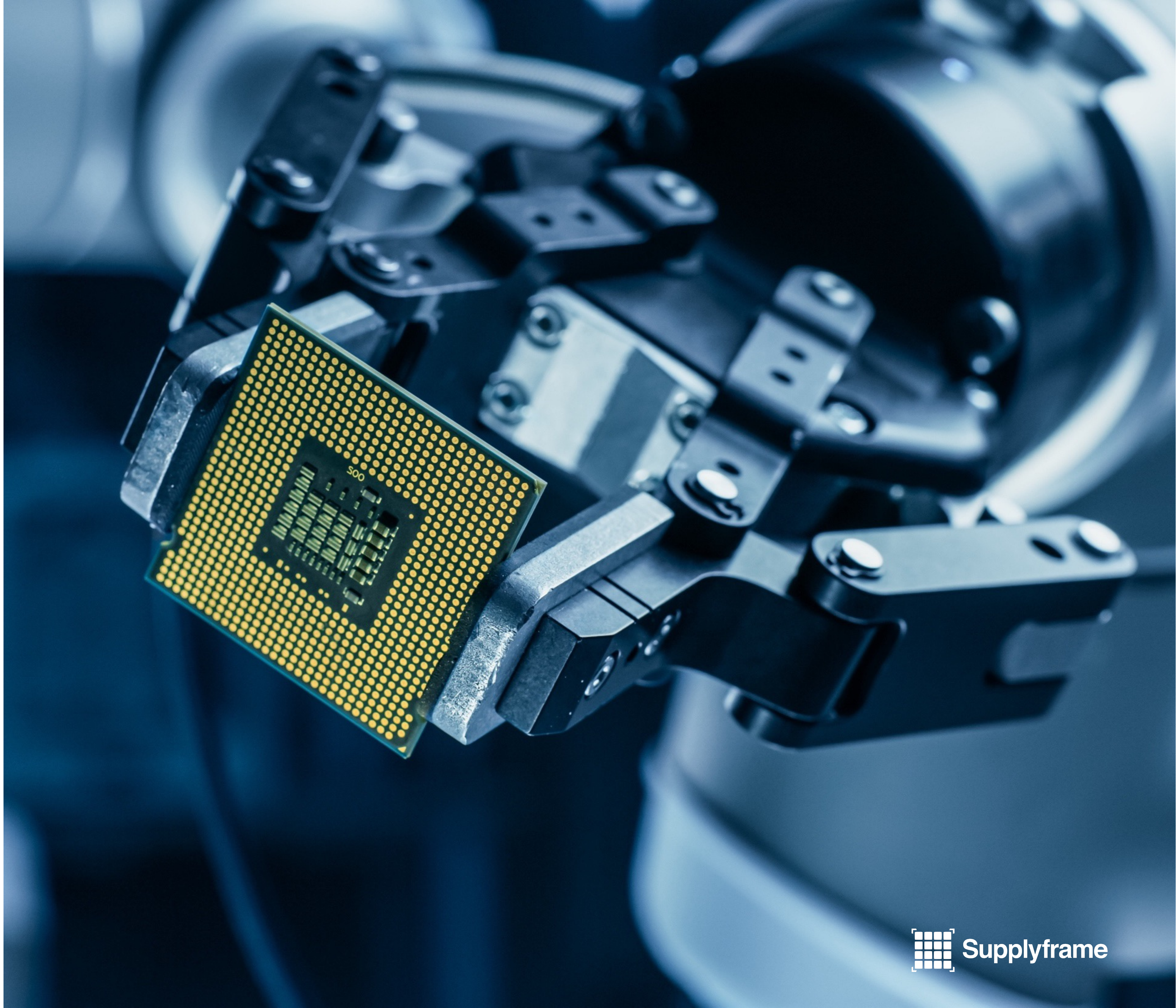**Supplyframe**
Design-to-Source
Intelligence

Design-to-Source
Monthly Insights

April 2024

Supplyframe

Methodology

The following report was compiled using data available from Supplyframe's Design to Source Intelligence (DSI) Network. The DSI Network consists of more than 70+ web properties, attracting 11M+ engineers and procurement professionals from around the world on a monthly basis. Engineers and procurement professionals visit and interact with the DSI Network specifically for their work (research, consider, design, and buy), enabling Supplyframe to understand design trends, sourcing trends, and extrapolate indicators of overall market conditions and trends.

