

1 Joseph R. Saveri (State Bar No. 130064)  
 Andrew M. Purdy (State Bar No. 261912)  
 2 Matthew S. Weiler (State Bar No. 236052)  
 James G. Dallal (State Bar No. 277826)  
 3 Ryan J. McEwan (State Bar No. 285595)  
 JOSEPH SAVERI LAW FIRM, INC.  
 4 555 Montgomery Street, Suite 1210  
 San Francisco, California 94111  
 5 Telephone: (415) 500-6800  
 Facsimile: (415) 395-9940  
 6 Email: jsaveri@saverilawfirm.com  
 apurdy@saverilawfirm.com  
 7 mweiler@saverilawfirm.com  
 jdallal@saverilawfirm.com  
 8 rmcewan@saverilawfirm.com

9 Solomon B. Cera (State Bar No. 99467)  
 C. Andrew Dirksen (State Bar No. 197378)  
 10 CERA LLP  
 595 Market Street, Suite 2300  
 11 San Francisco, California 94105  
 Telephone: (415) 777-2230  
 12 Facsimile: (415) 777-5189  
 Email: scera@cerallp.com  
 13 adirksen@cerallp.com

14 *Attorneys for Individual and Representative Plaintiff Chip-Tech, Ltd.*

15 UNITED STATES DISTRICT COURT  
 16 NORTHERN DISTRICT OF CALIFORNIA  
 17

18 Chip Tech, Ltd., On Behalf Of Itself and All  
 19 Others Similarly Situated,

20 Plaintiff,

v.

21 AVX Corporation; KEMET Corporation; KEMET  
 Electronics Corporation; KOA Corporation; KOA  
 22 Speer Electronics, Inc.; Panasonic Corporation,  
 Panasonic Corporation of North America; Panasonic  
 23 Electronic Devices Co. Ltd; Panasonic Electronic  
 Devices Corporation of America; ROHM Co., Ltd.;  
 24 ROHM Semiconductor U.S.A. LLC; SANYO  
 Electric Co., Ltd.; SANYO North America  
 25 Corporation; TDK Corporation; TDK-EPC  
 Corporation; TDK U.S.A. Corporation; Vishay  
 26 Intertechnology, Inc.,

27 Defendants  
 28

Case No.

**CLASS ACTION COMPLAINT**

JURY TRIAL DEMANDED

1 Plaintiff Chip-Tech, Ltd. (“Chip-Tech” or Plaintiff) brings this action on behalf of itself and on  
2 behalf of a class of all persons and entities similarly situated (the “Class” or the “Direct Purchaser  
3 Class”), for damages and injunctive relief under the antitrust laws of the United States against  
4 Defendants AVX Corporation; KEMET Corporation; KEMET Electronics Corporation; KOA  
5 Corporation; KOA Speer Electronics, Inc.; Panasonic Corporation, Panasonic Corporation of North  
6 America; Panasonic Electronic Devices Co. Ltd; Panasonic Electronic Devices Corporation of  
7 America; ROHM Co., Ltd.; ROHM Semiconductor U.S.A. LLC; SANYO Electric Co., Ltd.; SANYO  
8 North America Corporation; TDK Corporation; TDK-EPC Corporation; TDK U.S.A. Corporation;  
9 and Vishay Intertechnology, Inc.; (collectively, the “Defendants”). Plaintiff alleges facts regarding itself  
10 based on its personal knowledge, and on information and belief as to all other factual allegations, as  
11 follows:

## 12 I. NATURE OF THE ACTION

13 1. This civil antitrust class action seeks damages and injunctive relief for the collusive and  
14 concerted restraint of trade in Resistors (together, “Resistors”) orchestrated by the Defendants—all of  
15 which are leading manufacturers and direct competitors in the global Resistors industry—at least as  
16 early as January 1, 2003 to present (the “Class Period”).

17 2. Resistors are an essential component of all electronic circuits. All electronic devices in  
18 common use today—from the cheapest household appliances to personal computers to multi-million  
19 dollar computerized machinery—employ various electrical circuits working in concert to perform their  
20 functions. By electrical current (*i.e.*, the aggregate effect of moving electrical charge) flowing through a  
21 circuit, the path for which is usually defined by a printed circuit board (“PCB”), electronic signals can  
22 be amplified, simple and complex computations can be performed, data can be moved from one place to  
23 another, and other tasks can be executed.

24 3. Without the flow of electrical current, circuit boards—as well as the electronic devices  
25 that contain them—will not operate. Accordingly, circuits must not only have a source for current, but  
26 also means for storing and regulating the flow of that current.

27 4. A resistor is a passive two-terminal electrical component that implements electrical  
28 resistance as a circuit element. Resistors act to reduce current flow, and, at the same time, act to lower

1 voltage levels within circuits. In electronic circuits, Resistors are used to limit current flow, to adjust  
2 signal levels, bias active elements, terminate transmission lines among other uses. High-power Resistors  
3 that can dissipate many watts of electrical power as heat may be used as part of motor controls, in power  
4 distribution systems, or as test loads for generators. Fixed Resistors have resistances that only change  
5 slightly with temperature, time or operating voltage. Variable Resistors can be used to adjust circuit  
6 elements (such as a volume control or a lamp dimmer), or as sensing devices for heat, light, humidity,  
7 force, or chemical activity.

8 5. Resistors are integrated into electrical circuits to allow the energy traveling through a  
9 circuit to be manipulated. Resistors allow consumers to change the volume, or heat level, on electronic  
10 devices. Along with capacitors, Resistors constitute 80 to 90% of the mass of circuit boards used in  
11 electronic products such as computers.

12 6. As society's dependence on and consumption of technology has grown, so too has the  
13 demand of electronic device manufacturers for Resistors. As they are ubiquitous to electronic circuits,  
14 Resistors are fundamental to the operation of practically all electronic devices and thus the market for  
15 Resistors is enormous. Resistors are commodity products sold in large volumes. Indeed, global sales of  
16 Resistors in 2014 totaled approximately \$4.5 billion. Industry analysts estimate that global revenues  
17 from the sale of Resistors will reach over \$5 billion for the fiscal year 2015.

18 7. Resistors are relatively inexpensive to purchase on a per unit basis. Most Resistors cost  
19 less than a penny per unit, and typically cost as low as a fraction of a cent. Accordingly, the cost of  
20 Resistors is usually only a relatively small (but not Resistors insignificant) part of the overall cost of the  
21 products containing them.

22 8. The multi-billion dollar market for Resistors is susceptible to anticompetitive  
23 manipulation, particularly by entities that regularly and habitually collude with one another. Given, as  
24 alleged in detail below, the significant high barriers to entering the already mature and consolidation-  
25 prone Resistors manufacturing industry and achieving the large volume of sales required to reach  
26 sufficient economies of scale and profitability on a per unit basis, global sales of Resistors are dominated  
27 by a limited number of large manufacturers. These would-be competitors—specifically the Defendants  
28 named herein—sell mutually interchangeable commoditized products and adjust the prices and market

1 availability of their products in concert and based on an overarching agreement to fix, raise, maintain,  
2 and/or stabilize prices as described in detail below. These facts indicate that competition between the  
3 global sellers of Resistors has been suppressed.

4 9. Resistors can be designed as thick and thin film chips, as insulated carbon capsules, and  
5 in coils of metals such as nickel, chromium. Resistors of like design are generally mutually  
6 interchangeable. Price is therefore the chief differentiation among these products for purchasers.  
7 Accordingly, any agreement among Resistors manufacturers to fix, raise, maintain or stabilize prices, or  
8 to reduce the supply of Resistors, is highly likely to be effective in artificially inflating prices above those  
9 that would prevail in a competitive market to the detriment of purchasers both worldwide and in the  
10 United States.

11 10. The threat of anticompetitive manipulation for the sales of Resistors is not a hypothetical  
12 concern. On information and belief, at least one Defendant is currently a target of investigation by the  
13 United States Department of Justice (“DOJ”) for engaging in activities undertaken for the purpose of  
14 artificially maintaining and inflating prices of Resistors sold to United States purchasers and purchasers  
15 worldwide. Other Defendants have colluded with one another with respect to other passive electronic  
16 components they manufacture and distribute.

