

ELECTRONIC DESIGN TO DELIVERY INDEX

OCTOBER 2023

Delivering insights for millions of electronic components and millions of daily user interactions across design, supply chain, and manufacturing.



Supply: Overview

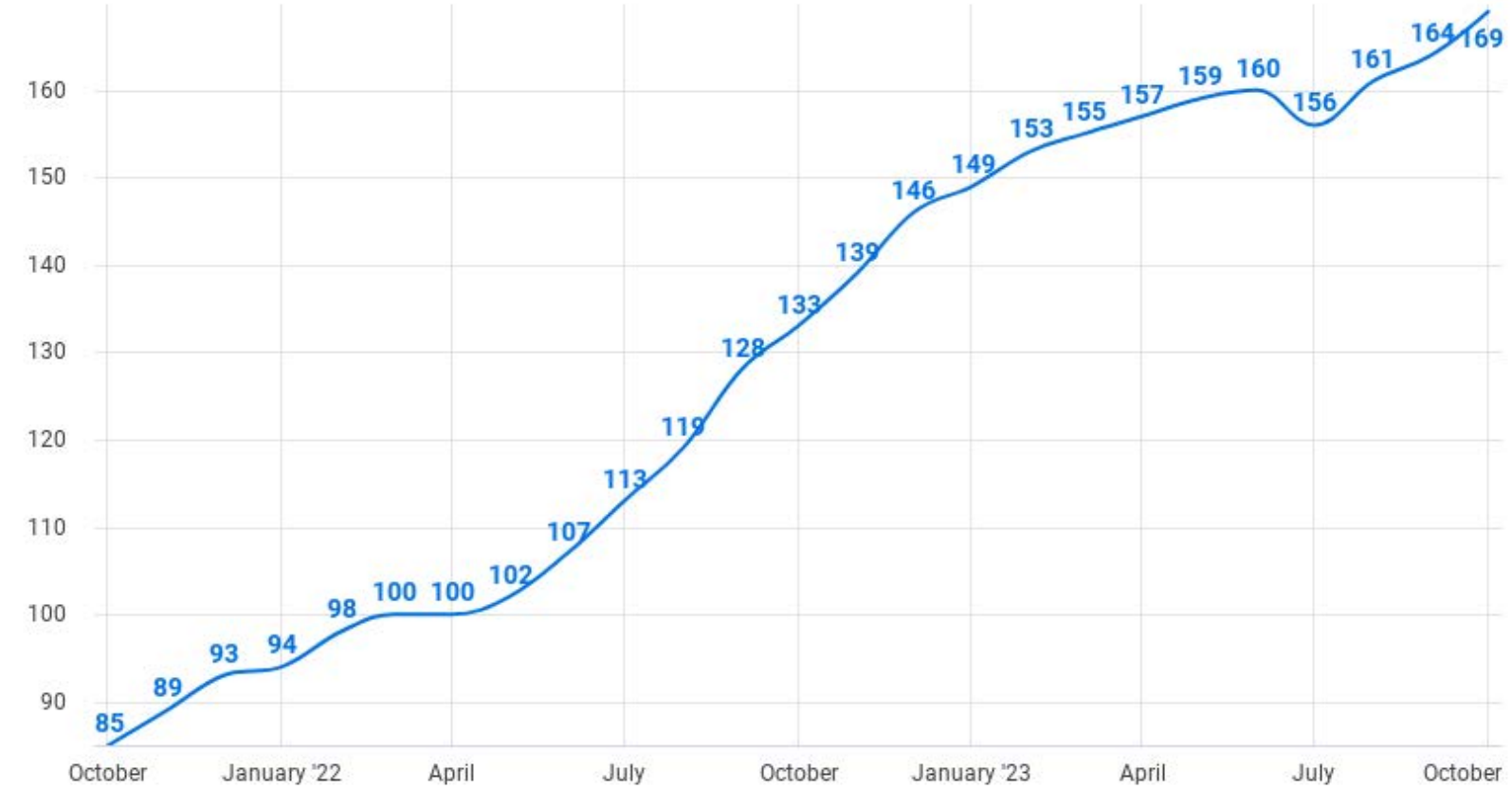
OCTOBER 2023

- The Industry Supply Index rose by 5 points, bringing its total to 169 points. This marks the third consecutive month of upward movement following a marginal decline to 156 points in July 2023.
- Circuit Protectors exhibited the most substantial surge in the supply index, increasing by 27 points (11.9%) to 254 points. Since July 2023, this is the third month of a consistent upward trend.
- Increases were also seen in Discrete Semiconductors (14 pts.), Integrated Circuits (9 pts.) and Optoelectronics (4 pts.)
- Both Connectors (-2 pts.), and Electromechanical (-1 pt.) declined this month.