What this report provides the advertiser?
1. A proxy for *"market"* condition by evaluating trends in engineering design activities and procurement sourcing activities
2. Understand what product categories are in demand by engineers and buyers
3. Anticipate future sourcing demand based on where design activities are concentrated (categories and regions)

Customers can leverage the insights provided in this report to support the development of their Go-To-Market strategy, as well as campaign planning and execution to drive their organization's objectives.

To protect sensitive information, as well as provide a mechanism for insights - we have normalized and indexed much of the data used in this analyses. There are two specific indices utilized to provide trend and comparative insights:

Design Activity Index

Based on part level activity by engineers on the DSI Network. Activities included are related to part evaluation and part placement in designs via EDAs. Activities, are normalized, weighted, and scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum volume of activities in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Sourcing Activity Index

Based on part level activity by buyers on the DSI Network. Activities included are related to buy clicks on the the DSI Network. Index is scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum value in the given data set. A value of 50 reflects half of the maximum value in the given data set.

What We Saw Across The Network

APRIL 2024

- Global design activities increased, while global sourcing activities decreased in April compared to prior month and prior year

- Global design activities increased +1% month-over-month and +17% year-over-year. Growth in activities were seen in the EMEA and APAC regions, while design activities remained flat in the Americas. Components in the embedded processors and controllers, sensors, and circuit protection product groups observed the largest growth in design activities for the month

- Following seasonal trends, global sourcing activities decreased month-over-month. Global activities decreased -12% month-over-month and -19% year-over-year. Decrease in activities were observed across all regions and all product categories
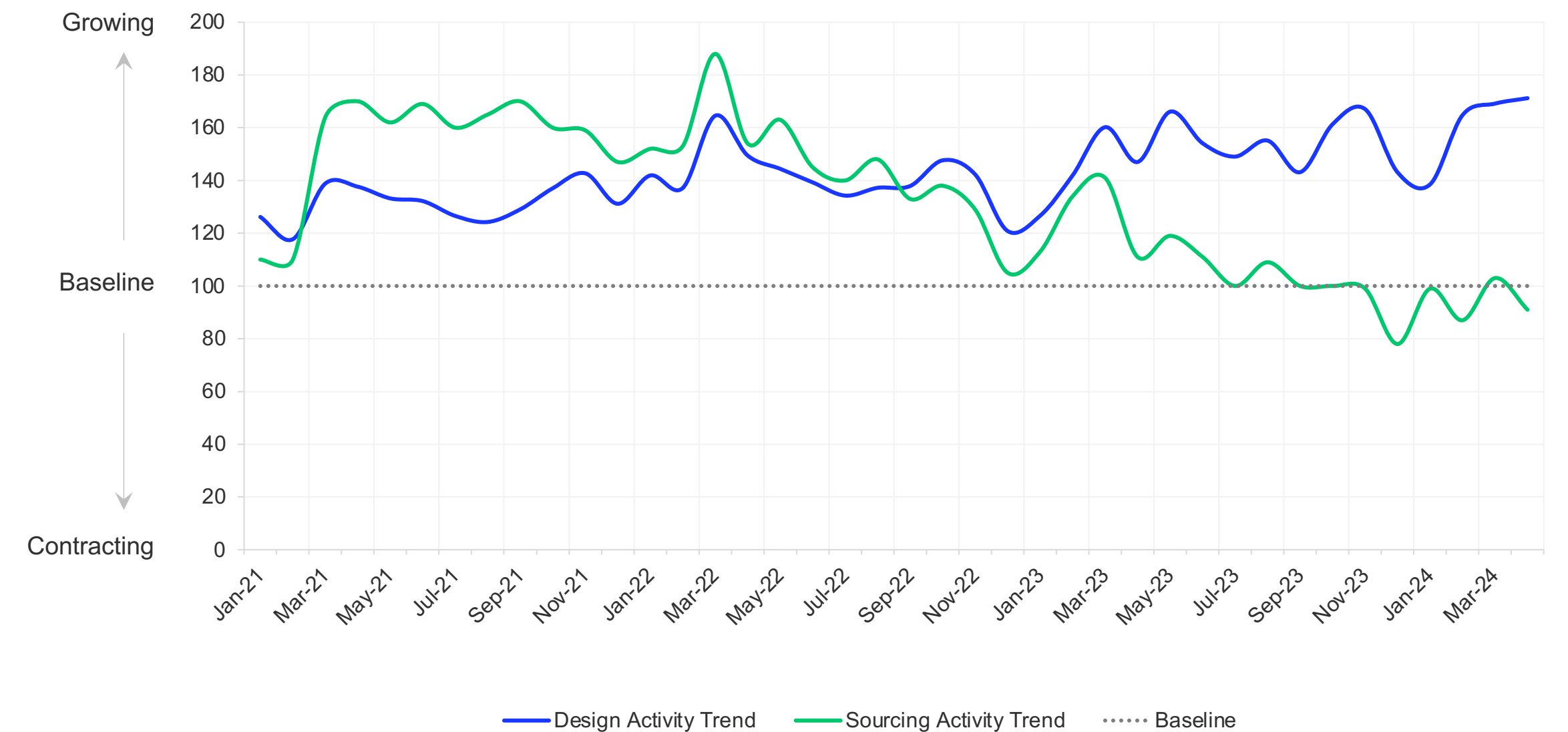
Q2 2024 outlook