17 11. Defendants committed these unlawful anticompetitive acts because: (1) prior to the  
18 outset of the conspiracy, competition was reducing margins on Resistors; (2) demand for certain types  
19 of Resistors began to wane starting in the early 2000s as devices such as televisions and computers  
20 became smaller and required less Resistors; (3) per-unit prices for Resistors dropped dramatically in the  
21 2001 downturn and never recovered; (4) and the 2008 Great Recession provided further incentive to  
22 conspire to stabilize Resistors prices.

23 12. To bolster the profitability of their respective resistor sales, and to slow and offset the  
24 impact on price caused by declining demand, Defendants agreed prior to the beginning of the Class  
25 Period to curtail price competition among themselves for their respective mutually interchangeable  
26 Resistors.

27 13. Accordingly, at least as early as January 1, 2003, Defendants formed a cartel and  
28 conspired by directly and indirectly communicating with each other to implement and effectuate an

1 overarching scheme to control and set the prices of their Resistors sold to United States purchasers and  
2 purchasers worldwide. Defendants also agreed, as part of the cartel, to combine and perform the various  
3 acts necessary to achieve the anticompetitive purposes of this scheme, as well as to conceal their activity  
4 from public view and regulatory oversight.

5 14. The Defendants' conspiracy was furthered and facilitated by a course of anticompetitive  
6 conduct and overt acts, such as making numerous agreements (both written and oral) and reaching  
7 understandings among themselves—at times developed during regular meetings among themselves  
8 throughout the Class Period—that they would in concert fix, raise, maintain and stabilize prices for  
9 Resistors.

10 15. Defendants also agreed to restrain their respective resistor manufacturing output  
11 through extending product lead times and other subterfuge.

12 16. As part of the conspiracy alleged herein, and to assist in achieving its ends, Defendants  
13 agreed to exchange and exchanged amongst themselves nonpublic and commercially sensitive  
14 information concerning, among other things, purchaser-specific Resistors pricing requests, current  
15 industry-specific Resistors pricing requests, current and future Resistors pricing intentions, timing of  
16 pricing changes, production capacity, costs, availability and cost of raw materials, product distribution,  
17 and other data that Defendants used to assist in the implementation and enforcement of their  
18 conspiracy.

19 17. Defendants concealed their anticompetitive and unlawful conduct from the public and  
20 their customers, including Plaintiffs and the Direct Purchaser Class, from the inception of the  
21 conspiracy until the summer of 2015, when Defendant Panasonic Corporation acknowledged that it was  
22 seeking leniency from the DOJ for price-fixing related to Resistors.

23 18. Defendants' cartel has been successful in achieving the anticompetitive and unlawful  
24 ends for which it was formed. Through their concerted actions, Defendants—the dominant players in  
25 the global and U.S. markets for Resistors—fixed, raised, maintained and/or stabilized prices of Resistors  
26 during the entirety of the time that the Defendants' conspiracy has existed. Defendants were effective in  
27 moderating, negating and reversing the normal competitive pressures on prices for Resistors caused by  
28 price competition, reduction of demand, technological change and oversupply.



1 action was substantially conducted with, directed to or impacted Plaintiffs and members of the Direct  
2 Purchaser Class in counties located within the Division.

### 3 III. PARTIES

#### 4 A. Plaintiff

5 26. Plaintiff Chip-Tech, Ltd. is a New York corporation with its principal place of business  
6 located at 6 Dubon Court, Farmingdale, New York 11735. Chip-Tech directly purchased Resistors from  
7 one or more Defendant during the Class Period, and has suffered injury as a result of Defendants'  
8 anticompetitive and unlawful conduct.

#### 9 B. Defendants

##### 10 1. AVX

11 27. Defendant AVX Corporation (“AVX”) is a Delaware corporation with its principal place  
12 of business located at One AVX Boulevard, Fountain Inn, South Carolina 29644. It is a subsidiary of  
13 non-party Kyocera Corporation, a Japanese corporation that owns approximately 72% of AVX’s  
14 outstanding common stock. During the Class Period, AVX manufactured, sold, and Resistors either  
15 directly or through its business units, subsidiaries, agents or affiliates to United States purchasers.

##### 16 2. KEMET

17 28. Defendant KEMET Corporation (“KEMET Corp.”) is a Delaware corporation with its  
18 principal place of business located at 2835 Kemet Way, Simpsonville, South Carolina 29681. During the  
19 Class Period, KEMET Corp. manufactured, sold and distributed Resistors either directly or through its  
20 business units, subsidiaries, agents or affiliates—including, without limitation, KEMET Electronics  
21 Corporation—to purchasers throughout the United States.

22 29. Defendant KEMET Electronics Corporation (“KEC”), a Delaware corporation, is a  
23 wholly owned subsidiary of KEMET Corp. with its principal place of business located at 2835 Kemet  
24 Way, Simpsonville, South Carolina 29681. During the Class Period, KEC—either directly or through  
25 its business units, subsidiaries, agents or affiliates—sold and distributed to purchasers throughout the  
26 United States Resistors manufactured by certain of its own business units, subsidiaries, agents or  
27 affiliates or those of its corporate parent, KEMET Corp.

28

1           30.     KEMET Corp. is the holding company of KEC and, accordingly, has no business of its  
2 own. KEC is the alter ego of KEMET Corp. Although separate corporate entities, KEMET Corp. and  
3 KEC are functionally a single economic and operational entity.

4           **3.     KOA**

5           31.     Defendant KOA Corporation (“KOA”) is a Japanese corporation with its principal place  
6 of business located at 2-17-2 Midori-Cho, Fuchu-Shi, Tokyo 183-0006, Japan. KOA is one of the  
7 world’s leading manufacturers of Resistors, and the largest manufacturer of thick film chip Resistors  
8 used in automobiles . During the Class Period, KOA manufactured, sold, and distributed Resistors  
9 either directly or through its business units, subsidiaries, agents, or affiliates to United States  
10 purchasers.

11           32.     Defendant KOA Speer Electronics, Inc. (“KOA Speer”) is a Delaware corporation with  
12 its principal place of business located at 199 Bolivar Drive, Bradford, Pennsylvania 16701. KOA Speer is  
13 one of the world’s leading manufacturers of Resistors and is a wholly owned subsidiary of KOA  
14 (Collectively, the “KOA Defendants”). During the Class Period, KOA Speer manufactured, sold, and  
15 distributed Resistors either directly or through its business units, subsidiaries, agents, or affiliates to  
16 United States purchasers.

17           **4.     Panasonic**

18           33.     Defendant Panasonic Corporation is a Japanese corporation with its principal place of  
19 business located at 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan. Until October 1, 2008,  
20 Panasonic Corporation operated under the name of Matsushita Electric Industrial Co., Ltd.  
21 (“Matsushita”). During the Class Period, Matsushita and Panasonic (together, “Panasonic Corp.”)  
22 manufactured, sold and distributed Resistors either directly or through its business units, subsidiaries,  
23 agents or affiliates to United States purchasers.

24           34.     Defendant Panasonic Corporation of North America (“PCNA”), a wholly owned  
25 subsidiary of Panasonic Corporation, is a Delaware corporation with its principal place of business  
26 located at Two Riverfront Plaza, Newark, New Jersey 07102. During the Class Period, PCNA—either  
27 directly or through its business units, subsidiaries, agents or affiliates (including, without limitation,  
28 Panasonic Industrial Sales Company)—sold and distributed to United States purchasers Resistors



1 manufactured by business units, subsidiaries, agents or affiliates of its corporate parent, Panasonic  
2 Corporation.