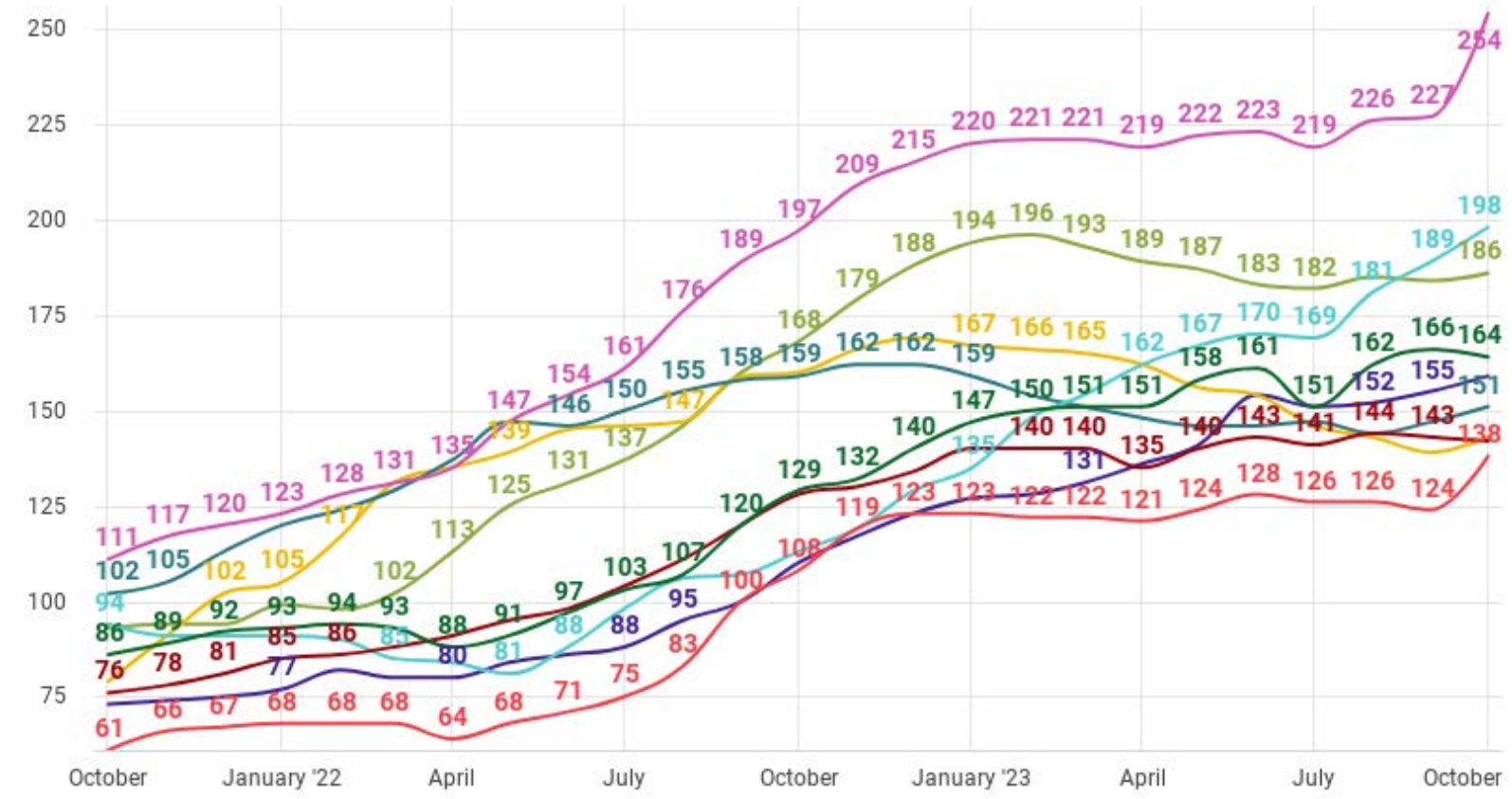
OCTOBER 2023
INDUSTRY INDEX
169
CHANGE
MONTH OVER MONTH
▲ 5

CATEGORY	INDEX	CHANGE	MONTH OVER MONTH
Circuit Protection	254	▲	27
Connectors	164	▼	2
Discrete Semiconductors	138	▲	14
Electromechanical	142	▼	1
Integrated Circuits	198	▲	9
Optoelectronics	151	▲	4
Passive Components	143	▲	4
Power Products	186	▲	2
Sensors	159	▲	4

INDUSTRY SUPPLY INDEX



SUPPLY INDEX BY CATEGORY



Supply: Integrated Circuits

OCTOBER 2023

- The Supply Index for Integrated Circuits increased by 9 points in October, for a total index value of 198 points. This increase is due to strong increases reported in all of the subcategory indices.
- The largest supply index lift in October was reported in Voltage Regulators - Linear at 24 points (13.8%), for an index total of 207 points. This adds to the 127 point increase in this index since May 2022 (158.7%).
- Other notable increases were seen in RF Receivers, Transceivers (22 pts.), Microcontrollers (11 pts.), and Voltage Regulators - Switching (16 pts.).
- Microcontrollers saw another double-digit increase of 11 points for a total index value of 133 points. This increase continues a 17 month upward trend since May 2022, when the index low reported was 27 points (392.6%).