- No change in quarterly projections from prior month

- Global design activities are projected to grow between +5% to +8% quarter-over-quarter driven by growth in activities from the Americas and APAC regions

- Global sourcing activities are projected to decrease between -1% to -5% quarter-over-quarter driven by decrease in activities in the Americas and EMEA regions

Global Performance

| Design Activities | ⌃ -+1.2% M/M |
| | ⌃ +16.5% Y/Y |

| Sourcing Activities | ⌄ -11.7% M/M |
| | ⌄ -18.5% Y/Y |

Chart 1. Design and Sourcing Activity Trends

Legend: Design Activity Trend — Sourcing Activity Trend — Baseline

How to read this chart:
Design and sourcing activities have been baselined to 2020 monthly median. Baseline is indicated as a value of 100. Above the baseline indicates growth, while below the baseline indicates decrease in activities.

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Design Activity Overview

APRIL 2024

Design Activity Index

Based on part level activity by engineers on the DSI Network. Activities included are related to part evaluation and part placement in designs via EDAs. Activities, are normalized, weighted, and scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum volume of activities in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Global design activities grew +1% month-over-month and +17% year-over-year.

Global design activities continued to show signs of growth after a slow start in January. Globally, activities grew +1% month-over-month and +17% year-over-year, with the EMEA and APAC regions showing month-over-month growth and the Americas region remaining flat. Compared to prior year, all regions observed growth in activities.

In the EMEA region, passive components, sensors, and circuit protection devices observed the largest month-over-month growth in design activities. Whereas in the APAC region, embedded processors and controllers, sensors, memory, and circuit protection devices observed the largest growth in activities month-over-month.

In the last six months, The following countries observed the largest sustained average monthly growth rates: Australia (+6%), China (+3.7%), South Korea (+3.3%), India (+2%), and Japan (+2%). In these countries, components that fall into the following product groups observed the largest growth in design activities over the same period: sensors (+6%), memory (+5%), circuit protection (+4%), integrated circuits (+4%), and embedded controllers and processors (+3%).