3 35. Defendant SANYO Electric Co., Ltd. (“SANYO Co.”), a Japanese corporation, is, as of  
4 December 2009, a wholly owned subsidiary of Panasonic Corporation, with its principal place of  
5 business located at 15-5, Keihan-Hondori, 2-Chome, Moriguchi City, Osaka 570-8677, Japan. During  
6 the Class Period, SANYO Co. manufactured, sold and distributed Resistors either directly or through  
7 its business units, subsidiaries, agents or affiliates to United States purchasers. Prior to its acquisition by  
8 Panasonic in December 2009, SANYO had no corporate affiliation with Panasonic Corporation or its  
9 business units, subsidiaries, agents or affiliates.

10 36. Defendant Panasonic Electronic Devices Co. Ltd (“PED”), a Japanese corporation, is a  
11 wholly owned subsidiary of Panasonic Corporation. During part of the Class Period, PED had its  
12 headquarters at 1006, Oaza Kadoma, Kadoma City, Osaka, Japan. Defendant Panasonic Industrial  
13 Devices Sales Company of America (“PIDS”) is a wholly owned subsidiary of Panasonic, and a  
14 Delaware corporation with its principal place of business located at Two Riverfront Plaza, Newark, New  
15 Jersey 07102. PED and PIDS are the third largest manufacturer of linear Resistors. In August 2011, PED  
16 and was absorbed into Panasonic Corporation. See  
17 <http://news.panasonic.com/press/news/official.data/data.dir/en110831-6/en110831-6.html>.

18 37. Defendant SANYO North America Corporation (“SANYO NA”), a Delaware  
19 corporation, is a wholly owned subsidiary of SANYO Co., with its principal place of business located at  
20 2055 Sanyo Avenue, San Diego, California 92154. During the Class Period, SANYO NA—either  
21 directly or through its business units, subsidiaries, agents or affiliates—sold and distributed to United  
22 States purchasers Resistors manufactured by business units, subsidiaries, agents or affiliates of its  
23 corporate parent, SANYO Co.

24 38. Defendants Panasonic Corp., PCNA, PIDS, SANYO Co. and SANYO NA are together  
25 referred to herein as “Panasonic.”

## 26 5. ROHM

27 39. Defendant ROHM Co., Ltd. (“ROHM Co.”) is a Japanese corporation with its principal  
28 place of business located at 21 Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan. During the Class

1 Period, ROHM manufactured, sold, and distributed Resistors either directly or through its business  
2 units, subsidiaries, agents or affiliates to United States purchasers.

3 40. Defendant ROHM Semiconductor U.S.A., LLC (“ROHM USA”), a Delaware limited  
4 liability corporation, is a subsidiary of ROHM Co. with its principal place of business located at 2323  
5 Owen Street, Suite 150, Santa Clara, California 95054. During the Class Period, ROHM USA— either  
6 directly or through its business units, subsidiaries, agents or affiliates— sold and distributed to United  
7 States purchasers Resistors manufactured by certain business units, subsidiaries, agents or affiliates of  
8 its corporate parent, ROHM Co.

9 41. Defendants ROHM Co. and ROHM USA are together referred to herein as “ROHM.”

## 10 6. TDK

11 42. Defendant TDK Corporation is a Japanese corporation with its corporate headquarters  
12 located at Shibaura Renasite Tower, 3-9-1 Shibaura, Minato-ku, Tokyo, Japan. During the Class Period,  
13 TDK Corporation manufactured, sold distributed Resistors either directly or through its subsidiaries,  
14 agents or affiliates to purchasers throughout the United States.

15 43. TDK-EPC Corporation, a Japanese corporation, is a wholly owned subsidiary of TDK  
16 Corporation with its principal place of business located at Shibaura Renasite Tower, 3-9-1 Shibaura,  
17 Minato-ku, Tokyo, Japan. TDK-EPC Corporation was founded on October 1, 2009 from the  
18 combination of the passive components business of TDK and EPCOS AG. During the Class Period,  
19 TDK-EPC Corporation manufactured, sold and distributed Resistors either directly or through its  
20 subsidiaries, agents or affiliates to purchasers throughout the United States.

21 44. Defendant TDK U.S.A. Corporation, a New York corporation, is a wholly owned  
22 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 U.S.A. Corporation manufactured, sold  
24 and distributed Resistors either directly or through its subsidiaries, agents or affiliates to purchasers  
25 throughout the United States.

26 45. Defendants TDK Corporation, TDK-EPC Corporation, and TDK U.S.A. Corporation  
27 are referred to collectively herein as “TDK.” TDK is the largest manufacturers of non-linear Resistors.  
28

1           **7. Vishay**

2           46. Defendant Vishay Intertechnology, Inc. (“Vishay”) is a Delaware corporation with its  
3 principal place of business located at 63 Lancaster Avenue, Malvern, Pennsylvania 19355. Vishay is one  
4 of the world’s leading manufacturers of Resistors, especially wirewound, nichrome, tin oxide and thin  
5 film Resistors. Indeed, Vishay is the largest manufacturer of linear Resistors in the world. During the  
6 Class Period, Vishay manufactured, sold, and distributed Resistors either directly or through its  
7 business units, subsidiaries, agents, or affiliates to United States purchasers.

8   **IV. CO-CONSPIRATORS AND AGENTS**

9           47. The anticompetitive and unlawful acts alleged against the Defendants in this class action  
10 complaint were authorized, ordered or performed by Defendants and their respective directors, officers,  
11 agents, employees, or representatives, while actively engaged in the management, direction, or control  
12 of Defendants’ businesses or affairs.

13           48. Various persons and/or firms not named as Defendants herein may have participated as  
14 co-conspirators in the violations alleged herein and may have performed acts and made statements in  
15 furtherance thereof.

16           49. Each Defendant acted as the principal, agent or joint venturer of, or for other Defendants  
17 with respect to the acts, violations, and common course of conduct alleged herein. In particular and as  
18 alleged more fully below, each Defendant headquartered outside the United States relied on their agents  
19 in the United States (be they wholly owned subsidiaries or otherwise) to implement, enforce and  
20 conceal the cartel in the United States as part of their respective global sales and marketing systems.  
21 Defendants’ subsidiaries were aware of an agreement to keep prices for Resistors high, and they sold, or  
22 distributed, Resistors to customers in the United States; the subsidiaries charged supracompetitive  
23 cartel prices as set by their foreign parents; the subsidiaries assisted their parents in concocting and  
24 disseminating pretexts for price increases; and in many instances the subsidiaries communicated with  
25 cartel members individually to help implement and conceal the price-fixing scheme. Persons who  
26 attended cartel meetings or participated in cartel activities did so representing the corporate enterprise  
27 on whose behalf they attended. Other participants also did so and understood they and others attended  
28

1 as representatives of their respective enterprises and further understood they were making global  
2 agreements on behalf of corporate enterprises they represented.

3 50. The agency relationships formed among the Defendants with respect to the acts,  
4 violations, and common course of conduct alleged herein were consensually formed between the  
5 Defendant principals and agents. Defendants' agents acted in the United States and abroad within the  
6 scope of their agency relationship with their own principals. Defendants' agents acted under the explicit  
7 authority, implied authority or apparent authority of their principals. These acts include, but are not  
8 limited to, subsidiaries selling, distributing, or shipping Resistors at the request of their parent  
9 companies. Further, Defendants acted on behalf of and were subject to the control of their principals,  
10 and they acted within the scope of authority or power delegated by their principals. Defendants' agents  
11 performed their duties with appropriate care and diligence, within the scope of their agency, in selling,  
12 distributing, or shipping Resistors that had been sold at supracompetitive prices.

13 51. Accordingly, the Defendant principals are liable for the acts of their agents. Likewise, the  
14 Defendant agents are liable for the acts of their principals conducted by the agents within the scope of  
15 their explicit, implied or apparent authority.

16 **V. CLASS ALLEGATIONS**

17 52. Plaintiff brings this action on behalf of itself and as a class action pursuant to Federal  
18 Rules of Civil Procedure, Rule 23(a), (b)(2) and (b)(3), on behalf of the members of a Class, which is  
19 defined as follows:

20 All persons in the United States that purchased Resistors (including  
21 through controlled subsidiaries, agents, affiliates or joint-ventures)  
22 directly from any of the Defendants, their subsidiaries, agents, affiliates or  
joint ventures from January 1, 2003 through the present (the "Class  
Period").

