors.

18 12. During the Class Period, prices of Inductors were remarkably resistant to the economic
19 forces of supply and demand. Indeed, Inductor prices fell further when Defendants stopped their cartel
20 activity than they did during the Great Recession of 2008-2010, when Inductor prices remained flat or
21 declined little.

22 13. Globally, the Inductors market was several billion dollars or more in each year of the Class
23 Period. In the United States, hundreds of millions of dollars of Inductors were sold during the Class
24 Period.

25 II. JURISDICTION AND VENUE

26 14. Jurisdiction exists under Section 16 of the Clayton Act (15 U.S.C. § 26) to recover equitable
27 relief for violation of Section 1 of the Sherman Act (15 U.S.C. § 1). The Court has original federal
28

1 question jurisdiction over the Sherman Act claim asserted in this complaint pursuant to 28 U.S.C. § 1331
2 and Section 16 of the Clayton Act.

3 15. Venue is proper in this District under Sections 4(a) and 12 of the Clayton Act (15 U.S.C.
4 §§ 12 and 22), and 28 U.S.C. § 1391(b), (c), and (d) because Defendants regularly transact business in
5 this District. Additionally, a substantial part of the events giving rise to Plaintiffs' claims occurred in this
6 District. Specifically, some Defendants maintain offices in this District, and all Defendants sell or seek
7 to sell Inductors to electronics companies located in this District.

8 16. This Court has jurisdiction over Defendants because the wrongdoing alleged herein was
9 directed at purchasers of Inductors in the United States and in this District.

10 III. PARTIES

11 A. Plaintiff

12 17. Plaintiff Dependable Component Supply Corp. ("Dependable Component") purchased
13 Inductors directly from one or more Defendants during the Class Period and has suffered injury because
14 of Defendants' anticompetitive and unlawful conduct. Dependable Component was incorporated in
15 Florida under its laws, and during the Class Period purchased millions of dollars of Inductors from
16 Defendants in the course of its business as a distributor of electronic components. Plaintiff purchased
17 Inductors from Inductor manufacturers including TDK, TOKO, Murata, Panasonic, and Taiyo Yuden.
18 Indeed, sales of Inductors were the largest aspect of Plaintiff's business by revenues during the Class
19 Period. Plaintiff sold Inductors to customers that included leading Original Equipment Manufacturers
20 ("OEMs") of telecommunications products.

21 B. The Murata Defendants

22 18. Murata Manufacturing Co., Ltd. ("Murata Manufacturing") is a Japanese corporation with
23 its principal place of business located at 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555,
24 Japan. Murata Manufacturing—directly and/or through its predecessors and subsidiaries, which it wholly
25 owned and/or controlled—manufactured, marketed, and/or sold Inductors in the United States during the
26 Class Period. For example, industry data shows that Murata Manufacturing had \$15 million in sales of
27 Inductors in North America in 2007 alone. Murata Manufacturing is one of the largest global
28

1 manufacturers of passive electronic components. Murata Manufacturing annually has revenues in excess
2 of \$5 billion from sales of passive electronic components, including inductors.

3 19. In March of 2014, Murata Manufacturing acquired controlling interest in TOKO, Inc.
4 (“TOKO”), a Japanese company that was a leading Inductor manufacturer that sold hundreds of millions
5 of dollars of Inductors in the United States during the Class Period. According to estimates from one
6 industry expert, TOKO had \$47 million of sales of Inductors in North America in 2007 alone. By April
7 2015, Murata Manufacturing had assumed all aspects of TOKO’s business, including its assets, sales,
8 service, and technical support for the portfolio of TOKO products, including Inductors. To the extent
9 Murata Manufacturing assumed, in whole or in part, the assets and liabilities of TOKO, Plaintiffs also
10 intend to hold Murata Manufacturing liable for any violations of Sherman Act § 1 by TOKO that occurred
11 during the Class Period.

12 20. Murata Electronics North America, Inc. (“MENA”) is a wholly owned subsidiary of
13 Murata Manufacturing (with Murata Manufacturing and TOKO, “Murata” or the “Murata Defendants”),
14 a Texas corporation with its principal place of business located at 2200 Lake Park Drive SE, Smyrna,
15 Georgia 30080-7604. MENA—directly and/or through its subsidiaries, which it wholly owned and/or
16 controlled—manufactured, marketed, and/or sold Inductors that were purchased throughout the United
17 States, including in this District, during the Class Period.

18 **C. The Panasonic Defendants**

19 21. Panasonic Corporation (“Panasonic Corp.”) is a Japanese corporation with its principal
20 place of business located at 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan. Panasonic
21 Electronic Devices Co. Ltd. (“PED”) was a former Japanese subsidiary of Panasonic Corp. that was a
22 leading manufacturer of Inductors. PED has substantial sales of Inductors in the United States during the
23 Class Period. For example, industry data shows that in 2007 PED sold \$10 million of Inductors in North
24 America. In August 2011, Panasonic Corp. announced it was dissolving and absorbing PED effective
25 April 2012.² Panasonic is responsible for the acts of its wholly owned and controlled subsidiary PED, and

27 ² *Panasonic to Absorb Wholly-Owned Subsidiaries (Panasonic Electronic Devices Co., Ltd. And*
28 *Panasonic Electronic Devices Japan Co., Ltd)*, PANASONIC HEADQUARTER NEWS (Aug. 31, 2011),
<http://news.panasonic.com/global/press/data/en110831-6/en110831-6.html> (last visited Jan. 8, 2018).

1 Plaintiff will seek to hold Panasonic Corp. liable for any violations of Sherman Act § 1 by PED that
2 occurred during the Class Period.

3 22. Panasonic Corporation of North America (“PCNA”), a wholly owned subsidiary of
4 Panasonic Corp., is a Delaware corporation with its principal place of business located at Two Riverfront
5 Plaza, Newark, New Jersey 07102. During the Class Period, PCNA—either directly or through its
6 business units, subsidiaries, agents, or affiliates—sold and distributed to United States purchasers
7 Inductors manufactured by business units, subsidiaries, agents, or affiliates of its corporate parent,
8 Panasonic Corp. Defendants Panasonic Corp., PED, and PCNA are hereinafter referred to as “Panasonic”
9 or the “Panasonic Defendants.”

10 **D. The Sumida Defendants**

11 23. Sumida Electric Co. Ltd. (“Sumida Electric”) is a Japanese corporation with its principal
12 place of business located at 3-6, 3-Chome, Ningyo-cho, Nihonbashi, Chuo-ku, Tokyo 103-8589, Japan.
13 Sumida Electric—directly and/or through its predecessors and subsidiaries, which it wholly owned and/or
14 controlled—manufactured, marketed, and/or sold Inductors in the United States during the Class Period.
15 For example, in 2007 Sumida Electric sold \$27 million of Inductors in North America according to
16 industry data.

17 24. Sumida America Components Inc. (“Sumida America”) is a Delaware corporation with its
18 headquarters at 1251 N Plum Grove Road, Suite 150, Schaumburg, Illinois 60173. Sumida America
19 maintains offices in this District, at 1885 Lundy Avenue, Suite 250, San Jose, California 95131. During
20 the Class Period, Sumida America—either directly or through its business units, subsidiaries, agents, or
21 affiliates—sold and distributed to United States purchasers Inductors manufactured by business units,
22 subsidiaries, agents, or affiliates of its corporate parent, Sumida Electric. Defendants Sumida Electric and
23 Sumida America are hereinafter referred to as “Sumida” or the “Sumida Defendants.”