Calendar Q2 forecast remains unchanged – we anticipate global design activities to grow between +5% to +8% quarter-over-quarter.
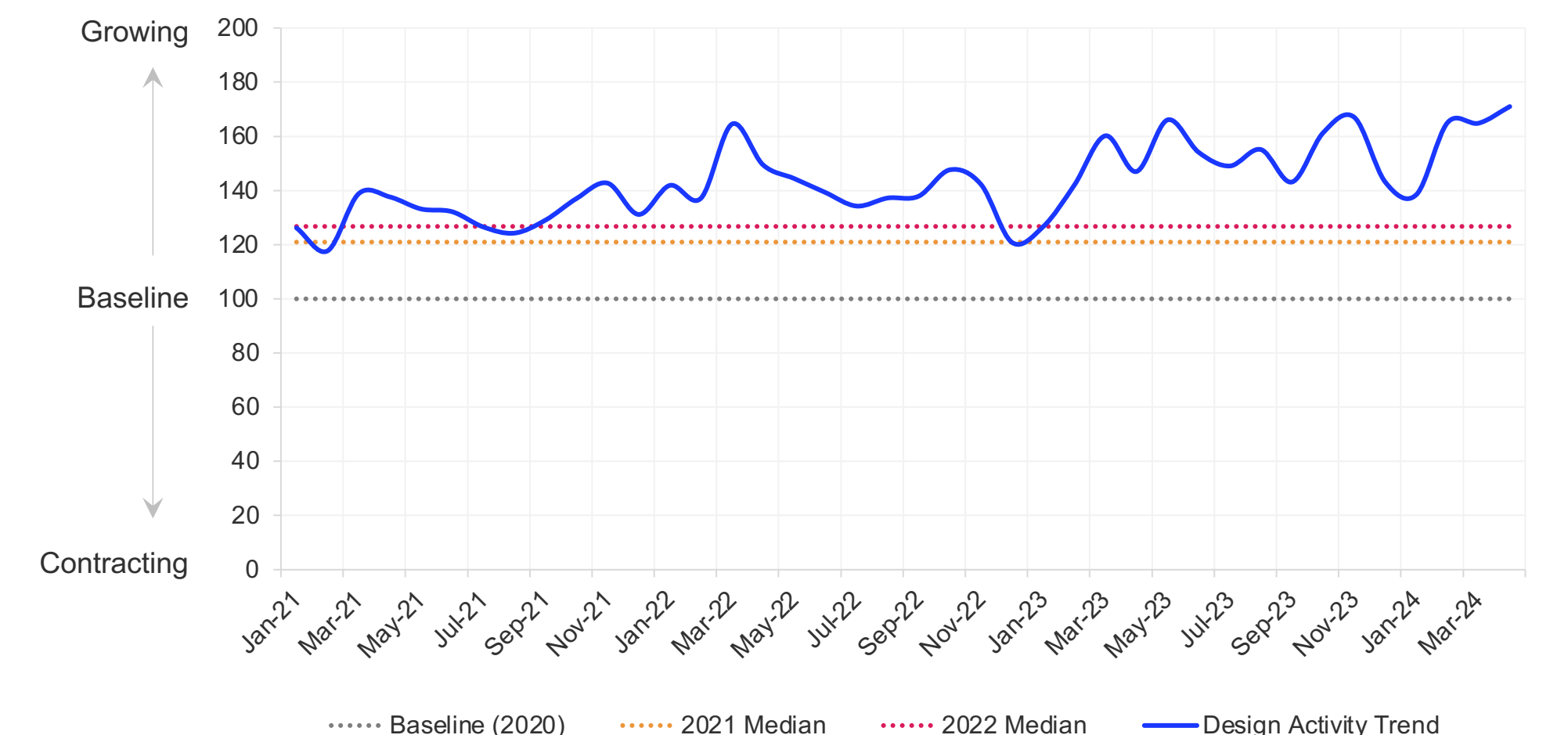
Table 1. Design Activity Summary

		vs. Prior Month	vs. Prior Year	6mo. CMGR
Global		1.2%	16.5%	1.0%

Region	Design Activity Index	vs. Prior Month	vs. Prior Year	6mo. CMGR
EMEA	100.0	1%	18%	1%
APAC	72.0	3%	20%	2%
AMER	43.6	0%	9%	0%

Top 10 Countries / Territories

Country / Territory	Design Activity Index	vs. Prior Month	vs. Prior Year	6mo. CMGR
United States	100.0	-2%	3%	0%
China (incl. Hong Kong)	72.5	4%	4%	4%
India	53.6	-4%	35%	2%
Germany	46.3	1%	16%	0%
United Kingdom	33.3	5%	19%	2%
France	27.3	1%	13%	0%
Italy	24.4	-11%	8%	-2%
Japan	23.7	23%	2%	2%
Republic of Korea	21.2	2%	45%	3%
Spain	19.6	11%	38%	2%