23 53. The Direct Purchaser Class definition encompasses those who purchased Resistors  
24 directly from any of the Defendants, even if the Resistors purchased were manufactured, sold or  
25 distributed by a given Defendant's predecessors, parents, business units, subsidiaries, affiliated entities,  
26 principals, agents or co-conspirators.

27 54. This definition of the Direct Purchaser Class specifically excludes the following persons  
28 or entities:

- 1 a. Any of the Defendants named herein;
- 2 b. Any of the Defendants' co-conspirators;
- 3 c. Any of Defendants' parent companies and their subsidiaries, agents or affiliates;
- 4 d. Any of Defendants' officers, directors, management, employees, subsidiaries, agents
- 5 or affiliates;
- 6 e. All governmental entities; and
- 7 f. The judges and chambers staff in this case, as well as any members of their
- 8 immediate families.

9 55. Plaintiff does not know the exact number of Direct Purchaser Class members, because  
10 such information is in the exclusive control of Defendants. Plaintiff is informed and believes that, due to  
11 the nature of the trade and commerce involved, there are thousands of Direct Purchaser Class members  
12 geographically dispersed throughout the United States and elsewhere, such that joinder of all Class  
13 members in the prosecution of this action is impracticable.

14 56. Plaintiff's claims are typical of the claims of its fellow Class members because Plaintiff  
15 directly purchased Resistors from certain of the Defendants named herein, Plaintiff and all Direct  
16 Purchaser Class members were damaged by the same wrongful conduct of Defendants as alleged herein,  
17 and the relief sought herein is common to all members of the Class.

18 57. Numerous questions of law or fact common to the entire Direct Purchaser Class—  
19 including, but not limited to those identified below—arise from Defendants' anticompetitive and  
20 unlawful conduct:

- 21 a. Whether Defendants combined and/or conspired to fix, raise, maintain, or stabilize
- 22 prices of Resistors sold to purchasers in the United States at any time during the
- 23 Class Period;
- 24 b. Whether Defendants concertedly fixed, raised, maintained or stabilized prices of
- 25 Resistors sold to purchasers in the United States at any time during the Class Period,
- 26 or committed other conduct in furtherance of the conspiracy alleged herein;
- 27 c. The duration and the extent of Defendants' conspiracy;
- 28

- 1 d. Whether Defendant fraudulently concealed their conspiracy from Resistors  
2 purchasers in the United States;
- 3 e. Whether the actions of Defendants in so conspiring violated Section 1 of the  
4 Sherman Act;
- 5 f. Whether Defendants' conduct caused the prices of Resistors sold at any time during  
6 the Class Period to purchasers in the United States to be artificially fixed, raised,  
7 maintained or stabilized at noncompetitive prices;
- 8 g. Whether Plaintiff and the other members of the Direct Purchaser Class were injured  
9 by Defendants' conduct and, if so, the appropriate Class-wide measure of damages;  
10 and
- 11 h. Whether Plaintiffs and other members of the Direct Purchaser Class are entitled to,  
12 among other things, injunctive relief, and, if so, the nature and extent of such relief.

13 58. These and other questions of law and fact are common to the Direct Purchaser Class and  
14 predominate over any questions affecting the Class members individually.

15 59. Plaintiff will fairly and adequately represent the interests of the Direct Purchaser Class  
16 because they directly purchased Resistors from one or more Defendants and they have no conflicts with  
17 any other members of the Class. Furthermore, Plaintiff has retained sophisticated and competent  
18 counsel who are experienced in prosecuting antitrust class actions, as well as other complex litigation.

19 60. Defendants have acted on grounds generally applicable to the Direct Purchaser Class,  
20 thereby making final injunctive relief appropriate with respect to the Class as a whole.

21 61. This class action is superior to alternatives, if any, for the fair and efficient adjudication  
22 of this controversy. Prosecution of the claims pleaded herein as a class action will eliminate the  
23 possibility of repetitive litigation. There will be no material difficulty in the management of this action as  
24 a class action.

25 62. The prosecution of separate actions by individual Class members would create the risk of  
26 inconsistent or varying adjudications, establishing incompatible standards of conduct for Defendants.

**VI. TRADE AND COMMERCE**

1  
2 63. During the Class Period, each Defendant, directly or through one or more of its  
3 respective parents, subsidiaries, business units, agents or affiliates, sold or delivered to United States  
4 purchasers Resistors in a continuous and uninterrupted flow of interstate commerce, including through  
5 and into this District.

6 64. By way of example and not limitation, and as detailed more fully below, the following  
7 Defendants each assisted their respective corporate parent Defendants with the sale or delivery to  
8 United States purchasers of the parents' respective Resistors United States purchasers: PCNA;  
9 SANYO NA; PEDCA; UCC; KOA Speer; ROHM USA; TDK USA.

10 65. During the Class Period, Defendants collectively controlled the respective markets for  
11 the sale of Resistors, both globally and also in the United States.

12 66. Defendants engaged in conduct both inside and outside of the United States that caused  
13 direct, substantial and reasonably foreseeable and intended anticompetitive effects upon interstate  
14 commerce within the United States.

15 67. Resistors manufactured abroad by the Defendants and sold in the United States  
16 constitute domestic or import commerce.

17 68. To the extent any Resistors have been or purchased by Direct Purchaser Class members  
18 and these purchases do not constitute domestic or import commerce, the Defendants' unlawful  
19 activities with respect thereto, as more fully alleged herein, had, and continue to have, a direct,  
20 substantial and reasonably foreseeable effect on United States commerce that gives rise to the claims  
21 asserted herein.

22 69. Defendants also sold Resistors overseas directly to members of the Direct Purchaser  
23 Class (including through the Class members' controlled subsidiaries, agents or affiliates), some of  
24 which were incorporated into products manufactured overseas that were imported into the United  
25 States. These sales by Defendants involved import commerce and had a substantial, direct and  
26 reasonable foreseeable effect on United States import commerce that gives rise to the claims asserted  
27 herein.  
28





1 devices are thick chip Resistors made of film; axially and radially arranged leaded Resistors in nichrome,  
2 wirewound or using tin oxide resistive elements; carbon film Resistors; in-line thick film networks made  
3 of nichrome or tantalum nitride; and chrome silicide thin film Resistors.

4 74. The overall resistor market is sub-divided into linear and non-linear Resistors. Linear  
5 Resistors are those in which current produced is directly proportional to the applied voltage. These  
6 Resistors are “linear” in because comparing current versus applied voltage yields a straight and linear  
7 relationship. Non-Linear Resistors are those whose current does not change linearly—or in a constant  
8 fashion—with changes in applied voltage. It is so because the current flow always results in production  
9 of heat, which either increases (as in metals) or decreases their resistance (as in insulators). Because of  
10 this change in resistance the current through such a resistor is not directly proportional to the  
11 impressed voltage.

12 75. Linear Resistors are most commonly used in consumer audio and video devices and  
13 computers. Non-linear Resistors are most commonly used in larger circuits, such as in  
14 telecommunications and automobiles. Both linear and non-linear Resistors are manufactured using  
15 similar metals and materials, and many Defendants manufacture both linear and non-linear Resistors.

16 **B. The Market Conditions in Which Defendants’ Conspiracy Originated and Operated**

17 76. Generally, there are three principal types of Direct Purchasers of Resistors, including: (1)  
18 OEMs who incorporate Resistors into their finished products, (2) manufacturers who create or assemble  
19 PCBs and other electric circuit products containing Resistors that ultimately are incorporated into  
20 finished products manufactured by OEMs and other product manufacturers, and (3) electronic  
21 component distributors who buy Resistors directly from manufacturers and resell them.

22 77. According to a leading industry analyst,<sup>1</sup> the North and South American markets for  
23 Resistors collectively account for approximately \$1.021 billion for fiscal year 2014, or roughly 23 percent  
24 of the global market.