24 **E. The Taiyo Yuden Defendants**

25 25. Taiyo Yuden Co., Ltd. (“Taiyo Yuden Co.”) is a Japanese corporation with its principal
26 place of business located at 6-16-20, Ueno, Taito-ku, Tokyo 110-0005, Japan. Taiyo Yuden Co.—directly
27 and/or through its predecessors and subsidiaries, which it wholly owned and/or controlled—manufactured,
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1 marketed, and/or sold Inductors in the United States during the Class Period. For example, in 2007 Taiyo
2 Yuden Co. sold \$16 million of Inductors in North America according to industry data.

3 26. Defendant Taiyo Yuden (USA) Inc. (“Taiyo Yuden USA”), an Illinois corporation, is a
4 wholly owned subsidiary of Taiyo Yuden Co., with its principal place of business located at 10 North
5 Martingale Road, Suite 575, Schaumburg, Illinois 60173. During the Class Period, Taiyo Yuden USA—
6 either directly or through its business units, subsidiaries, agents, or affiliates—sold and distributed to
7 United States purchasers Inductors manufactured by business units, subsidiaries, agents, or affiliates of its
8 corporate parent, Taiyo Yuden Co. Defendants Taiyo Yuden Co. and Taiyo Yuden USA are collectively
9 referred to herein as “Taiyo Yuden” or the “Taiyo Yuden Defendants.”

10 **F. The TDK Defendants**

11 27. TDK Corporation is a Japanese corporation with its principal place of business at 13-1
12 Nihonbashi 1-chrome, Chuo-ku 103-8272, Tokyo, Japan. TDK Corporation—directly and/or through its
13 predecessors and subsidiaries, which it wholly owned and/or controlled—manufactured, marketed, and/or
14 sold Inductors in the United States during the Class Period.

15 28. TDK-EPC Corporation (“TDK-EPC”) is a Japanese corporation with its principal place of
16 business located at Shibaura Renasite Tower, 3-9-1 Shibaura, Minato-ku, Tokyo 108-0023, Japan. TDK-
17 EPC was founded on October 1, 2009 from the combination of the passive components businesses of TDK
18 Corporation and non-party EPCOS AG, a German corporation. TDK-EPC—directly and/or through its
19 predecessors and subsidiaries, which it wholly owned and/or controlled—manufactured, marketed, and/or
20 sold Inductors in the United States during the Class Period.

21 29. Defendant TDK U.S.A. Corporation (“TDK USA”), a New York corporation, is a wholly
22 owned subsidiary of TDK Corporation with its principal place of business located at 525 RXR Plaza,
23 Uniondale, New York 11556. During the Class Period, TDK USA—either directly or through its business
24 units, subsidiaries, agents, or affiliates—sold and distributed to United States purchasers Inductors
25 manufactured by business units, subsidiaries, agents, or affiliates of its corporate parents, TDK
26 Corporation and TDK-EPC. TDK Corporation, TDK-EPC, and TDK USA are collectively referred to as
27 “TDK” or the “TDK Defendants.”
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1 30. The TDK Defendants were the largest manufacturers of Inductors during the Class Period.
2 For example, in 2007 TDK sold \$57 million in Inductors in North America, more than any other
3 manufacturer according to one industry expert. Following the 2009 combination, TDK began to sell TDK
4 and EPCOS-branded Inductors, and does so to this day.

5 **G. Agents and Co-Conspirators**

6 31. Each Defendant acted as the principal of or agent for the other Defendant with respect to
7 the acts, violations, and common course of conduct alleged herein.

8 **IV. CLASS ALLEGATIONS**

9 32. Plaintiff brings this action on behalf of itself and as a class action pursuant to Federal Rules
10 of Civil Procedure 23(a), (b)(2) and (b)(3), on behalf of the members of a Class, which is defined as
11 follows:

12 All persons or entities in the United States who purchased Inductors
13 (including through controlled subsidiaries, agents, affiliates, or joint-
14 ventures) directly from any of the Defendants, their subsidiaries, agents,
15 affiliates or joint ventures from January 1, 2003 through August 1, 2014
16 (the "Class Period").

17 33. The Direct Purchaser Class definition encompasses those who purchased Inductors directly
18 from any of the Defendants, even if the Inductors purchased were manufactured, sold, or distributed by a
19 given Defendant's predecessors, parents, business units, subsidiaries, affiliated entities, principals, agents,
20 or co-conspirators.

21 34. This definition of the Direct Purchaser Class specifically excludes the following persons
22 or entities: Defendants and their co-conspirators, subsidiaries, agents, and/or affiliates; Defendants'
23 officers, directors, management, employees, subsidiaries, and/or agents; all governmental entities; and the
24 Judges and chambers staff in this case, as well as any members of their immediate families.

25 35. The members of the Class are numerous. There are likely hundreds of companies across
26 the United States that purchased Inductors as part of their manufacturing or research activities, or to resell
27 to other such businesses. There are dozens of distributors, such as Plaintiff, that sold Inductors directly
28 purchased from Defendants. Due to the large number of potential class members, joinder of all Direct
Purchaser Class members is impracticable.

1 36. Plaintiff's claims are typical of the claims of the Direct Purchaser Class members because
2 Plaintiff directly purchased Inductors from certain of the Defendants named herein. Thus, Plaintiff was
3 harmed in the same way all Direct Purchaser Class members were damaged, by paying prices of Inductors
4 that were increased, fixed, or stabilized by the same wrongful conduct committed by all Defendants.

5 37. Plaintiff is an adequate representative. On information and belief, there were substantial
6 sales in the United States through distributors such as Plaintiff during the Class Period. As of 2016, a
7 leading industry analyst estimated that "more than half" of sales in the United States were to distributors.

8 38. The following questions of law and fact are common to Plaintiff and the Direct Purchaser
9 Class:

- 10 a. Whether Defendants conspired to fix, stabilize, or maintain prices of Inductors
11 sold to members of the Direct Purchaser Class in the United States during the
12 Class Period;
- 13 b. Whether Defendants committed any acts in furtherance of this conspiracy;
- 14 c. The duration and scope of Defendants' conspiracy, including the number of
15 meetings attended, information exchanged, and agreements made;
- 16 d. Whether Defendant fraudulently concealed their collusion;
- 17 e. Whether Defendants violated Section 1 of the Sherman Act;
- 18 f. Whether Defendants' collusion caused the prices of Inductors sold at any time
19 during the Class Period to purchasers in the United States to be artificially fixed,
20 raised, maintained, or stabilized at noncompetitive prices;
- 21 g. Whether Plaintiff and the other members of the Direct Purchaser Class were
22 impacted by Defendants' conduct and, if so, the appropriate Class-wide measure
23 of damages; and
- 24 h. Whether Plaintiffs and the other members of the Direct Purchaser Class are
25 entitled to, among other things, injunctive relief to prevent the recurrence of cartel
26 activity, and, if so, the nature and extent of such relief.

27 39. These and other questions of law and fact are common to the Direct Purchaser Class and
28 predominate over any questions affecting the Class members individually.

1 40. Plaintiff will fairly and adequately represent the interests of the Direct Purchaser Class
 2 because it directly purchased Inductors from one or more Defendants and has no conflicts with any other
 3 members of the Class. Furthermore, Plaintiff has retained sophisticated and competent counsel who are
 4 experienced in prosecuting antitrust class actions—in particular those involving electronic components
 5 such as Inductors—and spearheading other complex litigation.

6 41. A class action is the superior method to resolve the issue raised by Plaintiff and the
 7 members of the Direct Purchaser Class. Class resolution will reduce the risk of conflicting results and
 8 duplicative litigation, and will streamline resolution of the issues raised herein. Prosecution of claims by
 9 individual Class members is inefficient and inconsistent with the interests of judicial economy.