OCTOBER 2023

ALL INTEGRATED CIRCUITS

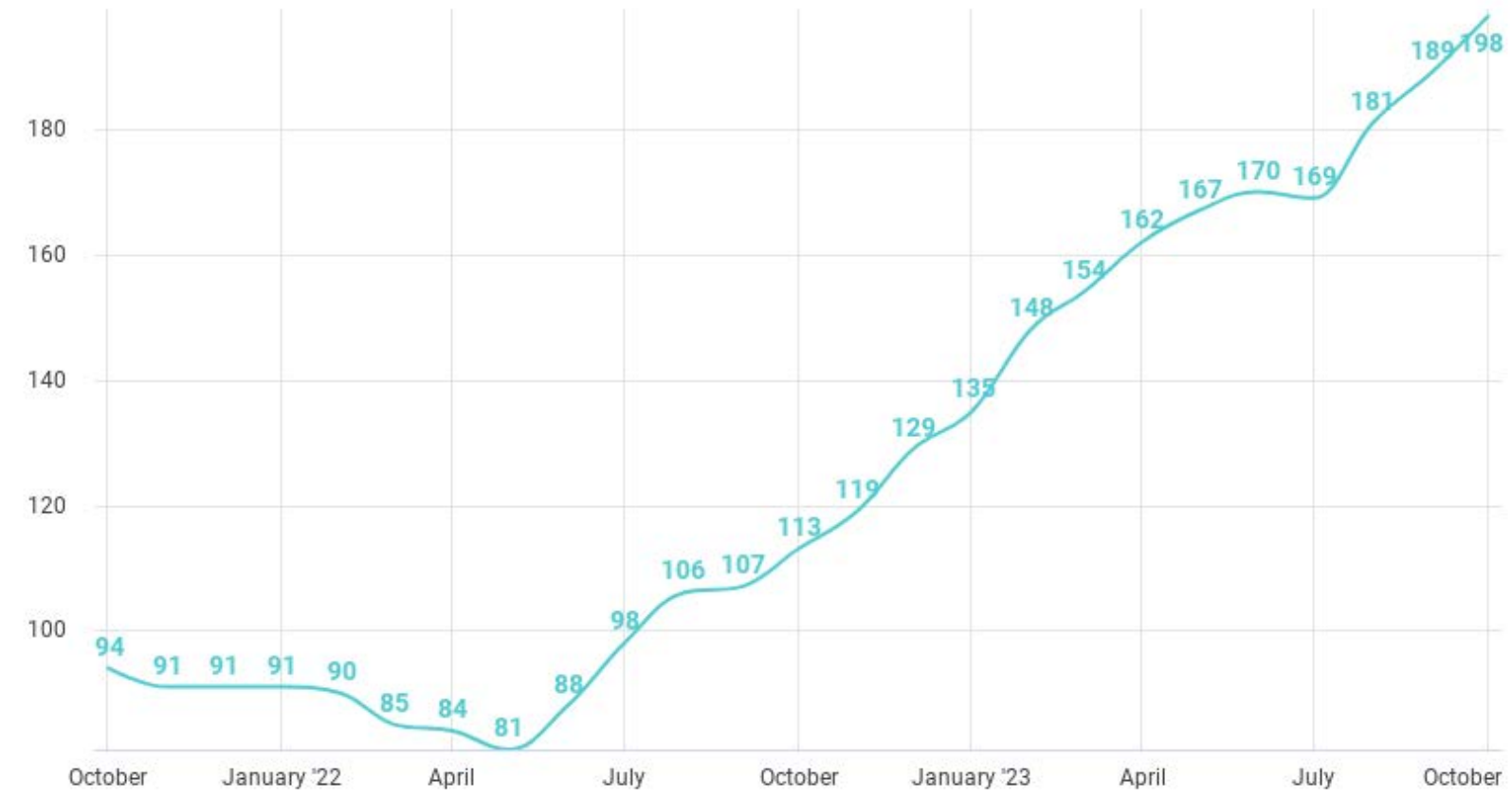
198

CHANGE
MONTH OVER MONTH

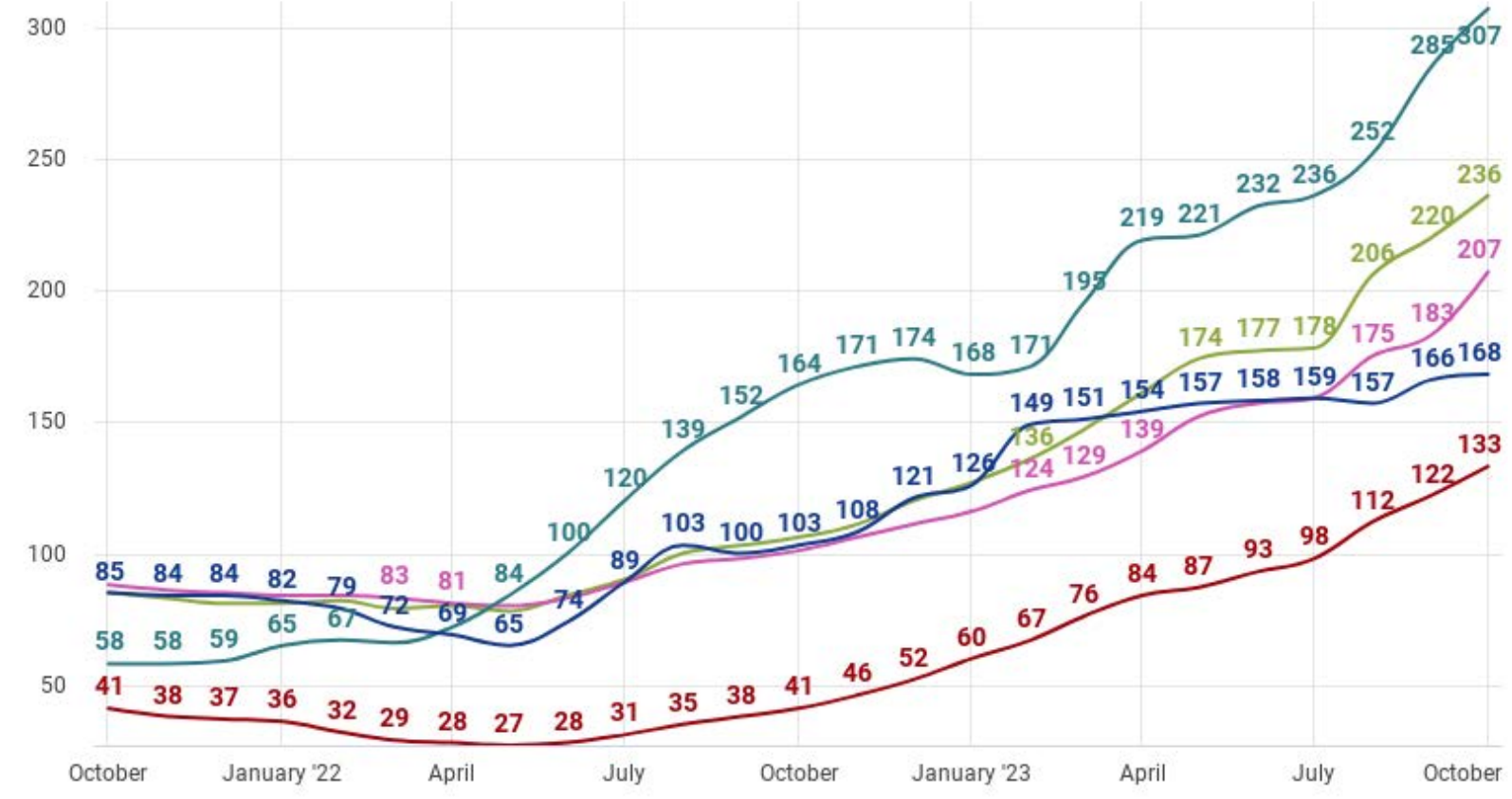
▲ **9**

CATEGORY	INDEX	CHANGE	MONTH OVER MONTH
Amplifiers - Op Amps, Buffer, Instrumentation	168	▲	2
Microcontrollers	133	▲	11
RF Receivers, Transceivers	307	▲	22
Voltage Regulators - Linear	207	▲	24
Voltage Regulators - Switching	236	▲	16

ALL INTEGRATED CIRCUITS SUPPLY INDEX



SUPPLY INDEX BY SUBCATEGORY



Supply: Passive Components

OCTOBER 2023

- The Supply Index for Passive Components increased 4 points (2.9%) this month for an index value of 143 points. This is the first increase reported, compared to the month-over-month decline since December 2022 when it peaked at 169 (-15.4%).
- Aluminum Electrolytic Capacitors saw another increase of 8 points to 156. This increase continues a 23 month upward trend since December 2021.
- Ceramic Capacitors supply has increased to 113 (3.7%) for the first time since November 2022.