25 78. Though Resistors are used in all types of electrical circuits, the demand for all types of  
26 Resistors for at least the last decade has been largely tied to the demand for consumer electronics. After  
27

28 

---

<sup>1</sup> Dennis M. Zogbi, CEO and Founder of Paumanok Publications, Inc.

1 experiencing growth throughout most of the 1990s and early years of the 2000s, resistor demand  
 2 dropped dramatically in 2001, and again during the Great Recession of 2008. Despite the drop in  
 3 demand, prices for Resistors have remained remarkably consistent throughout the Class Period. For  
 4 example, although the average price for Resistors dropped from around \$0.0080 per unit to around  
 5 \$0.0045 per unit from 2001 to 2002, prices for Resistors remained remarkable constant from 2002 to  
 6 2004, remaining around \$0.0045. *A Market Research Analysis Covering World Markets, Technologies &*  
 7 *Opportunities Linear and Non-Linear Resistors: 2004-2008* (Paumanok Publications, Inc. May 2004).  
 8 Indeed, the 2008 Recession had only a mild impact on the average price of Resistors, in comparison to  
 9 the much less severe 2001 global downturn, in which prices for Resistors fell nearly in half:

LINEAR RESISTORS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013f	2014e
Chip Resistors	\$0.996	\$0.960	\$0.944	\$0.949	\$0.916	\$0.877	\$0.781	\$0.731	\$0.740	\$0.725	\$0.711	\$0.699
Networks, Arrays & IPD	\$45.000	\$41.867	\$39.750	\$34.800	\$32.069	\$28.485	\$26.897	\$26.333	\$26.485	\$27.065	\$25.156	\$25.794
Film/Oxide/Foil	\$35.000	\$31.412	\$31.333	\$30.101	\$29.902	\$29.238	\$27.677	\$26.421	\$27.250	\$28.636	\$28.182	\$27.583
Wirewound	\$284.615	\$278.571	\$273.333	\$258.824	\$250.556	\$252.778	\$232.571	\$224.096	\$242.500	\$244.737	\$242.222	\$241.000
Carbon Film/Comp	\$5.143	\$4.471	\$4.111	\$4.118	\$3.941	\$3.750	\$3.857	\$3.769	\$4.923	\$4.909	\$4.800	\$4.727
Total Linear Resistors	\$2.517	\$2.451	\$2.542	\$2.509	\$2.347	\$2.215	\$2.067	\$1.921	\$2.017	\$2.015	\$1.967	\$1.946
NON-LINEAR RESISTORS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014f
Metal Oxide Varistors	\$35.4281	\$34.0769	\$32.9889	\$31.0000	\$30.2927	\$30.0000	\$29.0003	\$30.0457	\$29.0004	\$28.0000	\$26.3279	\$25.5783
PTC Thermistors	\$126.3393	\$118.0039	\$113.5338	\$110.8108	\$106.6777	\$103.3846	\$104.4534	\$104.1296	\$103.7963	\$101.5561	\$99.8322	\$97.6805
NTC Thermistors	\$156.8182	\$162.2318	\$161.4173	\$159.0909	\$157.9805	\$156.8750	\$158.0247	\$157.4830	\$156.4388	\$154.1463	\$151.9873	\$149.9264
Total Non-Linear Resistors	\$73.613	\$69.667	\$68.239	\$62.849	\$59.153	\$57.855	\$56.424	\$56.876	\$55.266	\$53.416	\$48.630	\$47.077
Grand Total Resistors	\$ 4.0825	\$ 3.9665	\$ 3.9921	\$ 3.9429	\$ 3.7294	\$ 3.5635	\$ 3.2300	\$ 3.3876	\$ 3.3458	\$ 3.3184	\$ 3.3303	\$ 3.2368

15 [Source: Resistors 2014 World Markets, Technologies & Opportunities: 2014-2019 (Paumanok  
 16 Publications, Inc. September 2014)].

### 17 C. Defendants' Collusive Anticompetitive Practices

18 79. Faced with increased requests by purchasers for price reductions and an overall decline  
 19 in demand for their Resistors, before and during the Class Period, Defendants knew that price  
 20 competition would reduce, if not eliminate, profitability for Defendants' resistor manufacturing  
 21 operations.

22 80. Before and during the Class Period, Defendants were aware that fringe non-party resistor  
 23 manufacturers with smaller market shares markets faced capacity, technology, and resources constraints  
 24 that would render them unable to successfully compete against Defendants by meeting and/or capturing  
 25 market demand for Resistors should Defendants artificially control prices in these three product  
 26 markets.

27 81. Resistors of the same resistance are, in most instances, mutually interchangeable for each  
 28 other.

1           82. Before and during the Class Period, Defendants were aware of the interchangeability of  
2 their respective Resistors having similar resistance, and had concerns that purchasers' understanding of  
3 this interchangeability could drive Defendants to compete against themselves on price for sales.

4           83. Resistors are components fundamentally necessary for the function of electric circuits.  
5 Other types of passive electrical components (*e.g.*, inductors, capacitors) cannot serve as a substitute for  
6 or a functional equivalent to a resistor.

7           84. Before and during the Class Period, Defendants were aware of their customers' inability  
8 to substitute other passive electronic components to take the place of the Resistors they required. This  
9 fact emboldened Defendants to set prices for their Resistors collusively during the Class Period because,  
10 without any feasible substitutes for Resistors on the market, Defendants would not lose anything close  
11 to sufficient sales to make the cartel pricing unprofitable.

12           85. All types of Resistors purchasers—OEMs, CMs and third-party distributors—are almost  
13 always committed to inflexible production or delivery deadlines to their respective customers, and  
14 therefore are likely to accept collusively set price increases on the Resistors they require to avoid the  
15 usually greater cost of production delays or customer dissatisfaction.

16           86. Before and during the Class Period, Defendants were aware that, because Resistors are  
17 necessary, non-substitutable, and generally inexpensive, collusively set price increases would face little  
18 to no opposition from purchasers.

19           87. In their collective and individual consideration of these market conditions and product  
20 characteristics, Defendants agreed to operate as a cartel to suppress price competition among them for  
21 their respective competing Resistor manufacturers. This agreement was reached through both oral and  
22 written communications among directors, executives, officers, business unit managers, sales  
23 representatives and employees of the Defendant companies. These communications occurred in person  
24 through both regular and impromptu meetings, electronic or paper correspondence, text messaging  
25 and/or telephonic or video communications in the period before and during the Class Period.

26 **D. Defendants' Cartel**

27           88. Rather than engage in competition, Defendants colluded, formed a cartel, and agreed to  
28 fix, raise, and stabilize resistor prices throughout the world, including in the United States.

1 89. Defendants intended to restrain trade in Resistors through trade associations and  
2 meetings of trade associations. One group that, on information and belief, was the [REDACTED]  
3 [REDACTED] meetings included personnel from, at least, AVX, Panasonic,  
4 Vishay, KEMET, TDK, and KOA.

5 90. Defendants also met as part of the Passive Components Market Services (“PCMS”). At  
6 these meetings, Defendants exchanged information concerning capacitors, Resistors, and other passive  
7 components. PCMS meetings happened regularly during the Class Period, and were held in the United  
8 States. For example, a PCMS meeting occurred in Chicago in January 2008.

9 91. [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]

17 92. Finally, Defendants KOA, Panasonic, ROHM, and Vishay met as part of the America  
18 Corporation Electronic Components Industry Association (“ECIA”), which is located in Alpharetta,  
19 Georgia. PCMS meetings were organized by ECIA members, and PCMS was a subgroup of ECIA.