10 **V. AFFECTED COMMERCE**

11 42. Defendants engaged in conduct both inside and outside of the United States that caused
 12 direct, substantial, and reasonably foreseeable—indeed, intended—anticompetitive effects in interstate
 13 commerce within the United States. Specifically, Defendants directed price-fixing activities at U.S.
 14 customers, such as Plaintiff and the members of the Direct Purchaser Class, and then manufactured
 15 Inductors and shipped or otherwise transported them to the United States.

16 43. For purposes of the Foreign Trade Antitrust Improvements Act of 1982, Inductors
 17 manufactured abroad but shipped or billed to the United States constitute domestic or import commerce.
 18 Defendants’ sales of Inductors specifically targeted the United States and U.S. purchasers. Defendants
 19 understood that Inductors were often shipped internationally and billed to companies in the United States.
 20 On information and belief, Inductors that were shipped to countries such as Mexico, Taiwan, China, and
 21 Canada were billed to U.S. companies. In Mexico, for example, contract manufacturers specialize in
 22 assembling products for U.S. companies that will be imported in the United States. In China and Taiwan,
 23 companies such as Apple purchase Inductors directly or as a third-party beneficiary under purchase
 24 agreements between contract manufacturers and OEMs. It is known and understood that the finished
 25 products are to be assembled into products that are shipped into the United States.

26 44. Many Inductors were “drop shipped” from Japan to foreign countries during the Class
 27 Period. For example, Plaintiff purchased Inductors that were shipped directly to a customer in Germany.
 28

1 45. Additionally, to the extent any Inductors have been purchased by Direct Purchaser Class
2 members and these purchases do not constitute domestic or import commerce, the Defendants' unlawful
3 activities with respect thereto, as more fully alleged herein, had, and continue to have, a direct, substantial,
4 and reasonably foreseeable effect on United States commerce that gives rise to the claims asserted herein.
5 That is specifically true where a member of the Direct Purchaser Class buys within both international and
6 U.S. channels. The price-fixing activity in international channels (most notably sales in Asian offices of
7 such members of the Class) will have a direct and foreseeable impact on the U.S. purchases.

8 46. Inductors sold overseas directly to members of the Direct Purchaser Class (including
9 foreign subsidiaries and U.S. subsidiaries of foreign companies) that are imported to the United States
10 similarly have a substantial, direct, and reasonably foreseeable effect on U.S. import commerce.

11 47. Defendants also had substantial connections to the United States during the Class Period.
12 Defendants sold and shipped Inductors to customers in the United States, directly or through their U.S.
13 subsidiaries. Defendants also travelled to the United States as part of their efforts to sell Inductors.
14 Plaintiff's principal executive played golf with the CEO of Taiyo Yuden and other executives at Deer
15 Creek Golf Club in Florida, as part of Taiyo Yuden's efforts to market and sell its Inductors.

16 **VI. FACTUAL ALLEGATIONS**

17 **A. Inductors Generally**

18 48. Inductors (sometimes referred to as chokes or coils) are passive electronic components that
19 store and regulate energy in a circuit using principles of electromagnetism.

20 49. Although Inductors are not used in every type of circuit, they are critical components to
21 modern electronics such as personal computers, wireless handsets, and automobiles. This litigation is
22 about "discrete inductors," which are mounted on printed circuit boards. In concept all Inductors are
23 essentially "coils" that produce magnetic reactions from various types of alignments and materials.
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50. Although the constituent parts of an Inductor may vary, the same basic principles of physics and electrical engineering govern them. Inductors are used to create desired inductance in two basic ways, using wirewound coils and multilayered film or ceramic coils (“multilayered” Inductors). Wirewound coil Inductors simply involve winding or coiling metals around a core.



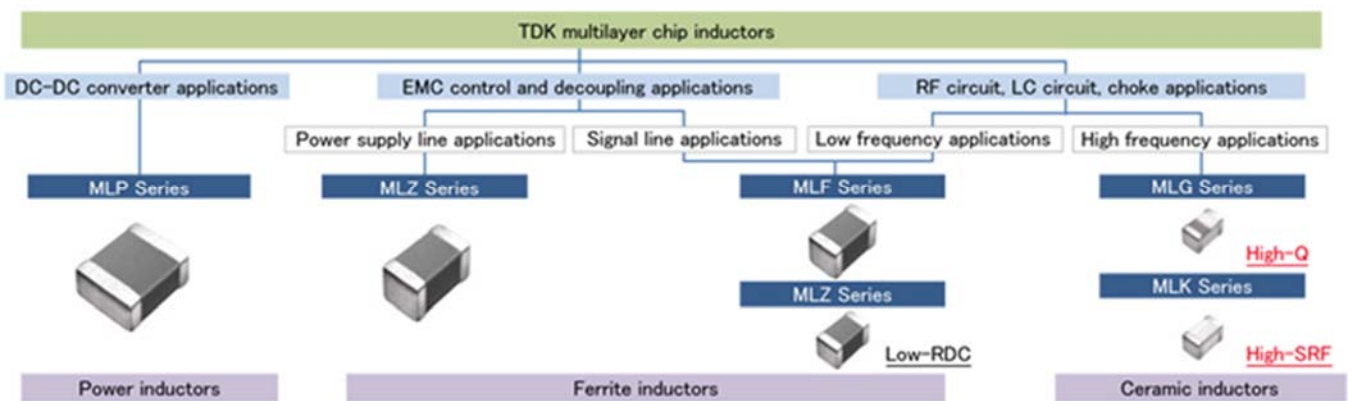
51. Wirewound coil Inductors may also be encased, embedded, or molded in plastic cases or in discrete inductor chips.

52. Wirewound coils can have metallic or ceramic cores (or hybrids of both), and may also have air cores.

53. Multilayered Inductors may also vary in composition and alignment, but they, too, perform the same basic function.

54. Multilayered Inductors are usually encased in plastic. Multilayered Inductors often use ferrite beads, or bead arrays, and may also stack or layer film and various types of coils and electrode materials.

□ Main products and types of TDK multilayer chip inductors



1 55. Inductors work by creating magnetic fields when current passes through the coils or other
2 inductive material. The magnetic fields created by the passage of current are measured in terms of “force”
3 and “flux.” The field force is the amount of “push” that a field exerts over a certain distance, pushing
4 energy through the wire. The field flux is the total quantity, or effect, of the field as energy surrounds the
5 core. Force and flux work off one another. The amount of field flux that will develop in space is
6 proportional to the amount of field force applied, divided by the amount of opposition to flux.

7 56. The magnetic field also introduces opposition into the circuit, which is a tension that
8 develops within the circuit allowing for storage of energy. Opposition is created by the movement of the
9 magnetic flux as it opposes or resists any changes in the electrical current flowing through it. Energy is
10 stored when the magnetic field flux allows for a certain “inertia” to accumulate in the flow of electrons
11 through the wire (or other inductive material) producing the field.

12 57. An Inductor also acts as a governor, or regulator, of energy in a circuit. When current
13 increases, an inductor absorbs energy and drops voltage. When current decreases, it acts as a source of
14 energy, creating voltage as it releases stored energy.

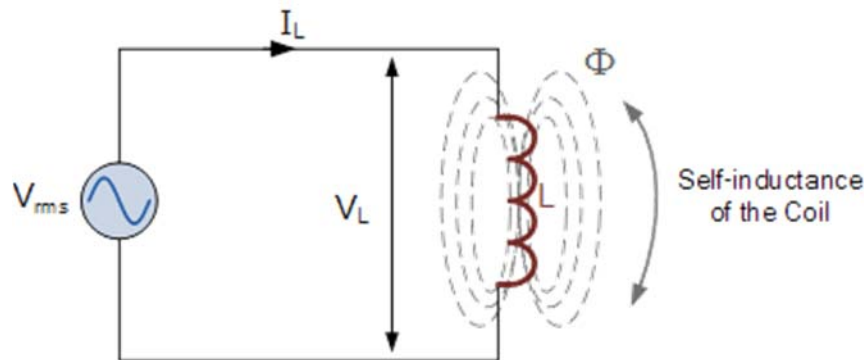
15 58. Inductors are classified primarily by inductance, the ability of an inductor to store energy
16 in the form of a magnetic field. Inductance is measured in the unit of the Henry (μH).

