

Covering The World Market For
Capacitors, Resistors and Inductors

March 2018

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Paumanok Publications, Inc.
363 Pages, 161 Tables and Graphs
ISBN #:1-893211-99-1 (2018)

Passive Electronic Components: World Market Outlook: 2018-2023



Passive Electronic Components: World Market Outlook: 2018-2023

Published March Quarter 2018

Price: \$3,750.00 USD

363 Pages, 161 Tables and Graphs

ISBN #:1-893211-99-1 (2018)

(2018 Fiscal Year Ending March 31, FINAL Report)

Published: March 2018

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Fixed Capacitors, Linear Resistors & Discrete Inductors

Paumanok Publications, Inc.

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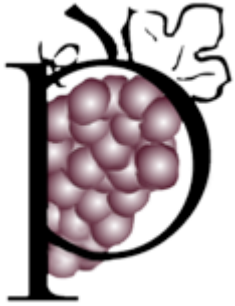
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Published March 2018

Price: \$3,750.00 USD

363 Pages, 147 Tables

ISBN #:1-893211-99-1 (2018)

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Covering: Capacitors, Resistors & Inductors

It is our mission to empower manufacturers, distributors, OEM, EMS, financial institutions and governments with unbiased market research to protect their assets, build their wealth and prosper in good times and bad.



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Introduction To Passive Electronic Component Markets, Technologies & Opportunities: 2018

Scope of Report Coverage:

Passive Electronic Components, which are covered in this report are defined as Capacitors (C), Linear Resistors (R) and Discrete Inductors (L).

The 20 individual products that are covered in this report include the following:

- Ceramic Capacitors
- Tantalum Capacitors
- Aluminum Electrolytic Capacitors
- Paper & Plastic Capacitors
- Thick and Thin Film Chip Resistors
- Arrays, Networks and Integrated Passive Devices
- Wirewound Resistors
- Nichrome Film Resistors
- Tin-Oxide Resistors
- Bulk Metal Foil Resistors
- Carbon Film & Composition Resistors
- Ferrite Beads
- Ferrite Bead Array
- Multilayered Chip Coil
- Molded Case Wirewound Chip
- SMD Molded Wirewound Coil
- Axial Leaded Wirewound Inductor
- Radial Leaded Wirewound Inductor
- Wirewound Bobbin
- Ferrite Cores

√√√√√√√√ In FY 2018 these components accounted for 3.78 Trillion Pieces consumed worldwide, with a market value of \$24.3 Billion US Dollars Up an incredible 17% In US Dollars Year-On-Year. The market has increased substantially in value in FY 2018 due to a dramatic upward shift in demand, which has manifested itself in demand for capacitors, especially solid capacitors, with emphasis upon the MLCC and the molded tantalum chip capacitors; however, and



moreover, even plastic film capacitors and aluminum electrolytic capacitors also enjoyed growth rates in the double-digit range year-on-year marking the FY 2018 as a banner year in this “feast or famine” business. Fixed resistors, especially thick and thin film chips, also experienced a double-digit rate of worldwide value growth in FY 2018. Magnetic component markets also grew but at a much slower rate than that of capacitors and resistors. First quarter CY Data (March 2018) illustrates that demand is still high and our forecast is that demand will remain tight for the FY 2019 year as well.

Based upon 30 year data analysis on Passive Components (The actual history of this report is 30 years old) and we see similar events occurring in the market in 1995, 2000, 2011 and now in 2017/2018. In each of the prior events, the market collapsed after such massive growth rates, and in each instance, the decline was as substantial as the growth. This we fear will happen again in passive components, but most certainly only after 2019. The short term outlook remains robust for capacitor, resistor and inductor manufacturers. And this report explains in vivid detail, why this is the case and forecasts the future consumption based upon 30 years of “Big” data applied specifically to passive components.