20 **VIII. INDUSTRY CHARACTERISTICS INDICATING AND FACILITATING**  
21 **DEFENDANTS’ CONSPIRACY**

22 93. For at least as long as the Class Period, the Resistors industry has been characterized by  
23 numerous factors that facilitated Defendants’ conspiracy. By way of illustration and not limitation, the  
24 industry has exhibited (1) market concentration among a limited number of participants; (2) high  
25 barriers to entry; (3) mutual interchangeability of Defendants’ products; (4) inelasticity of demand; (5)  
26 product commoditization; (6) weak demand in a mature market; (7) excess manufacturing capabilities  
27 and capacity; (8) a large number of purchasers with limited purchasing power; and (9) ease of  
28 information sharing among Defendants.

1 **A. Market Concentration**

2 94. Before and during the Class Period, Defendants—both individually and collectively—  
3 held significant shares in already-mature markets for Resistors, thereby producing a significant amount  
4 of the Resistors available to United States purchasers and purchasers worldwide. Indeed, the market for  
5 Resistors was highly concentrated throughout the Class Period. In 2003, Panasonic, Vishay, KOA, and  
6 Rohm held 61% of the market for linear Resistors; at that same time, Defendants had nearly 40% of the  
7 market for non-linear Resistors. In 2014, Defendants had nearly 40% of the world market for all types of  
8 Resistors.

9 95. Global sales for Resistors remain large. In 2014, linear Resistors were estimated to be a  
10 \$2.65 billion industry, and non-linear Resistors are predicted to account for \$1.89 billion.

11 **B. High Barriers to Entry**

12 96. In industries characterized by substantial barriers to entry, new entrants are unlikely to be  
13 able to compete away supracompetitive cartel pricing. Here, high barriers to entry have prevented entry  
14 by sellers of Resistors despite the artificial inflation of prices.

15 97. Companies seeking to manufacture and sell Resistors confront various significant barriers  
16 to entry.

17 98. The Resistors manufacturing industry is a mature one dominated by established  
18 corporations, most having multinational operations, global market reach, and diverse product portfolios  
19 of all types of passive electrical components. These companies—the Defendants in particular—have  
20 significant experience in the global Resistors industry and established reputations with both sellers of  
21 raw materials and purchasers of finished Resistors. These companies typically have access to significant  
22 financial resources that allow them to commit the capital necessary to bring online new fabrication  
23 operations and facilities or to expand/retrofit existing ones to meet and exceed market demand and  
24 adjust to technological changes. This readily available access to capital also permits manufacturers like  
25 Defendants the ability to establish and secure necessary supply chain commitments for all raw materials  
26 they require. Defendants are all established manufacturers in the Resistors industry.

27 99. For a prospective resistor manufacturer, setting up competitive manufacturing  
28 operations and supply chain operations is a significant financial and logistic hurdle to market entry. A

1 new entrant seeking to build Resistors operations and facilities faces not only the sizeable cost of  
2 building fabrication plants, but also the costs of acquiring the necessary production technology, hiring  
3 and retaining skilled and knowledgeable manpower, and securing the raw materials and supply chain  
4 commitments necessary to manufacture competitive products. These costs would exceed hundreds of  
5 millions of dollars. Many of the Defendant manufacturers have developed internal processing  
6 capabilities for raw materials and have established relationships with raw materials producers that all but  
7 insure that their requirements will be met.

8 100. Moreover, some of the raw materials necessary to manufacture certain types of Resistors  
9 are produced in only a limited number of regions around the world or are available from only a limited  
10 number of suppliers. Many Resistors are made with rare earth metals, which are of limited supply, and  
11 which require expensive mining and processing.

12 101. For example, thin film Resistors are made with tantalum nitride, a substance that uses  
13 the rare metal tantalum. Tantalum is only mined in a few regions in the world, principally South  
14 America (Brazil), central Africa (the Democratic Republic of Congo), and Australia. Because the Congo  
15 is rich in ores containing tantalum, rebel factions in the country have mined and sold tantalum to  
16 foreigners in order to fund their insurgency. To avoid SEC-reporting companies directly or indirectly  
17 funding civil wars and strife abroad when purchasing their tantalum requirements, Congress passed the  
18 Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502, which designates  
19 tantalum as a “conflict mineral” and requires that public companies using tantalum or other conflict  
20 minerals to file annual public reports with the SEC regarding the origins of conflict minerals in their  
21 supply chains that disclose and represent the source of these minerals. Sourcing concerns led to supply  
22 shortages and price shocks. Accordingly, a potential new thin film resistor manufacturer not only would  
23 have difficulty securing adequate supplies of tantalum in the already competitive global market for the  
24 mineral, but would likely have to commit significant time, effort and money to auditing its newly  
25 acquired tantalum supply chain.

26 102. Similarly, other rare metals and materials used by resistor manufacturers include  
27 ruthenium, nickel, Tin and alumina. Ruthenium is the primary precious metal consumed in thick film  
28 chips, networks and arrays; while nickel is used in wirewound and nichrome Resistors.

1           103. These hurdles, however, are not the only barriers a new market entrant faces. For a new  
2 market entrant consistently to manufacture and sell Resistors competitively and to create and sustain a  
3 diverse product portfolio, it must invest in substantial research and development operations.  
4 Additionally, the new entrant must create and maintain global sales, marketing and distribution  
5 operations so that its products can reach resistor purchasers.

6           104. Ultimately, to be competitive, a new market entrant has to commit to significant financial  
7 and operational undertakings to establish itself in an industry where—absent price manipulation—  
8 profit margins are not large (and are trending lower) and large economies of scale must be achieved in  
9 order to reach profitability. A new market entrant seeking financing would need to convince investors or  
10 commercial lenders to loan it hundreds of millions of dollars to enter a market for commoditized, low  
11 profit margin products where profitability depends on achieving large economies of scale despite waning  
12 demand.

### 13 **C. Interchangeability of Defendants' Resistors**

14           105. As noted earlier, Resistors of like resistance are interchangeable. A specific linear or non-  
15 linear resistor manufactured by one of the Defendants therefore can be exchanged for a product of  
16 another Defendant with the same technical and operational specifications. There are no other defining  
17 physical characteristics that differentiate Defendants' various Resistors from each other.

18           106. Defendants are aware of the fungibility of their respective products. Indeed, Defendants  
19 have made product cross-reference materials available through their respective web sites, product  
20 catalogs, and/or other materials distributed to resistor purchasers. These cross-reference materials  
21 identify a specific competitor's Resistors by either product number or technical and operational  
22 specifications, and then identify their own specific interchangeable Resistors.

23           107. Because resistor purchasers are aware of the interchangeability of Defendants' respective  
24 Resistors of like resistance, along with the possibility that certain products that are not directly fungible  
25 (*i.e.*, with differing technical tolerances and ratings) can still replace each other, Defendants present  
26 purchasers a broad portfolio of product choices that can meet their needs. Accordingly, absent  
27 Defendants' conspiracy, price would be the primary means of competition among Defendants in resistor  
28 markets.

1 **D. Inelastic Demand**

2 108. Inelastic demand means that increases in price result in limited declines in quantity sold  
3 in the market. For a cartel to profit from raising prices above competitive levels, demand must be  
4 inelastic at competitive prices such that cartel members are able to raise prices without triggering a  
5 decline in sales revenue that would make the artificial price increase unprofitable. In simple terms,  
6 demand is inelastic when the loss in volume arising from a price increase is small relative to the  
7 magnitude of the increase in price, allowing higher prices to increase revenues and profits despite loss of  
8 sales.

9 109. Demand is inelastic for Resistors. When there are few or no substitutes for a product,  
10 purchasers have little choice but to pay higher prices in order to purchase these products. As set forth  
11 above, Resistors are a fundamental and necessary component in the electric circuits employed to make  
12 functional a wide variety of products within different end-markets. Resistors perform a particular  
13 function that generally cannot be replicated through inclusion of other components. No other type of  
14 passive electrical component (*e.g.*, inductors, capacitors) can serve as a substitute or a functional  
15 equivalent to a resistor in an electric circuit. Accordingly, a purchaser that is either an OEM or an EMS  
16 Provider cannot design an electric circuit to bypass its need for a resistor with a certain capacitance,  
17 dielectric and form factor.