Chart 2. Global Design Activity Trends

Design Activity: Americas Trends

APRIL 2024

Design Activity Index

Based on part level activity by engineers on the DSI Network. Activities included are related to part evaluation and part placement in designs via EDAs. Activities, are normalized, weighted, and scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum volume of activities in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following data provides a breakdown of design activities across the DSI Network in the Americas region.
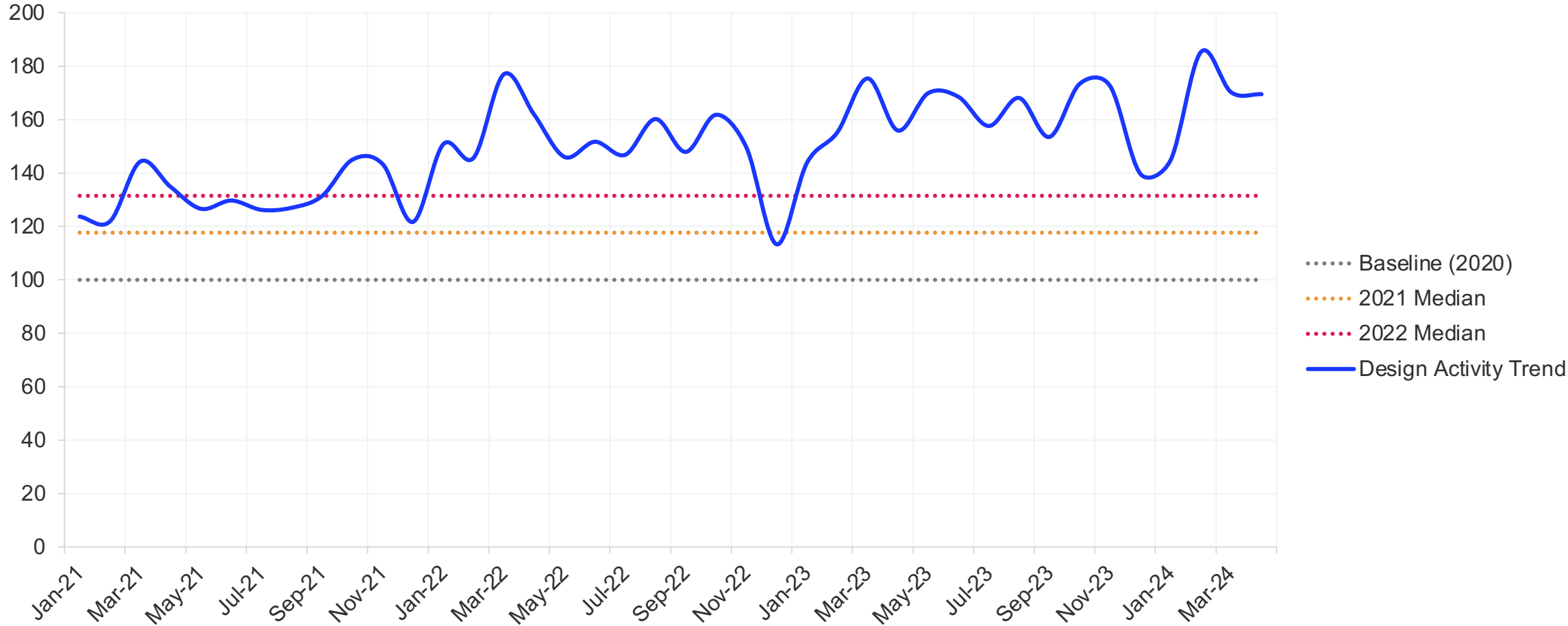
Chart 3. Americas Design Activity Trends

Legend:
- Baseline (2020)
- 2021 Median
- 2022 Median
- Design Activity Trend

Table 2. Top 15 Product Categories in Americas

Product Class	Design Activity Index	M/M%	Y/Y %	6mo. CMGR
Connectors	100.0	6%	17%	1%
Resistors	51.4	-4%	8%	-2%
Power Circuits	50.9	-3%	1%	-1%
Capacitors	49.7	-9%	0%	-2%
Diodes	35.9	0%	5%	-1%
Transistors	24.0	-8%	-12%	-3%
Optoelectronics	21.7	-9%	0%	-2%
Microcontrollers and Processors	21.4	3%	8%	0%
Terminal Blocks	19.0	-16%	23%	-2%
Inductors	16.8	-6%	7%	-2%
Drivers And Interfaces	16.6	2%	1%	0%
Amplifier Circuits	16.4	11%	1%	-1%
Logic	14.0	7%	0%	0%
Signal Circuits	13.4	3%	11%	-3%
Switches	13.0	-8%	0%	-1%