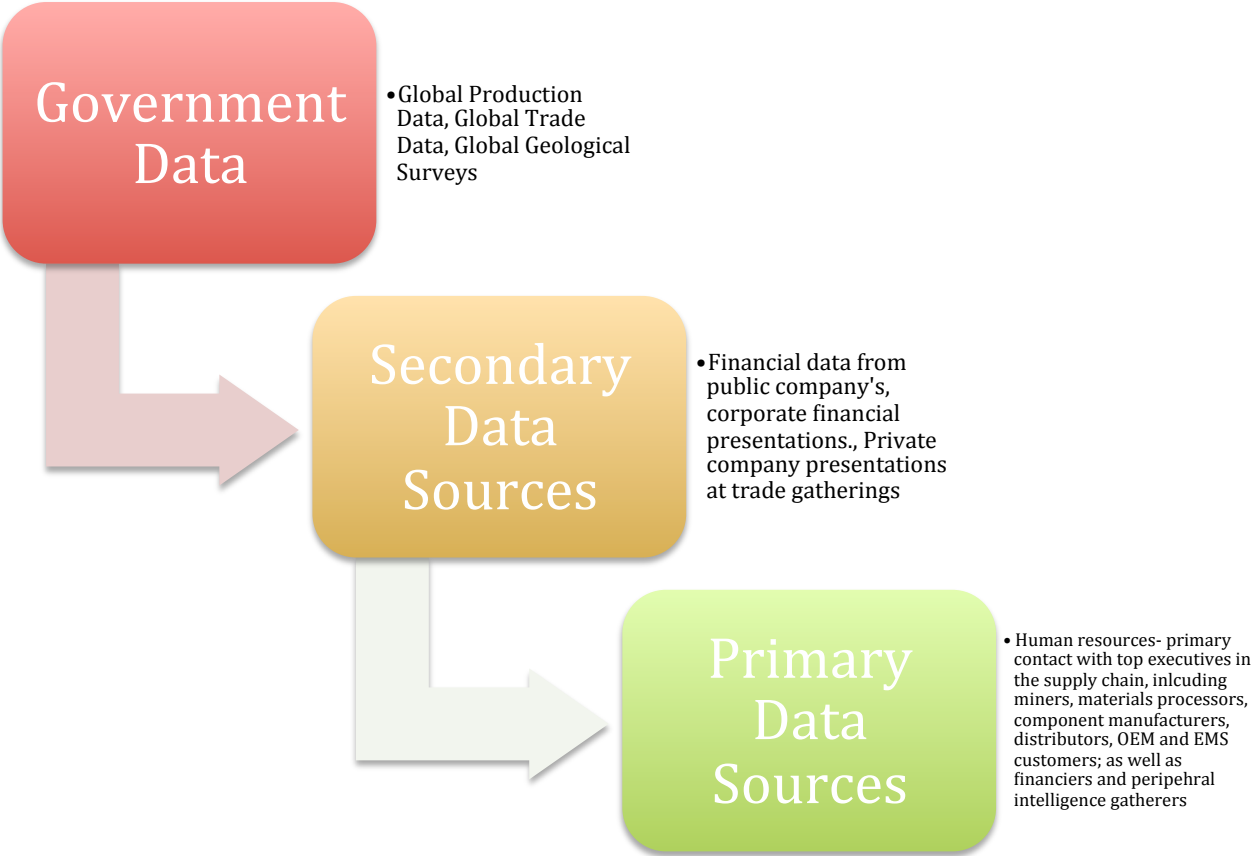
Research Methodology:

The methodology employed to create this study combines secondary and primary data sources, including government data; company financial data and primary human intelligence resources to draw conclusions. This is called a “legacy” of data that is designed to make sure that all pieces of the market “puzzle” fit together. Also we have the unique capability to benchmark the markets we study with previous studies under the same title produced in the past two decades. This enables us to establish the “Delphi -Method” which suggests that the trend of sales over time will support a similar rate of growth in the future. We caveat this approach by also employing a “Box-Jenkins” method of market research which adjusts forecasts based upon our knowledge of current events and their impact on the supply chain, and how that might impact future sales.

In this the 2018 iteration, Paumanok has been relying on the methodology most specifically to create shift models in consumption by end-use market segment and world region. The results reveals which industries paid more for passive components in FY 2018 (It was the OEM customers in Asia who had lost support of TDK in MLCC, and who had no choice but to pay 50% premiums to obtain passives for new TV set and home theatre projects. Meanwhile, new brands such as Amazon, began to see early success in home automation systems such as “DOT, and also had to pay substantial premiums- but less concerned about price at this point in the roll-out.”)



Figure 1: Paumanok Research Methodology



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Government Data Collection and Resources:

There are many government resources that we apply to research on the electronic components industry. Our primary use of government data is to establish component production in specific countries, as well as imports and exports by country of origin and country of destination respectively. Government data can also be used to establish OEM pricing because of the availability in some instances of both value and