18 110. Resistors are also often a comparatively inexpensive cost input in electrical devices, so a  
19 purchaser facing higher prices for Resistors would generally pay that increased price rather than forgo  
20 its opportunity to sell the device that includes the Resistors. Notably, Resistors bought for import to the  
21 United States are often ultimately used in the production of high-cost durable products such as cars,  
22 large electronic devices (such as televisions), and computers. Accordingly, U.S. resistor purchasers are  
23 generally less price-sensitive than Asian purchasers and will pay higher prices for Resistors in order to  
24 sell their final products or (for distributors) to meet demand.

25 111. Further, Resistors purchasers facing strict deadlines tied to promised product delivery  
26 dates would pay the increased price for the specific Resistors needed rather than lose out on the amount  
27 already invested in the completed products incorporating the Resistors or risk losing business  
28 permanently by alienating downstream customers through missed deadlines.



1           112.     Indeed, demand inelasticity for Resistors is particularly acute when a given electric  
2 circuit or an electronic device requires not just a resistor, but one with a specific resistance that  
3 specifically fits the circuit's design. In that instance, a purchaser has no choice but to buy a specific  
4 resistor with the required technical and operational characteristics.

5     **E.     Commoditization**

6           113.     When a product is characterized as a commodity, market participants typically compete  
7 on the basis of price rather than other attributes such as product quality or customer service. Where  
8 competition occurs principally on the basis of price, it is easier to implement and monitor a cartel  
9 because price is more often objectively measurable and observable than non-price factors such as  
10 service.

11           114.     Resistors are mass-produced through standardized manufacturing processes. They are  
12 designed according to standardized technical and operational characteristics for the various mutually  
13 interchangeable models Defendants manufacture.

14           115.     The Resistors at the center of Defendants' conspiracy are largely commoditized.

15     **F.     Weak Demand**

16           116.     Static or declining demand is one factor that makes the formation of a collusive  
17 arrangement more likely. Under normal business conditions, when faced with weak demand conditions,  
18 firms will attempt to maintain their sales by taking market share from competitors through decreasing  
19 prices. For this reason, firms faced with static or declining demand have a greater incentive to collude  
20 with competitors to avoid price competition and profit erosion.

21           117.     The overall demand for Resistors has declined since the early 2000s. Specifically, demand for  
22 Resistors is closely tied to the demand for particular consumer electronics, such as computers,  
23 televisions, and automobiles. Over the past decade, declining sales of desktop computers and television  
24 sets have weakened demand for passive electronic components, including Resistors. In 2012, for example,  
25 sales of televisions and desktop computers declined roughly 10% from the previous year, whereas  
26 demand for laptop computers declined only 2%. Weakened demand is also due to the smaller design of  
27 consumer electronic devices, such as televisions and computers, which now require fewer Resistors to  
28 manufacture.

1 **G. Excess Manufacturing Capacity**

2 118. All things equal, if product manufacturers have excess capacity available to meet and  
3 exceed demand, prices in an unfettered market will decline. This is all the more so if demand is falling as  
4 well.

5 119. An economist would expect that in a market in which product manufacturers have excess  
6 production capacity and demand is falling, prices would fall as well. If those conditions exist, and yet  
7 prices are increasing, economics suggest that cartel behavior could be the cause of his anomaly.

8 120. Before and during the Class Period, Defendants had excess manufacturing capacity that  
9 allowed them to expand to meet global and U.S. demand for Resistors. This excess capacity put  
10 downward pressure on prices, and resulted in the incentive to collude.

11 121. In 2001, for example, industry statistics show that new unit shipments of chip Resistors  
12 dropped by 44% to 349 billion pieces, from the elevated levels of 625 billion pieces in 2000 due to excess  
13 inventories. Prices for Resistors fell nearly by half as a result.

14 **H. Large Number of Purchasers With Limited Purchasing Power**

15 122. In the markets for Resistors, Defendants each have historically sold and currently sell to a  
16 wide number of purchasers around the globe, the vast majority of whom during the Class Period made  
17 up a small part Defendant's respective annual net sales, year over year.

18 123. Defendants therefore had many reasons during the Class Period to coordinate pricing  
19 and market supply availability with each other within the auspices of their cartel.

20 124. Defendants concertedly priced their respective Resistors during the Class Period, and  
21 also provided lockstep quotation of production lead times to purchasers who tried to shop around for  
22 the best deal.

23 **I. Ease of Information Sharing Among Defendants**

24 125. Because of their common membership and participation in trade associations and  
25 interrelated business relationships between certain executives, officers, and employees of the  
26 Defendants, there were many opportunities both before and during the Class Period for Defendants to  
27 collude by discussing competitive information regarding their Resistors. The ease of communication  
28 was facilitated by the use of meetings, telephone conversations, email messages, written correspondence

1 and text messaging. Defendants took advantage of these opportunities to discuss, and agree upon, their  
2 pricing for the various types of Resistors they produce.

3 126. Industry trade associations make a market more susceptible to collusive behavior because  
4 they can provide a pretext under which conspirators can exchange sensitive company information such  
5 as pricing and market allocation.

6 127. A number of industry trade associations exist to which many of the Defendant  
7 manufacturers belong. The Japan Electronics and Information Technology Industries Association  
8 (“JEITA”) is a prominent trade organization that claims as members many of the Defendants, *e.g.*,  
9 Panasonic and ROHM. It was formed in 2000 from two earlier organizations, the Electronic Industries  
10 Association of Japan and the Japan Electronic Industries Development Association.

11 128. JEITA is not the only industry trade association to which Defendants hold memberships.  
12 As alleged above, Defendants were members of [REDACTED] PCMS, and ECIA. [REDACTED]  
13 [REDACTED] and Defendants worked with consultants in compiling data for  
14 both Resistors and Resistors at PCMS meetings.

15 129. Aside from these formalized means of exchanging information among each other,  
16 Defendants have among them numerous informal links between their former and current colleagues, co-  
17 venturers, or partners employed by other Defendant companies as well as contemporaneous experience  
18 colluding with one another. These links provided them the means and opportunity to exchange  
19 competitively sensitive information. Despite the billions of dollars of revenue generated by the Resistors  
20 industry worldwide, it is still a narrow segment of the overall electronic components industry, and the  
21 key decision-makers for the major producers had personal access to each other both directly and  
22 indirectly.

23 130. Many of the Defendants are either Japanese corporations or partially or wholly owned  
24 U.S. subsidiaries of Japanese corporations. The geographic proximity of the Japan-based Defendants to  
25 each other help facilitate their ability to meet, converse, agree on a course of collusive action and  
26 execute on that course of action on a real-time basis. Many of the Defendants also manufactured other  
27 passive electronic components, including capacitors. These Defendants regularly met with each other to  
28 fix prices and exchange confidential non-public information, and engage in cartel activity with respect to

1 other passive components. For example, Panasonic conspired in violation of the antitrust laws with  
2 capacitor manufacturers, including at times Defendants AVX, Kemet, Rohm, TDK, and Vishay,  
3 starting no later than January 1, 2003.

4 131. Defendants can procure relatively detailed competitive information from industry  
5 analysts. The resistor industry is analyzed by a limited number of market research firms that deal in  
6 detailed industry data. Each of these firms offers, for a fee, market data on pricing, supply, and other key  
7 indicators of market activity as well as market projections. The capacity and pricing information  
8 procured by these analysts is provided directly from industry participants, including certain of  
9 Defendants. Given the limited number of analysts that cover the Resistors industry, those that do are  
10 often provided highly detailed information and direct access to decision-makers for the Resistors  
11 manufacturers, including Defendants.

12 132. In fact, Defendants engaged in regular and continuous exchanges of confidential  
13 information regarding their respective Resistors businesses throughout the Class Period.

14 **IX. CURRENT U.S. AND INTERNATIONAL ANTITRUST INVESTIGATIONS INTO**  
15 **ANTICOMPETITIVE PRACTICES IN THE RESISTORS INDUSTRY**

16 133. Defendants' conspiracy to artificially raise, maintain or stabilize prices for Resistors has  
17 only recently been discovered by law enforcement and regulatory authorities in the United States.