17 59. Inductors are sold by specifications that relate to inductance, voltage, and size. These
18 measures are standardized. Inductors with the same inductance, core, and size are substantially the same,
19 and fungible with one another.

20 60. Inductors are distinguished from one another by the material composing the “core,” or the
21 conductor for the magnetic reaction. An inductor’s core material can affect its performance, as different
22 metals and materials have different magnetic and inductive properties. A core may be made of ceramic,
23 ferrite, copper, or some other metal. Different cores can provide equivalent standard levels of inductance,
24 even if each type of material provides different levels of power and performance. The key principle of
25 physics that impacts Inductor specifications is that inductance is directly proportional to the available
26 surface area contained in the finished inductor. To achieve added surface area, metallic or ceramic
27 materials can be stacked or wound in an Inductor.
28

61. Inductors, capacitors, and resistors perform distinct roles in an electric circuit. Inductors store current using magnetic fields, which also give Inductors the ability to act as resistors. However, unlike resistors, Inductors can also store energy. Inductors block alternating current (“AC”) but allow direct current (“DC”) to pass through. Capacitors block DC but allow AC to pass through. Unlike capacitors, Inductors can create energy when needed by use of magnetic fields. In short, all three of these components work together to form closed circuits that power the products that contain them. Inductors can perform all of the basic functions of capacitors and resistors, but capacitors and resistors cannot perform all of the functions of an Inductor.

62. An inductor’s role in a simple circuit is depicted below:



63. Direct purchasers of Inductors in the Class Period include OEMs that use Inductors in their finished products, companies that manufacture electric circuits or other parts that are incorporated into products sold by OEMs and other manufacturers, and distributors such as Dependable Components who buy from manufacturers directly and resell Inductors to customers (who are manufacturers, researchers, and hobbyists) across the United States.

B. The Market for Inductors was Strong in 1980s and Most of 1990s

64. Defendants have long dominated the Inductor market, especially for Inductors used to manufacture high-technology products such as wireless handsets, laptop and desktop computer motherboards, wireless LAN, GPS products, televisions, video game consoles, hard disc drives, and HDTV tuners.

65. A strong Japanese economy in the 1980s and early 1990s, driven in large part by U.S. demand for consumer electronic goods, kept prices of Inductors high through the natural interplay of supply and demand.

1 66. Until the late 1990s, Japanese electronics manufacturers virtually never supplied Inductors
2 from outside of Japan. Strong tariffs made it economically unfeasible for international competitors to
3 compete with business in Japan.

4 67. The Defendants continued to dominate segments of the Inductor market throughout the
5 Class Period. In 2007, for example, per industry data, Defendants were responsible for over 73% of the
6 sales of Inductors with ceramic chip technology in North America.

7 **C. International Trade Agreement and Recession Disrupts Inductor Market**

8 68. Price erosion in the market for Inductors began with trade agreements that eliminated
9 tariffs. In December 1996, 29 different countries, including the United States and Japan, agreed to the
10 Information Technology Agreement (“ITA”), an agreement reached with the assistance of the World
11 Trade Organization. The ITA eliminated tariffs and import duties on hundreds of billions of dollars’ worth
12 of high technology products, including computers, telecommunication equipment, semiconductors, as
13 well as the passive electronic components (such as inductors) that were used to manufacture these
14 products.

15 69. Since its inception, the ITA covered “[e]lectrical transformers, static converters (for
16 example, rectifiers) and inductors.”³ Once tariffs on inductors were lifted, manufacturers that once had
17 no competition from OEMs who purchased from them suddenly had global competition from the
18 signatories to the ITA.

19 70. Thus, following the ITA, the Japanese manufacturers began to face competition from
20 manufacturers in Korea and Taiwan, which were signatories.

21 71. The 2001 recession exerted further downward pressure on prices of Inductors. In Japan,
22 exports of passive electronic components fell from a peak of 781,951 million yen in 2000; to 541,797
23 million yen in 2001; to 531,859 million yen in 2002.

24 72. In North America, sales of Inductors dropped from \$1.020 billion to \$665 million from
25 2001 to 2002, and fell every year until 2005. According to an industry analyst, “The inductor business in
26

27 ³ *United States Schedule of Concession*, WORLD TRADE ORGANIZATION (July 16, 1997),
28 <http://docsonline.wto.org/imrd/directdoc.asp?DDFDocuments/q/WT/LET/182-01.pdf> (last visited Jan.
8, 2018).

1 [North America] follows suit with capacitor and resistor sales in the region with respect to the value of
2 discrete inductor shipments over time. The market experienced a sharp upturn in FY 2001, followed by a
3 sharp drop in new product shipments.”

4 73. China agreed to the ITA in 2003, which resulted in even more competition. Chinese
5 Inductor manufacturers quickly became the greatest threat to Japanese Inductor manufacturers. By 2004,
6 there were 200 Chinese manufacturers of Inductors, and they sold 80% of their products to Japan. China’s
7 chip Inductor business alone was expected to grow 20% annually at the time.⁴ Knowledge of the
8 impending threat from Chinese manufacturers provided powerful incentive for Defendants to collude to
9 protect their profit margins.

10 **D. Defendants Turn to Cartel Activity**

11 74. Faced with increased requests by purchasers for price reductions and an overall decline in
12 demand for their Inductors, before and during the Class Period, Defendants had a keen desire to avoid
13 price competition.

14 75. Before and during the Class Period, Defendants knew that international competitors
15 (especially those in Taiwan and China), despite their inroads, could not successfully compete with
16 Defendants’ advantages in capacity, technology, and resources should Defendants stabilize or inflate
17 prices of Inductors. Taiwanese and Chinese components were often perceived to be of inferior quality
18 and not as reliable as Japanese products.

19 76. Before and during the Class Period, Defendants understood that Inductors of similar
20 inductance were interchangeable, and were concerned that purchasers would use that knowledge to cause
21 Defendants to bid against one another for Inductors.

22 77. The highly concentrated nature and structure of the Inductors market made it likely that
23 collusion would be possible and profitable. As shown below, Defendants comprised over 80% of the
24 market at the beginning of the Class Period, and still had two-thirds of the market in 2016. Purchasers of
25 Inductors could not substitute other electronic components for Inductors. Furthermore, Defendants knew
26 that although global competition was eroding the price of Inductors, manufacturers (especially of

27 _____
28 ⁴ *Passives: Capacitors, Resistors & Inductors: Supplier Capability in Mainland China and Taiwan*
(Global Sources Market Intelligence August 2004).

1 sophisticated and expensive electronics) were unlikely to substitute inferior quality products for
2 Defendants' Inductors.

3 78. Direct purchasers, especially OEMs and contract manufacturers, are committed to preset
4 production or delivery deadlines, and Defendants wagered that they would rather continue to pay flat or
5 increasing prices for Inductors than look for lower prices elsewhere and risk disruption to their business
6 from delays or production shortfalls.

7 79. Defendants agreed to operate as a cartel through both oral and written communications
8 among directors, executives, officers, business unit managers, sales representatives, and employees of the
9 Defendant companies. On information and belief, these communications were organized around JEITA
10 meetings, and occurred among Defendants' employees who attended JEITA meetings.