OCTOBER 2023

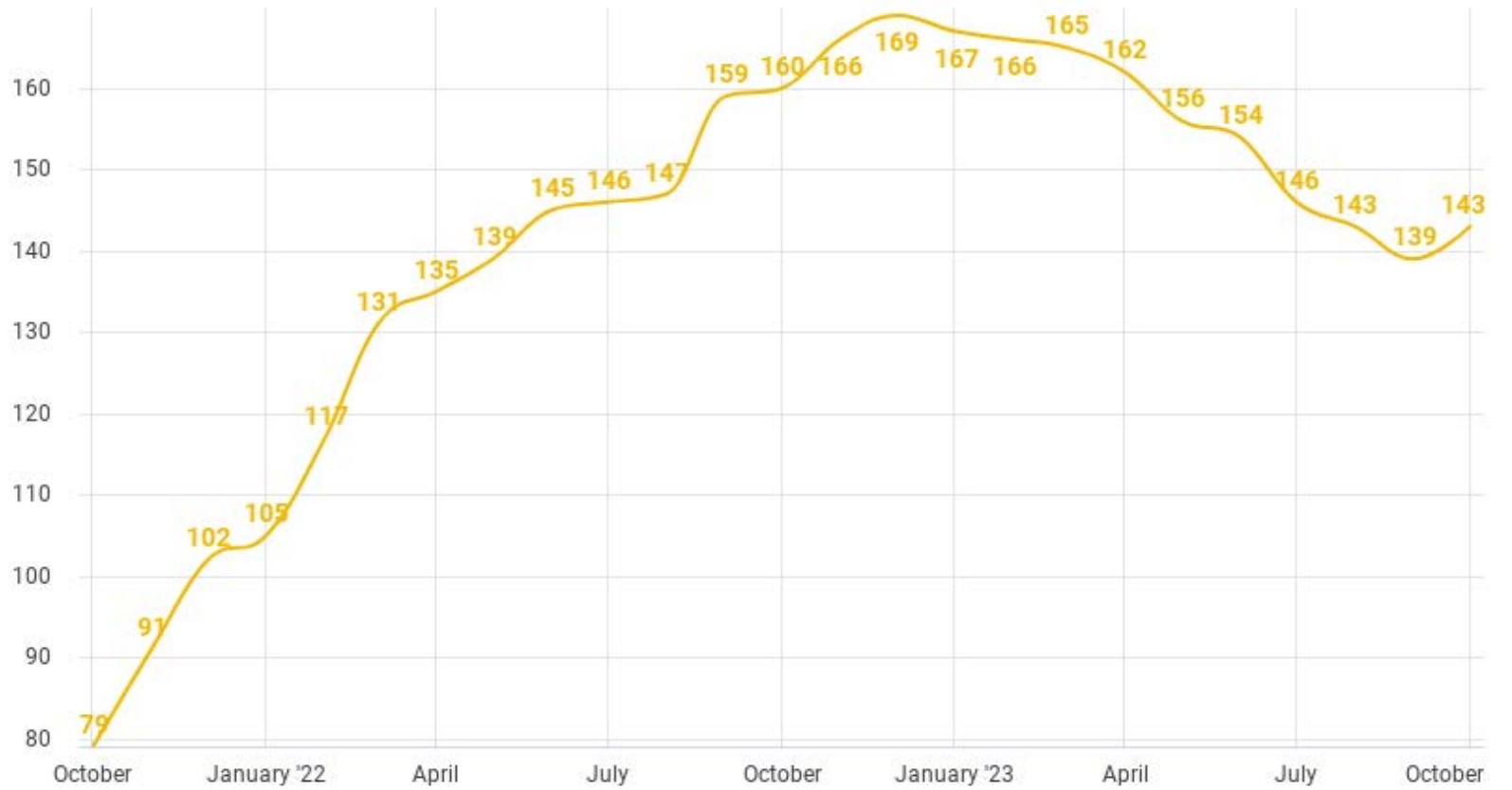
ALL PASSIVE COMPONENTS

CHANGE
MONTH OVER MONTH

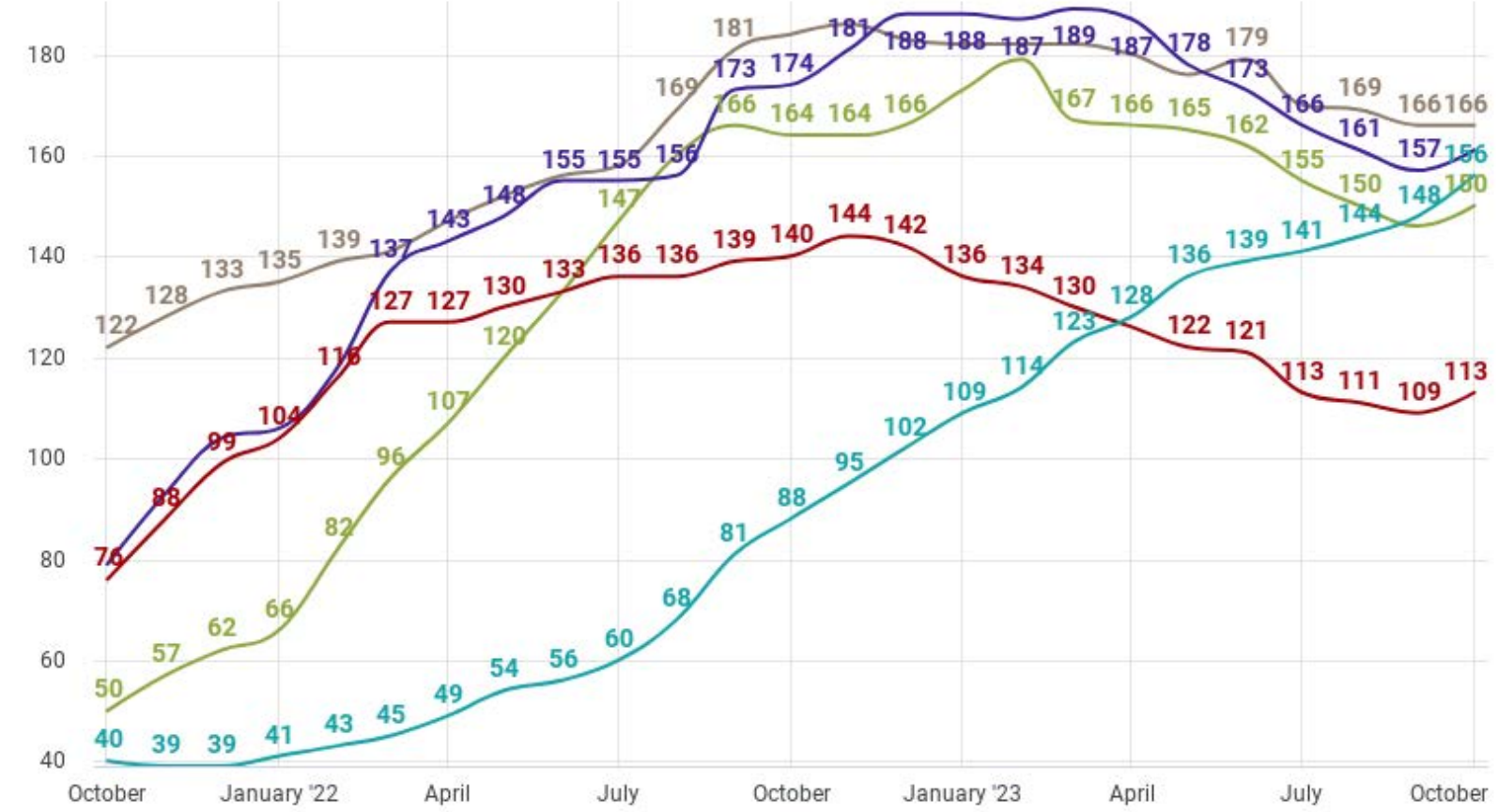
143 ▲ 4

CATEGORY	INDEX	CHANGE	MONTH OVER MONTH
Aluminum Electrolytic Capacitors	156	▲	8
Ceramic Capacitors	113	▲	4
Chip SMD Resistors	161	▲	4
Fixed Inductors	166	▶	Flat
Tantalum Capacitors	150	▲	4

ALL PASSIVE COMPONENTS SUPPLY INDEX



SUPPLY INDEX BY SUBCATEGORY



Supply: Discrete Semiconductors

OCTOBER 2023

- Discrete Semiconductor Supply Index increased by 14 points (11.3%), reaching 138 points. When compared to the prior 10 months, this represents a significant shift in momentum.
- The most significant improvements were in the MOSFETs area, which increased by 23 points (16.7%), reaching 161 points. This rise extends an 18-month rising trend that began in April 2022.
- The Zener Diodes supply index increased in October at 147 points (9.7%). This index has increased for the first time since June 2023 value of 136 points (8%).
- Schottky Diodes increased by double digits to 130 (12.1%). This increase continues a 4 month upward trend since July 2023 value of 107 (21.5%).