18 134. In the summer of 2015, media sources reported that Panasonic disclosed details of the  
19 Resistors conspiracy to the DOJ Antitrust Division as part of its ACPERA leniency request.

20 135. Defendant Panasonic/SANYO has approached U.S. authorities to self-report its  
21 involvement in the conspiracy and to request prosecutorial leniency and amnesty.

22 136. ACPERA provides leniency benefits for a participant in a price-fixing conspiracy that  
23 voluntarily admits its conduct to the DOJ. A November 19, 2008 presentation on the DOJ's website  
24 explains that "[a conditional leniency] applicant must admit its participation in a criminal antitrust  
25 violation involving price fixing . . . before it will receive a conditional leniency letter." One of the  
26 leniency benefits for a conspirator that is accepted into the ACPERA program is that the applicant is not  
27 charged with a criminal offense and is not required to plead guilty to criminal charges.  
28



1 reasonable diligence the existence of the conspiracy alleged herein until in or about July 2015, when  
2 investigations by the DOJ were first made public.

3 145. Defendants engaged in a self-concealing conspiracy that did not give rise to facts that  
4 would put Plaintiffs or the Direct Purchaser Class on inquiry notice that there was a conspiracy among  
5 Defendants to artificially fix, raise, maintain or stabilize prices for Resistors, as well as to restrict their  
6 respective output by quoting unjustifiably long production lead times. In fact, Defendants had secret  
7 discussions about price and output and, in furtherance of the conspiracy, they agreed not to discuss  
8 publicly the nature of the scheme. Further Defendants provided pretextual explanations for price  
9 changes or pricing decisions.

10 **XI. EFFECTS OF DEFENDANTS’ CONSPIRACY ON U.S. SALES OF RESISTORS AND**  
11 **INJURY TO THE DIRECT PURCHASER CLASS**

12 146. Defendants’ combination and conspiracy as set forth herein has had the following effects,  
13 among others:

- 14 a. Restraint on price competition among Defendants in the sale of their respective  
15 Resistors during the Class Period to United States purchasers;
- 16 b. Prices for Resistors sold by Defendants during the Class Period to United States  
17 purchasers have been raised, fixed, maintained, and stabilized at artificial and non-competitive levels;
- 18 c. The supply of Defendants’ Resistors available for sale during the Class Period to  
19 United States purchasers has been artificially and unjustifiably restrained; and
- 20 d. United States purchasers have been deprived of the benefit of free and open  
21 competition on the basis of price in the market for Resistors.

22 147. As a direct and proximate result of Defendants’ anticompetitive and unlawful conduct,  
23 Plaintiff and the Direct Purchaser Class have been injured in their business and property in that, during  
24 the Class Period, they paid artificially inflated prices for the Resistors they purchased directly from  
25 Defendants.

26 148. Plaintiff and the Direct Purchaser Class have been damaged as measured by the full  
27 amount of the overcharges that they paid in an amount subject to proof and to be determined at trial.  
28



1 a. Participating in meetings and conversations to discuss their respective prices and  
2 supply of Resistors and how they could effectively coordinate their actions to restrain trade for these  
3 products;

4 b. Communicating in writing and orally to raise, fix, maintain or stabilize prices for  
5 Resistors, and to quote artificial and unjustified production lead times to limit available supply of these  
6 Resistors;

7 c. Agreeing to coordinate and manipulate the prices and available supply of these  
8 Resistors directly sold to United States purchasers in a manner that deprived these purchasers of free  
9 and open price competition;

10 d. Issuing or signaling to each other price announcements, price quotations and  
11 production lead times for specific Resistors in accordance with the agreements Defendants reached  
12 among themselves;

13 e. Selling Resistors to United States purchasers at noncompetitive and artificial  
14 prices Defendants collusively determined; and

15 f. Providing pretextual justifications to purchasers and the public to explain any  
16 raises, maintenance, or stabilization of the prices for Defendants' Resistors.

17 158. Defendants' anticompetitive and unlawful conduct is illegal per se.

18 159. As a result of Defendants' anticompetitive and unlawful conduct, Plaintiff and the  
19 members of the Direct Purchaser Class have been injured in their businesses and property in that they  
20 have paid more for the Resistors that they purchased during the Class Period than they otherwise would  
21 have paid in the absence of Defendants' conduct.

22 **XIII. DEMAND FOR JUDGMENT**

23 **WHEREFORE**, Plaintiff requests that the Court enter judgment on its behalf and on behalf of  
24 the Direct Purchaser Class defined herein, by adjudging and decreeing that:

25 A. This action may proceed as a class action, with Plaintiff serving as a Direct Purchaser  
26 Class Representative under Fed. R. Civ. P. 23(c);

27  
28



1 B. Defendants have combined and conspired in violation of Section 1 of the Sherman Act,  
2 15 U.S.C. § 1, and that Plaintiff and the Direct Purchaser Class have been injured in their business and  
3 property as a result of Defendants' violations;

4 C. Plaintiff and the Direct Purchaser Class are entitled to recover damages sustained by  
5 them, as provided by the federal antitrust laws under which relief is sought herein, and that a joint and  
6 several judgment in favor of Plaintiff and the Direct Purchaser Class be entered against Defendants in an  
7 amount subject to proof at trial, which is to be trebled in accordance with Section 4 of the Clayton Act,  
8 15 U.S.C. § 15;

9 D. Plaintiff and the Direct Purchaser Class are entitled to pre-judgment and post-judgment  
10 interest on the damages awarded them, and that such interest be awarded at the highest legal rate from  
11 and after the date this class action complaint is first served on Defendants;

12 E. Plaintiff and the Direct Purchaser Class are entitled to equitable relief appropriate to  
13 remedy Defendants' past and ongoing restraint of trade, including:

- 14 1. A judicial determination declaring the rights of Plaintiff and the Direct Purchaser  
15 Class, and the corresponding responsibilities of Defendants; and
- 16 2. Issuance of a permanent injunction against Defendants and their parents,  
17 subsidiaries, affiliates, successors, transferees, assignees and the respective officers,  
18 directors, partners, agents, and employees thereof and all other persons acting or  
19 claiming to act on their behalf from continuing and maintaining the conspiracy or  
20 agreements alleged herein;

21 F. Defendants are to be jointly and severally responsible financially for the costs and  
22 expenses of a Court-approved notice program through post and media designed to give immediate  
23 notification to the Direct Purchaser Class;

1 G. Plaintiff and the Direct Purchaser Class recover their costs of this suit, including  
2 reasonable attorneys' fees as provided by law; and

3 H. Plaintiff and the Direct Purchaser Class receive such other or further relief as may be just  
4 and proper.

5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

**JURY TRIAL DEMANDED**

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiff demands a trial by jury of all the claims asserted in this complaint so triable.

Dated: August 24, 2015

JOSEPH SAVERI LAW FIRM, INC.

By:           /s/ Joseph R. Saveri            
Joseph R. Saveri

Joseph R. Saveri (State Bar No. 130064)  
Andrew M. Purdy (State Bar No. 261912)  
Matthew S. Weiler (State Bar No. 236052)  
James G. Dallal (State Bar No. 277826)  
Ryan J. McEwan (State Bar No. 285595)  
505 Montgomery Street, Suite 625  
San Francisco, CA 94111  
Telephone: (415) 500-6800  
Facsimile: (415) 395-9940

CERA LLP

By:           /s/ Solomon B. Cera            
Solomon B. Cera

Solomon B. Cera (State Bar No. 99467)  
C. Andrew Dirksen (State Bar No. 197378)  
595 Market Street, Suite 2300  
San Francisco, CA 94105  
Telephone: (415) 777-2230  
Facsimile: (415) 777-5189  
Email: scera@gbcslaw.com  
cdirksen@gbcslaw.com

*Attorneys for Individual and Representative Plaintiff  
Chip-Tech, Ltd.*