11 80. All Defendants are members of JEITA, and were members through all or most of the
12 Relevant Period. JEITA holds periodic meetings lasting up to several days and nights. There are formal
13 meetings at which minutes are taken, but there are also social events, such as meals and parties. In
14 addition, JEITA has subcommittees organized by general product types and purposes, such as the Passive
15 Components Subcommittee. Subcommittees also meet periodically, telephonically and sometimes in
16 person. On information and belief, JEITA also has working groups organized by specific passive
17 component, such as the resistors working group.

18 81. Executives from TDK and Murata are the leaders of JEITA's Electronic Parts
19 Subcommittee. An executive from TDK is the Director of the Board, and a Murata executive is a Board
20 Member and President. All Defendants are members of JEITA's Electronic Parts Subcommittee. Many
21 have been leaders, as leadership rotates periodically.

22 82. Through JEITA meetings, Defendants had the opportunity to exchange competitively
23 sensitive information on price and volume, and for specific bids.

24 83. Trade organizations such as JEITA are often pretext for industry members to conspire. It
25 has now been publicly admitted that membership in JEITA played a large role in facilitating collusion by
26 the defendants in those actions, some of whom overlap with the Defendants alleged herein, in the
27 *Capacitors* and *Resistors* actions
28

1 84. Defendant Panasonic is a common member of the cartels in *Capacitors* and *Resistors*. It
2 is now public knowledge in both actions that Panasonic provided information to the ongoing investigations
3 by the San Francisco office of the DOJ of price-fixing in those markets to seek leniency under ACPERA.

4 85. On January 4, 2018, mLex reported that subpoenas were sent out in “mid-November” 2017
5 by the San Francisco office of the DOJ relating to an ongoing investigation into the Inductors
6 manufacturers related to the ongoing criminal investigations in the capacitors and resistors markets. mLex
7 reported that Panasonic stated that it had not received a subpoena. Defendants Murata, Taiyo Yuden,
8 TDK, and Sumida declined to comment as to whether they had received a subpoena.

9 **E. Prices of Inductors Defy Economic Forces**

10 86. The existence of a price-fixing cartel can be strongly inferred from an analysis of the prices
11 of Inductors.

12 87. Following the 2001 global recession, prices for Inductors stabilized while prices for
13 electronics were dropping, and global demand for electronics waned. By August 2004, it was well known
14 that price quotes for Inductors defied the economic logic of supply and demand. According to one expert
15 at the time, “[d]espite the reduction in electronics prices, quotes for chip resistors are expected to remain
16 flat due to fierce competition and low profit margin.”

17 88. Indeed, industry data shows that as a result of the 2001 recession, prices of Inductors fell
18 from \$0.0452 apiece to \$0.0327 from 2000 to 2003. Defendants ensured that this type of drop, a decrease
19 of 27.6%, would never happen again.

20 89. Prices of Inductors would remain stubbornly flat from 2003 onward, hovering just above
21 \$0.03 a piece, despite the forces (such as competing semiconductor chip technology and increased
22 competition from Chinese and Taiwanese competitors) that should have lowered the competitive prices
23 for Defendants’ products.

24 90. The 2008 recession hit the global economy severely. In Japan, exports of passive
25 components fell from 1,130,000 million yen in 2007 to 705,372 million yen in 2009.⁵ In the United States,
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28 _____
⁵ Statistics provided by the Japanese Ministry of Economy, Trade and Industry.

1 monthly factory output fell 27% from July 2008 to May 2009, a decrease valued at \$133 billion.⁶ Yet the
2 prices of Inductors remained remarkably resilient. Prices for Inductors fell modestly, from \$0.0324 to
3 \$0.0302 from 2008 to 2009. Prices of Inductors barely budged from 2009 to 2011, despite the excess
4 capacity that firms would face due to the Great Recession. To put this into perspective, as shown below,
5 prices of Inductors fell by only 6.7% despite the worst global economic downturn since World War II,
6 when during the 2001 recession prices of Inductors fell 27.6%.

7 91. Indeed, prices for Inductors remained stubbornly high until mid-2014. From 2014 to 2015,
8 prices of Inductors fell by 8.17%. During the same period, the global economy was growing and demand
9 for Inductors was increasing. Volume of Inductor sales increased 18% from 2013 to 2014, and another
10 5.5% from 2014 to 2015. Yet the price decrease observed was the largest decrease in the Class Period.
11 The only possible explanation for this price drop is that the capacitors price-fixing cartel had become
12 public knowledge in the summer of 2014. Defendants may have abandoned their cartel activity,⁷ and
13 when they did, prices of Inductors finally fell to competitive levels. The disruption of Defendants' cartel
14 activity had a greater impact than the 2001 recession.

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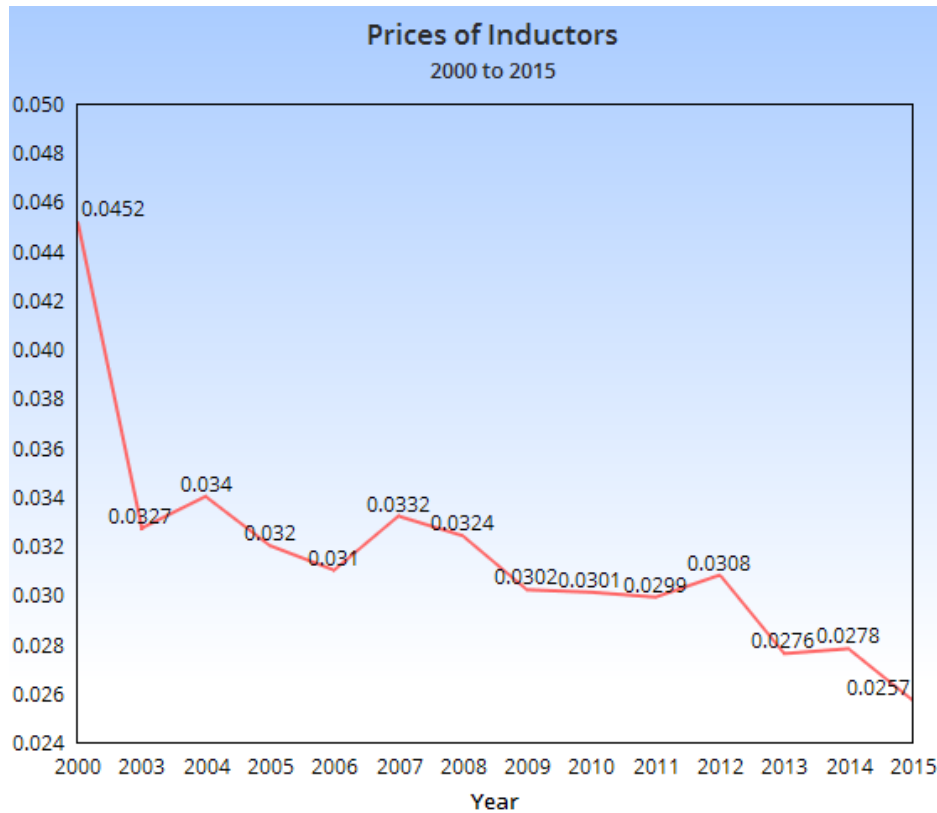
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26 ⁶ Jessica Nicholson & Ryan Noonan, *Manufacturing Since the Great Recession*, U.S. DEPARTMENT OF
27 COMMERCE (June 10, 2014), available at [http://www.esa.doc.gov/sites/default/files/
28 manufacturingsincethegreatrecession2014-06-10final.pdf](http://www.esa.doc.gov/sites/default/files/manufacturingsincethegreatrecession2014-06-10final.pdf) (last visited Jan. 8, 2018).