OCTOBER 2023

ALL DISCRETE SEMICONDUCTORS

CHANGE MONTH OVER MONTH

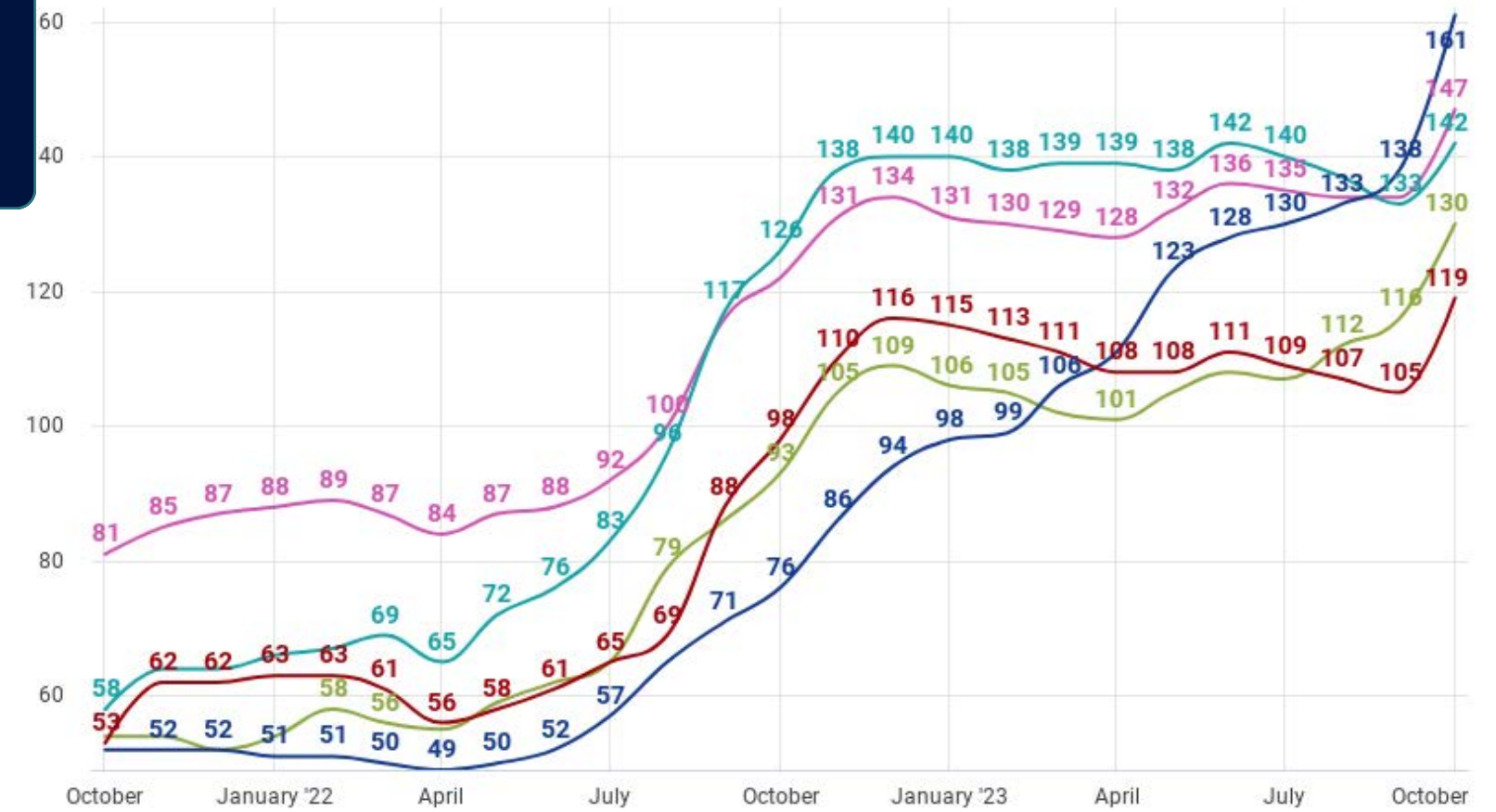
138 ▲ **14**

CATEGORY	INDEX	CHANGE MONTH OVER MONTH
BJTs	119	▲ 14
MOSFETs	161	▲ 23
Rectifier Diodes	142	▲ 9
Schottky Diodes	130	▲ 14
Zener Diodes	147	▲ 13

ALL DISCRETE SEMICONDUCTORS SUPPLY INDEX



SUPPLY INDEX BY SUBCATEGORY



Demand: Overview

OCTOBER 2023

- The Industry Demand Index decreased overall by 1 points (0.7%) this month to a total of 131 points. This is the 2nd month of decline since August 2023 high of 140 points.
- The only category to increase this month was Circuit Protection 137 points (0.7%). This reflects a 33% increase since April 2023.
- Connectors, with 136 points, was the sole demand index that remained unchanged in October. This is a 40% improvement from April 2023, when the index hit a low of 82 points.
- All remaining categories have show a similar trend of a rise in August 2023 and a drop to the current index.