⁷ These allegations are made based on Plaintiff's investigation to date. Plaintiff reserves the right to seek recovery for cartel activity that has continued to the present.

92. The following graph, taken from industry reports that report a per-unit price for Inductors for 2000 and 2003 through 2015, illustrates the impact of the cartel⁸:



VII. EFFECTS OF THE CONSPIRACY

93. Because of Defendants' collusion, Plaintiff and the Class have been injured in their business or property because they have paid more for Inductors than they otherwise would have in a competitive market.

94. Defendants' agreements to fix, inflate, or stabilize the price of Inductors is an artificial restraint in the market for Inductors. Defendants have reduced price competition in the Inductors market and as a result, prices for Inductors have been set, maintained, or stabilized at supra-competitive levels. Plaintiff and members of the Class have been deprived of the benefit of competition in the market for Inductors.

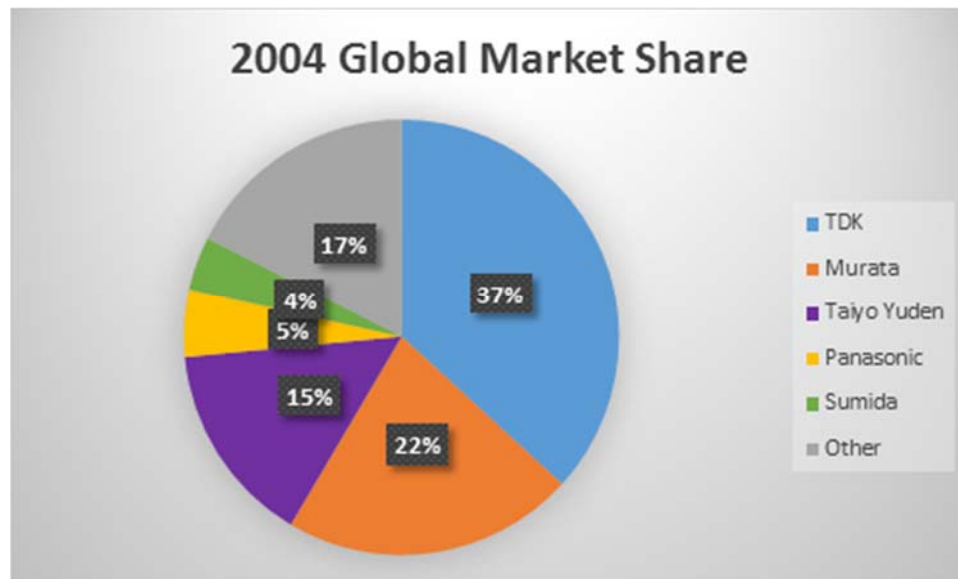
⁸ Plaintiff's investigation is ongoing, and Plaintiff reserves the right to supplement or supplant the pricing data alleged here after full and fair discovery into Defendants' pricing of Inductors.

VIII. CHARACTERISTICS OF THE INDUCTORS MARKET

95. The nature and structure of the Inductors market facilitated Defendants’ collusion. The market for Inductors is characterized by high concentration and few participants; high barriers to entry; inelasticity of demand; product commoditization; a mature market with weak demand; and excess manufacturing capabilities and capacity.

A. High Market Concentration

96. The Inductors market is highly concentrated. As of 2004, Defendants had over 80% of the market in Inductors.



97. In 2007, TDK and Murata alone had over 61% of the market for ceramic chip inductors in North America.

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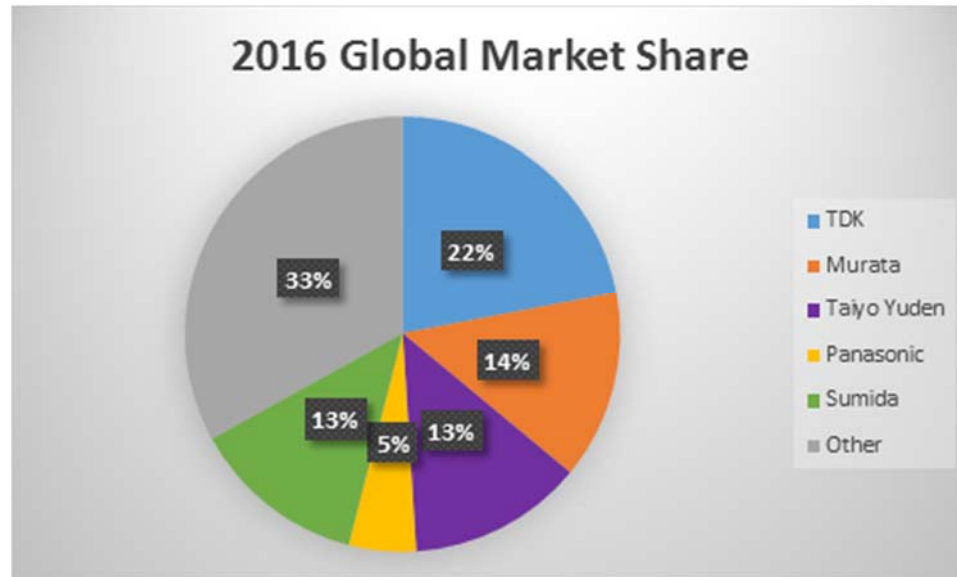
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98. In 2016, Defendants had two-thirds of the Inductors market.



Company	2004 Global Market Share	2016 Global Market Share
TDK	36.8%	22%
Murata	21.7%	14%
Taiyo Yuden	15%	13%
Panasonic	5%	5%
Sumida	4%	13%
Other	17.5%	33%

B. High Barriers to Entry

99. The Inductors market is a mature one dominated by established corporations, most having global operations. TDK and Panasonic both manufacture a variety of electronic products, as well as other electronic components. Panasonic reported revenues of over \$62 billion in its 2017 fiscal year; TDK reported over \$10 billion. Both are large and diverse multinational corporations that, like all Defendants, can benefit from economies of scale. Murata manufactures virtually every electronic component and has yearly revenues that top \$5 billion. Taiyo Yuden is a diversified manufacturer of passive electronic components with annual net sales in excess of \$2 billion, most of which is from sales of passive electronic components. Sumida is another international giant, who most recently announced sales in excess of \$700

1 million annually. Sumida has R&D offices in the United States, China, Japan, Germany, and Canada;
2 sales offices in the United States, China, Japan, Hong Kong, Singapore, Taiwan, Thailand, South Korea,
3 and Germany; and factories in China, Japan, Vietnam, Thailand, Mexico, Germany, Romania, and
4 Slovenia.⁹

5 100. Defendants have established reputations with purchasers of Inductors and sellers of the raw
6 materials needed to manufacture Inductors; have access to significant amounts of capital to fund current
7 operations; have global operations that allow them to specialize function and meet the needs of customers
8 with global businesses; can weather downturns in the economy due to their size and substantial resources;
9 and have integrated supply chains due to their diverse products.

10 101. During the Class Period, there were few (if any) new entrants into the market for Inductors.
11 During the Class Period, the number of leading Inductors manufacturers fell, which is an indication of a
12 mature market with diminishing demand, circumstances that make the market ripe for collusion.

13 102. Consolidation of the Inductors industry was substantial during the Class Period. Murata
14 acquired TOKO in 2009, and TDK announced that it would acquire the Inductor business of EPCOS in
15 2008.

16 103. It is no surprise that new entry practically came to a halt, and the number of participants
17 contracted. New entrants would need to invest hundreds of millions of dollars in building manufacturing
18 facilities, obtaining patents or licenses for technology, and creating a production line; assembling a
19 workforce, including professionals and executives with industry experience; obtaining a supply network;
20 and investing in R&D, marketing, and transportation capabilities necessary to bring a product to market.
21 And even then, it takes years to demonstrate quality control and establish a customer base to see any return
22 on this investment. In short, a prospective competitor in the Inductor market would face a daunting task
23 in establishing and growing a business. It speaks volumes that the United States hardly has a competitive
24 player in this field.

25 104. Further barriers to entry exist because manufacture of Inductors requires an expensive
26 supply chain, including the purchase and in-house processing of raw materials such as metals. Although

27 ⁹ *Sumida Corporate Information*, SUMIDA, [https://www.sumida.com/userfiles/INFO_CENTER/](https://www.sumida.com/userfiles/INFO_CENTER/COMPANY_INFO/profile_E_1704.pdf)
28 [COMPANY_INFO/profile_E_1704.pdf](https://www.sumida.com/userfiles/INFO_CENTER/COMPANY_INFO/profile_E_1704.pdf) (last visited Jan. 8, 2018).

1 some metals and materials used in Inductors are commonly found, they are not cheap. Inductors use iron,
2 nickel, zinc, and sometimes barium, cobalt, and strontium.

3 105. After raw materials are purchased, they must be processed and chemically treated. Leading
4 Inductor manufacturers have facilities for processing and treating the raw materials. Processing and
5 treating raw materials requires large expenditures of capital for nanotechnology. Nanotechnology, which
6 concerns analysis of materials at the molecular (or very small particle) level, is necessary because of the
7 precision involved in manufacturing small components. Nanotechnology equipment is very expensive.

8 106. A core principle of the physics and economics of manufacturing Inductors is that the
9 performance of the component is directly proportional to the size, or surface area, of the Inductor.
10 Accordingly, precision manufacturing and quality control measures are critical.

11 107. Manufacture of Inductors involves stacking, winding, and pressing metals and other raw
12 materials, and the technology to imprint and manipulate thin metals and wire. This process requires
13 sophisticated engineering as well as expertise in nanotechnology and process yields.

14 **C. Inelasticity of Demand**

15 108. Demand for products with inelastic demand does not decline much when prices increase.
16 That is why cartel activity is most often found in products that are prosaic but foundational to
17 manufacturing and economic activity, such as food additives, agricultural commodities like eggs and milk,
18 chemicals, and electronic components. As a matter of economics, cartel members must have inelastic
19 demand to profit when prices are set above competitive level. When demand is inelastic, cartel members
20 profit more from increased prices than they lose from customers who refuse to pay higher or stubbornly
21 flat prices.

22 109. Several characteristics of Inductors cause demand inelasticity. First, the price of Inductors
23 is relatively low relative to the final prices of the goods sold (e.g., a laptop computer or a car), and in
24 comparison, to the price of many inputs. There is less incentive to switch Inductor suppliers under those
25 circumstances. On a per unit basis, prices of most Inductors range from a few to fifty cents. Products
26 such as computers and cars may have up to sixty or seventy Inductors, but other products have only a
27 couple dozen.
28

1 110. Second, there are no substitutes for Inductors. No other passive electronic component can
2 perform all the functions of an Inductor. Its electromagnetic properties distinguish it from a capacitor, as
3 does its operation in relation to DC current. Capacitors can only store current; they cannot increase voltage
4 like an Inductor can by use of magnetic fields. Resistors perform some of the “blocking” functions of
5 Inductors, but cannot store or generate voltage. If a circuit in a product calls for an Inductor, no other
6 component will do.

7 111. Third, the fact that OEMs and other manufacturers face periodic deadlines for production
8 reduces the chance that Defendants’ customers will invest the time and resources to find another supplier.

9 **D. Inductors Are Interchangeable Commodities**

10 112. Inductors are standardized across manufacturer and are referenced by codes that denote the
11 inductors’ inductance, voltage, and size. As these measures allow for standardization, among industry
12 leaders such as Defendants, the Inductors can be as interchangeable. Because Inductors are commoditized
13 by technical specification, it is easier for Defendants to agree on price and monitor compliance with
14 agreements.

15 113. Inductors are marked using standard values. The first two digits marking a standardized
16 Inductor are the value of the inductance, expressed in units of Henry, and the third digit is the multiplier
17 by power of 10. So, “101” = $10 \times 10^1 \mu\text{H} = 100 \mu\text{H}$. If there is an R, it acts as a decimal point and there is
18 no multiplier. Therefore, “4R7” means $4.7 \mu\text{H}$. Precision of an Inductor is also expressed in standard
19 terms, using a final letter F, G, J, K, or M, which refers to +/-1%, +/-2%, +/-5%, +/-10%, and +/-20%,
20 respectively.

21 114. The International Electrotechnical Commission (“IEC”), an organization that promotes
22 standardization in the electrical fields, has published standards for testing relating to Inductors.
23 Defendants’ products refer to these standards. For example, TDK’s product reference guide states that
24 “[a]ll chokes¹⁰ for low-frequency mains networks are dimensioned and tested in compliance with
25 applicable EN and IEC standards.” Inductors are mass produced pursuant to these standards, making them
26 interchangeable.

27
28 ¹⁰ Inductors are sometimes called chokes.

1 115. Defendants understand their products are interchangeable. A webpage maintained by TDK
2 relating to Inductors has a feature that allows users to enter a non-TDK product code so that, “[u]sing the
3 part number of a product of other manufacturers, [TDK’s] products with similar specifications can be
4 searched.”¹¹ Other Defendants’ websites have similar functions.

5 **E. Inductors Face Declining Demand and Excess Capacity**

6 116. The Inductors market was dealt a series of shocks, starting in the 1990s with the ITA.
7 Inductors faced declining demand following the 2001 recession at the beginning of the Class Period. One
8 industry expert has noted that price erosion was severe in 2001 and 2002 as Inductor manufacturers
9 suffered from excess capacity, and leading Inductor manufacturers contemplated selling their production
10 facilities. Indeed, flagging demand for electronics products characterized much of the early 2000s.

11 117. In addition to the effects of the 2001 recession, new technology, such as semiconductor
12 chips and digital circuits, has threatened Inductors. Inductors are not used in digital circuits, which are
13 increasingly used in high-technology products. Inductors are too large to be integrated into semiconductor
14 chips, which are micro-electric circuits that fit onto a silicon wafer.

15 118. Many consumer electronics have moved to chip technology. In 2007, a leading analyst
16 predicted that the North American sales volume of Inductors would fall by over a billion units from 2007
17 to 2014, mostly due to a poor outlook for consumer digital electronics. Compact portable devices that
18 rely on digital chip circuits, such as iPhones, have replaced several different personal electronic devices.

19 119. As demand has waned, Defendants have faced excess capacity at their Inductor facilities.
20 Defendants have facilities that specialize in the manufacture of few products. Panasonic has a plant in
21 Tajima, Japan that at one point during the Class Period had 250,000 square feet devoted to manufacturing
22 Inductors. Defendants that manufacture primarily passive components, such as Taiyo Yuden, Sumida,
23 and Murata, also specialize their manufacturing facilities so that when demand is low, their plants are idle.

24 120. The remarkably resilient prices following the 2008 Great Recession illustrate cartel activity
25 at play. When prices remain high or flat in light of declining demand and excess capacity, it becomes
26 clear that collusion is keeping the prices high.

27 _____
28 ¹¹ Inductors (Coils), Product Center, TDK, https://product.tdk.com/en/search/inductor/inductor/smd/cross_reference/ (last visited Jan. 8, 2018).

IX. ONGOING CRIMINAL INVESTIGATION AND PAST COLLUSION

121. The DOJ has started an investigation into potential collusion in the Inductors market. This investigation has likely resulted in the production of documents by leading Inductors manufacturers, as mLex has reported that subpoenas were issued in November 2017.