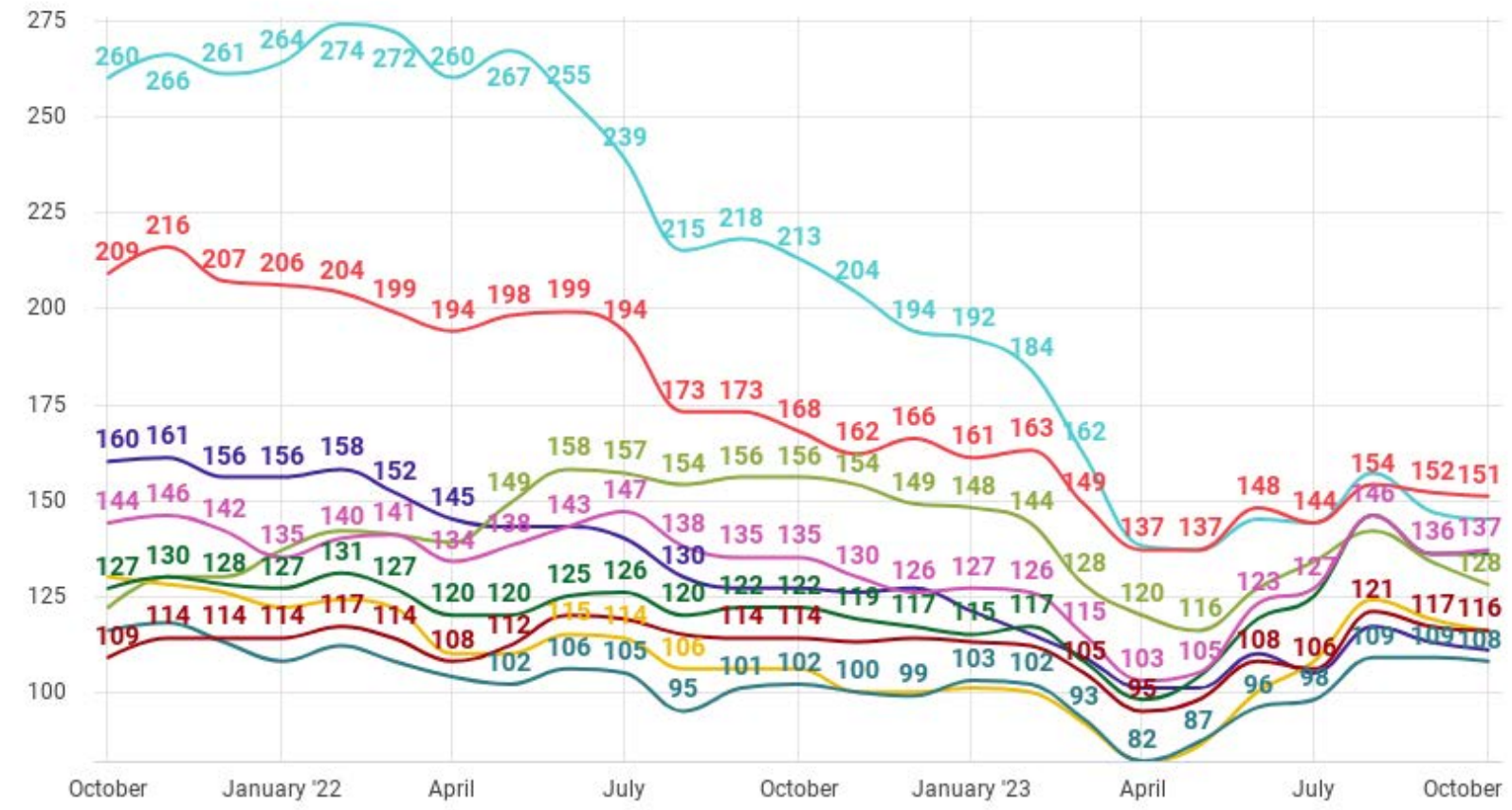
OCTOBER 2023
INDUSTRY INDEX
131
CHANGE
 MONTH OVER MONTH
 ▼ 1

CATEGORY	INDEX	CHANGE	MONTH OVER MONTH
Circuit Protection	137	▲	1
Connectors	136	▶	Flat
Discrete Semiconductors	151	▼	1
Electromechanical	116	▼	1
Integrated Circuits	145	▼	2
Optoelectronics	108	▼	1
Passive Components	116	▼	3
Power Products	128	▼	6
Sensors	111	▼	2

INDUSTRY DEMAND INDEX



DEMAND INDEX BY CATEGORY



Demand: Integrated Circuits

OCTOBER 2023

- The Demand Index for Integrated Circuits decreased 2 points in October totaling 145 points (1.3%).
- The largest demand index decrease was seen in Microcontrollers at 17 points. This notable decrease is consistent with the downward trend in this index that started in February 2022, when demand peaked at 419 points (-59.9%)
- RF Receivers, Transceivers and Voltage Regulators - Linear index remain flat in October at 97 and 139 points, respectively.