122. Panasonic is a repeat competition law violator. Panasonic and its affiliates have been investigated by the DOJ for its role in the price fixing of capacitors, resistors, automotive parts, and lithium ion batteries.

123. Panasonic affiliate Sanyo Electric Co., Ltd. pleaded guilty for its role in a conspiracy to fix prices on cylindrical lithium ion battery cells sold worldwide for use in notebook computer battery packs, and agreed to a \$10.731 million criminal fine.

124. Panasonic recently admitted its involvement in a longstanding conspiracy to fix prices of switches, steering angle sensors, and automotive high intensity discharge ballasts installed in cars sold in the United States and elsewhere. Panasonic agreed to pay a \$45.8 million criminal fine, and a number of its executives pled guilty in exchange for limited fines and imprisonment.

125. Additionally, Panasonic was also named as a defendant in civil antitrust litigation related to conspiracies to fix the prices of CRT televisions and monitors and TFT-LCD flat panel displays. Panasonic agreed to pay a \$17.3 million settlement in the CRT case to the direct purchaser plaintiffs.

126. In the DOJ investigation into the capacitors industry, seven companies have pleaded guilty, and ten individuals were indicted.

127. In September 2015, the DOJ charged NEC TOKIN Corporation with participating in a price-fixing conspiracy regarding capacitors that lasted from “at least as early as September 1997” until “in or about January 2014,” and that NEC TOKIN “knowingly joined and participated in the charged conspiracy from at least as early as April 2002 until in or about December 2013” and charged that the Conspiracy sought “to suppress and eliminate competition by fixing and rigging bids of certain electrolytic capacitors in the United States and elsewhere.” On January 21, 2016, NEC TOKIN pleaded guilty “to the violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, that is charged in the Information.”

1 128. On June 9, 2016 Hitachi Chemical Co. Ltd. pled guilty to conspiring with its competitors
2 to fix the prices of electrolytic capacitors, which according to the DOJ's Information was dated from "at
3 least as early as September 1997" until "in or about January 2014."

4 129. On October 12, 2016, Rubycon Corporation pleaded guilty to conspiring to fix the prices
5 of electrolytic capacitors as charged in the DOJ's Information, which dated the capacitors conspiracy from
6 "at least as early as September 1997" until "in or about January 2014."

7 130. On October 12, 2017, ELNA Co., Ltd. and Holy Stone Holdings Co., Ltd. pleaded guilty
8 to conspiring to fix the prices of electrolytic capacitors as charged in the DOJ's Information, which alleged
9 the capacitors conspiracy lasted from "at least as early as September 1997" until "in or about January
10 2014."

11 131. On October 26, 2017, Matsuo Electric Co., Ltd. pleaded guilty to conspiring to fix the
12 prices of electrolytic capacitors as charged in the DOJ's Information, which dated the conspiracy from "at
13 least as early as September 1997" until "in or about January 2014."

14 132. On November 9, 2017, Nichicon Corporation pleaded guilty to conspiring to fix the prices
15 of electrolytic capacitors as charged in the DOJ's Information, which dated the conspiracy from "at least
16 as early as September 1997" until "in or about January 2014."

17 **X. FRAUDULENT CONCEALMENT**

18 133. Plaintiff and members of the Class could not have discovered, with reasonable diligence,
19 the existence of the conspiracy until the DOJ's investigation was made public in January of 2018.

20 134. Defendants concealed the existence of the conspiracy from Plaintiff and members of the
21 Class, and there is nothing in the public domain that would put Plaintiff or anyone else on notice that
22 Defendants were conspiring at meetings regarding prices for Inductors sold in the United States.

23 135. The meetings held by Defendants were furtive. The nature of a price-fixing cartel requires
24 secrecy.
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XI. CLAIM FOR RELIEF
VIOLATION OF THE SHERMAN ACT

15 U.S.C. § 1

(Alleged against all Defendants)

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4
5 136. Plaintiff hereby repeats and incorporates by reference each preceding and succeeding
6 paragraph as though fully set forth herein.

7 137. Defendants violated Section 1 of the Sherman Act by conspiring to artificially restrict
8 competition in the market for Inductors. Starting January 1, 2003 Defendants met repeatedly to exchange
9 competitively sensitive information, including price and price-related information. The effect of these
10 meetings was to raise, fix, set, stabilize, or otherwise artificially manipulate the prices of Inductors beyond
11 the natural interplay of supply and demand.

12 138. Defendants formed a cartel, organized around JEITA meetings, designed to raise, fix, set,
13 stabilize, or otherwise artificially manipulate the prices of Inductors beyond the natural interplay of supply
14 and demand.

15 139. As a result of Defendants' and their co-conspirators' unlawful conduct and acts taken in
16 furtherance of their conspiracy, prices for Inductors sold to purchasers in the United States during the
17 Class Period were raised, fixed, maintained, or stabilized at artificially inflated cartel levels.

18 140. The combination or conspiracy among Defendants consisted of a continuing agreement,
19 understanding and concerted action among Defendants and their co-conspirators.

20 141. For purposes of formulating and effectuating their combination or conspiracy, Defendants
21 and their co-conspirators did those things they combined or conspired to do, including setting prices of
22 Inductors at supra-competitive prices, and selling these Inductors to Plaintiff and the members of the
23 Direct Purchaser Class.

24 142. Defendants' anticompetitive and unlawful conduct is illegal per se.

25 143. As a result of Defendants' anticompetitive and unlawful conduct, Plaintiff and the
26 members of the Direct Purchaser Class have been injured in their businesses and property in that they have
27 paid more for the Inductors that they purchased during the Class Period than they otherwise would have
28 paid but for Defendants' conduct.

XII. DEMAND FOR JUDGMENT

144. Plaintiff requests that the Court enter judgment on its behalf and on behalf of the Direct Purchaser Class that:

- A. This action may proceed as a class action, with Plaintiff serving as a Direct Purchaser Class Representative under Fed. R. Civ. P. 23(c);
- B. Defendants have violated Section 1 of the Sherman Act, 15 U.S.C. § 1, and that Plaintiff and the Direct Purchaser Class have been injured in their business and property as a result of Defendants' violations;
- C. Plaintiff and the Direct Purchaser Class are entitled to recover damages sustained by them, as provided by the federal antitrust laws under which relief is sought herein, and that a joint and several judgment in favor of Plaintiff and the Direct Purchaser Class be entered against Defendants in an amount subject to proof at trial, which is to be trebled in accordance with Section 4 of the Clayton Act, 15 U.S.C. § 15;
- D. Plaintiff and the Direct Purchaser Class are entitled to pre-judgment and post-judgment interest on the damages awarded them, and that such interest be awarded at the highest legal rate from and after the date this class action complaint is first served on Defendants;
- E. Plaintiff and the Direct Purchaser Class are entitled to equitable relief appropriate to remedy Defendants' restraint of trade, including issuing a permanent injunction against Defendants and their parents, subsidiaries, affiliates, successors, transferees, assignees and the respective officers, directors, partners, agents, and employees thereof and all other persons acting or claiming to act on their behalf from repeating (or continuing and maintaining) the conspiracy or agreements alleged herein;
- F. Defendants are to be jointly and severally responsible financially for all costs, including the expenses of a Court-approved notice program;
- G. Plaintiff and the Direct Purchaser Class recover their reasonable attorneys' fees as provided by law; and
- H. Plaintiff and the Direct Purchaser Class receive such other or further relief as may be just and proper.

XIII. JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38(c), Plaintiffs demand a trial by jury on all matters so triable.

DATED: January 9, 2018

BLEICHMAR FONTI & AULD LLP

By: /s/ Lesley E. Weaver

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