OCTOBER 2023

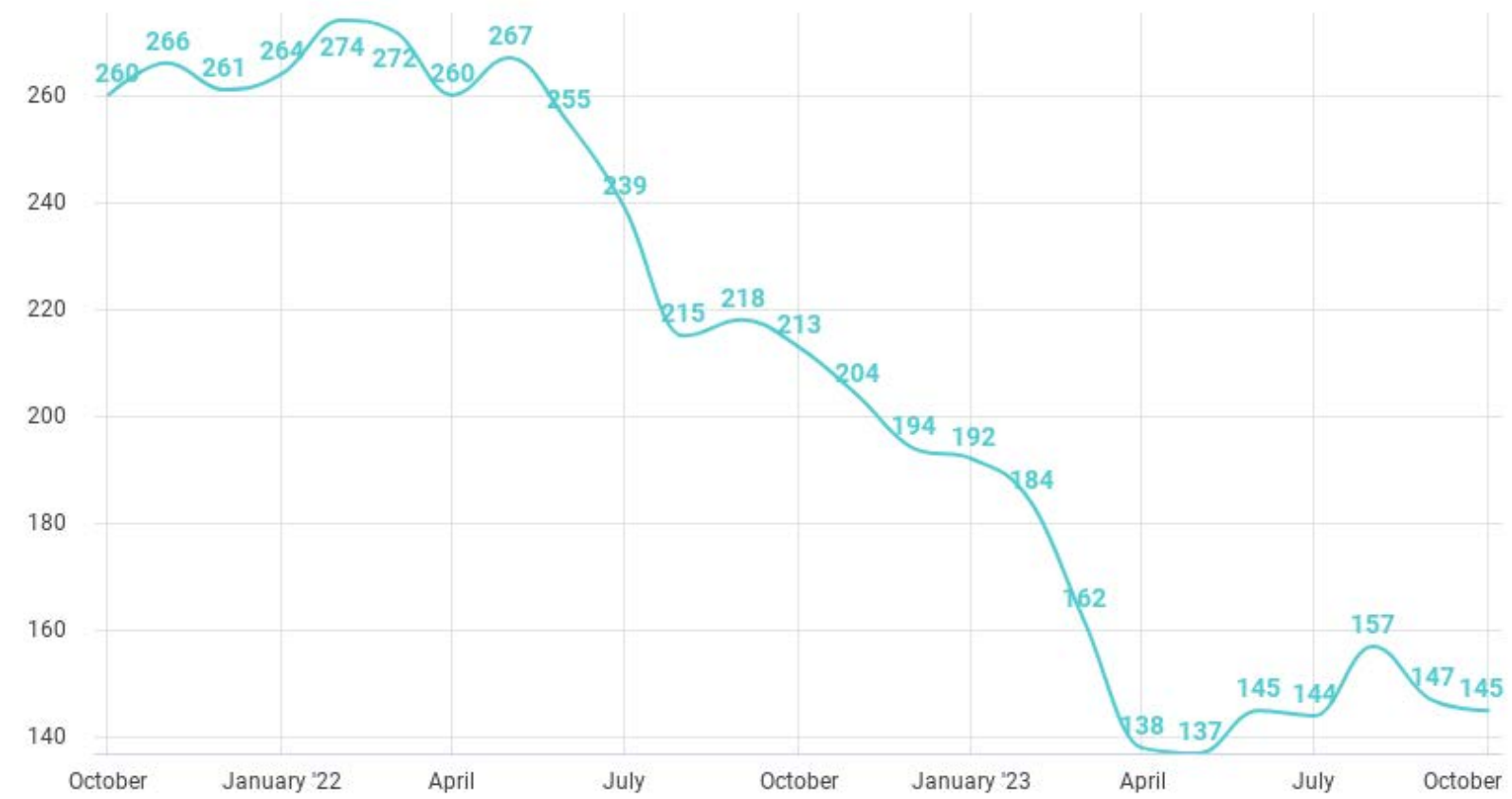
ALL INTEGRATED CIRCUITS

CHANGE MONTH OVER MONTH

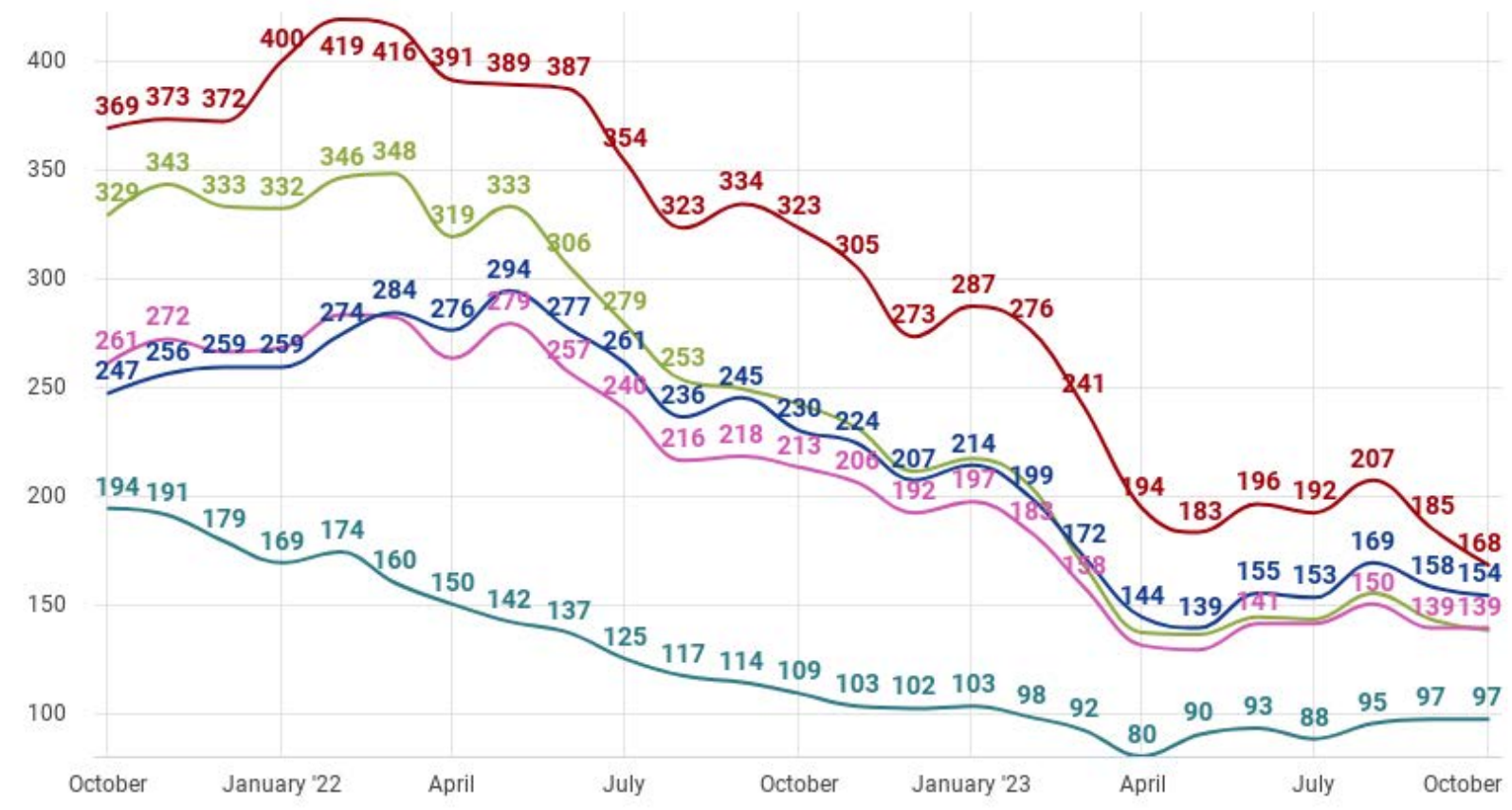
145 ▼ **2**

CATEGORY	INDEX	CHANGE MONTH OVER MONTH
Amplifiers - Op Amps, Buffer, Instrumentation	154	▼ 4
Microcontrollers	168	▼ 17
RF Receivers, Transceivers	97	▶ Flat
Voltage Regulators - Linear	139	▶ Flat
Voltage Regulators - Switching	138	▼ 5

ALL INTEGRATED CIRCUITS DEMAND INDEX



DEMAND INDEX BY SUBCATEGORY



Demand: Passive Components

OCTOBER 2023

- The Demand Index for Passive Components decreased 3 points in October, totaling 116 points. This is the 2nd month in a row that demand has fallen since August 2023.
- All remaining categories have show a similar trend of a rise in August 2023 and a drop to the current index.
- Decreases were reported in the Ceramic Capacitors (-1 pts.), Chip SMD Capacitors (-3 pts.), Tantalum Capacitors (-5 pts.), and Fixed Inductors (-5 pt.) subcategories.
- Even with a decline in the demand index for Passive Components, the supply index is reporting a consistent decline. This may be a category to watch as the market starts to shift.

OCTOBER 2023

ALL PASSIVE COMPONENTS

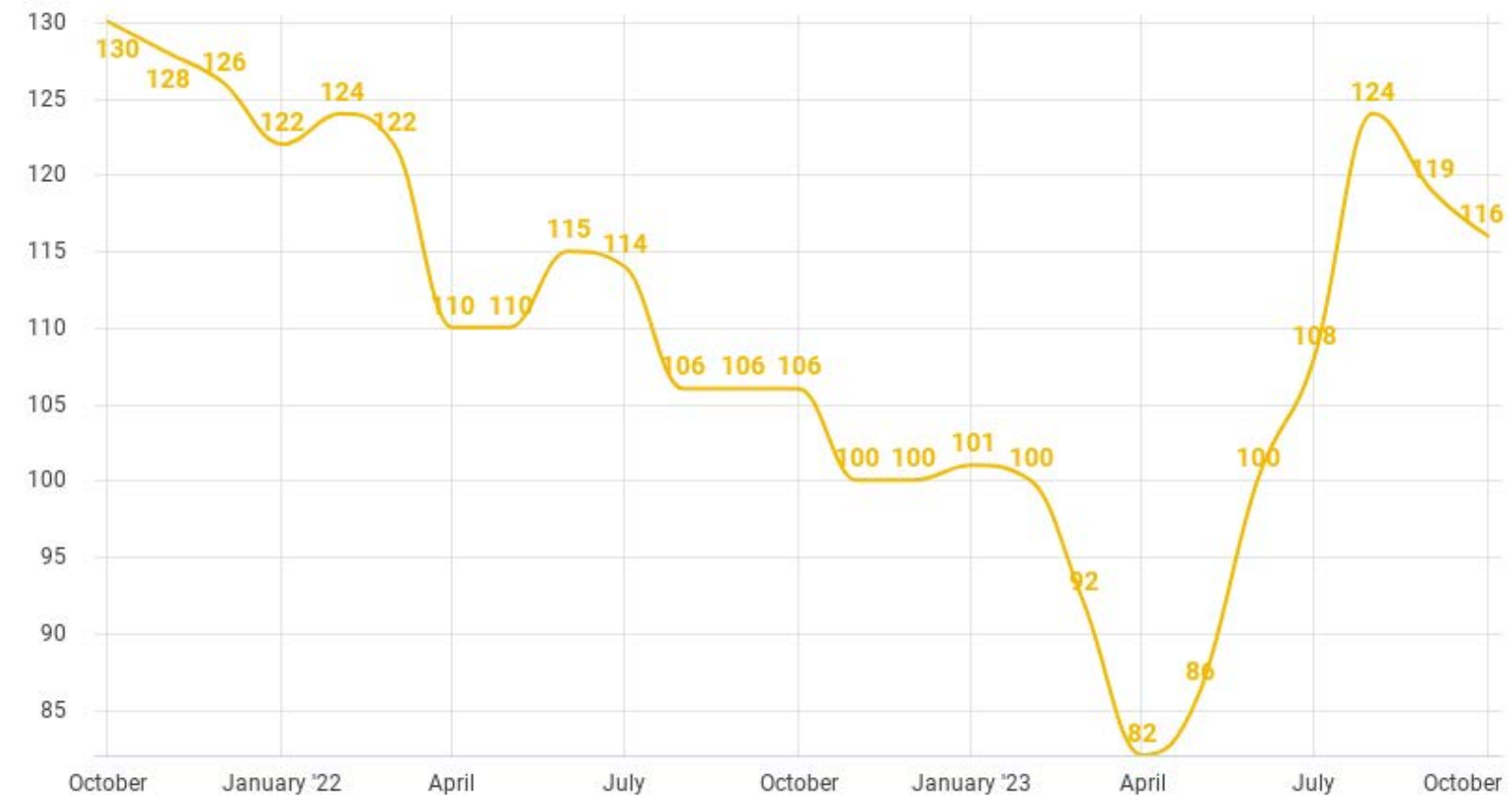
CHANGE
MONTH OVER MONTH

116 ▼ **3**

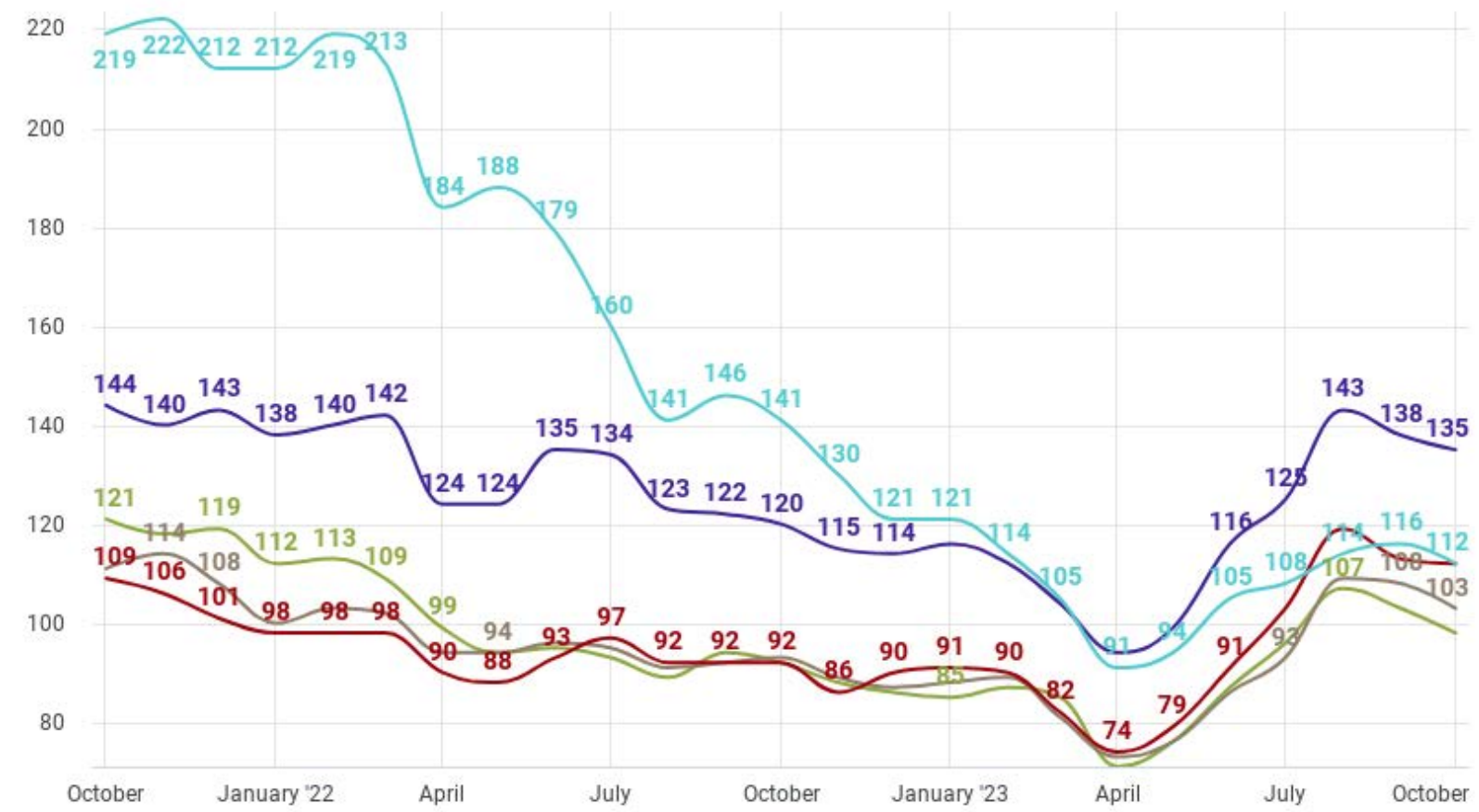
CATEGORY	INDEX	CHANGE	MONTH OVER MONTH
Aluminum Electrolytic Capacitors	112	▼	4
Ceramic Capacitors	112	▼	1
Chip SMD Resistors	135	▼	3
Fixed Inductors	103	▼	5
Tantalum Capacitors	98	▼	5



ALL PASSIVE COMPONENTS DEMAND INDEX



DEMAND INDEX BY SUBCATEGORY



Demand: Discrete Semiconductors

OCTOBER 2023

- The Discrete Semiconductor Industry Demand Index decreased by 1 points in October, due to mixed sourcing activity reported across all subcategory level indices.
- The only subcategory level demand index increase was seen in Zener Diodes at 2 points for total value of 156 points. The demand index is reporting signs of a continuous upward trend since April 2023 low of 125 points (24.8%).
- Other demand index decreases were seen in BJTs (-3 pts.) and MOSFETs (-7 pts.).

OCTOBER 2023

ALL DISCRETE SEMICONDUCTORS

151

CHANGE
MONTH OVER MONTH

▼ 1

CATEGORY	INDEX	CHANGE	MONTH OVER MONTH
BJTs	128	▼	3
MOSFETs	158	▼	7
Rectifier Diodes	137	▶	Flat
Schottky Diodes	161	▶	Flat
Zener Diodes	156	▲	2

ALL DISCRETE SEMICONDUCTORS DEMAND INDEX



DEMAND INDEX BY SUBCATEGORY