Design Activity: EMEA Trends

APRIL 2024

Design Activity Index

Based on part level activity by engineers on the DSI Network. Activities included are related to part evaluation and part placement in designs via EDAs. Activities, are normalized, weighted, and scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum volume of activities in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following data provides a breakdown of design activities across the DSI Network in the EMEA region.
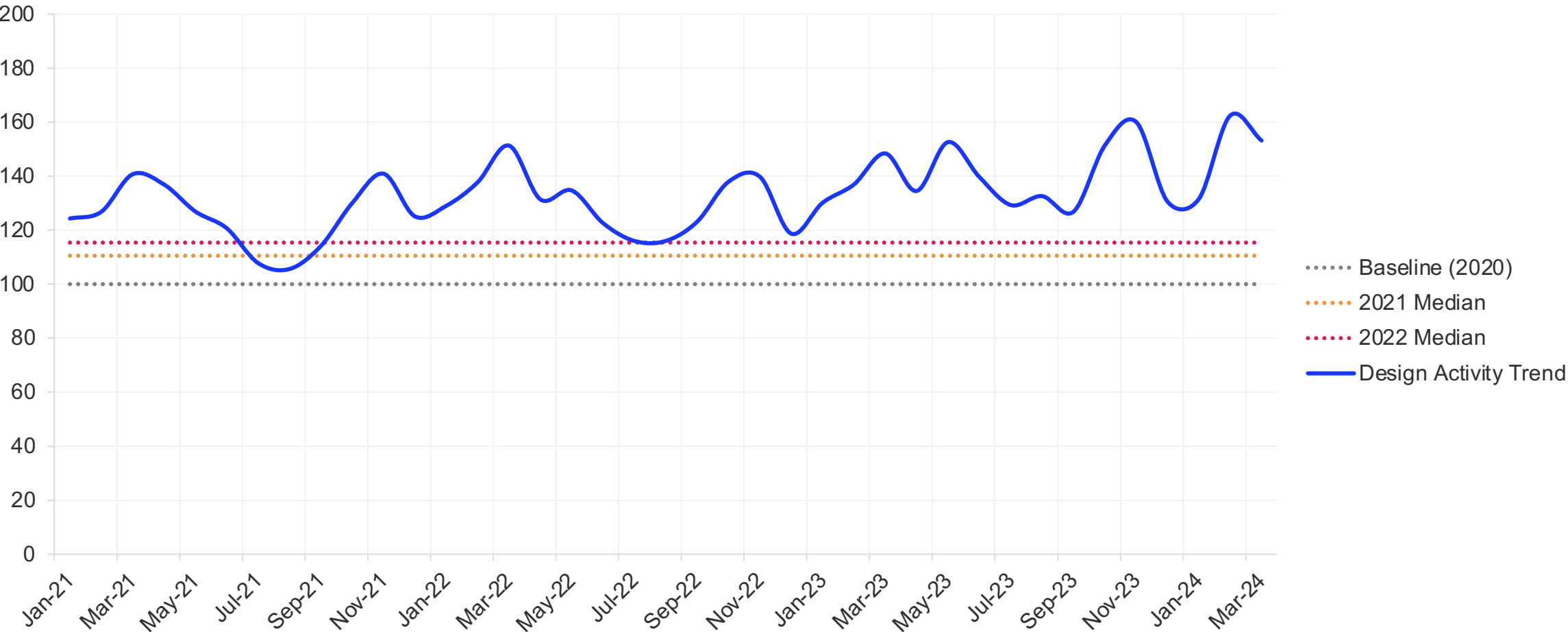
Chart 4. EMEA Design Activity Trends

Legend:
- ···· Baseline (2020)
- ···· 2021 Median
- ···· 2022 Median
- —— Design Activity Trend

Table 3. Top 15 Product Categories in EMEA

Product Class	Design Activity Index	M/M%	Y/Y %	6mo. CMGR
Connectors	100.0	-5%	6%	3%
Power Circuits	64.3	-7%	4%	3%
Capacitors	56.3	-9%	-1%	4%
Resistors	52.3	-7%	0%	5%
Diodes	43.8	-8%	-1%	2%
Transistors	31.5	-6%	-4%	3%
Microcontrollers and Processors	28.1	-5%	2%	3%
Terminal Blocks	27.0	-11%	7%	2%
Optoelectronics	26.0	-1%	-5%	3%
Inductors	24.8	-6%	37%	4%
Drivers And Interfaces	19.1	-9%	-2%	2%
Amplifier Circuits	17.4	-8%	-2%	3%
Signal Circuits	16.5	-5%	6%	4%
Logic	15.5	-3%	-6%	2%
Switches	15.1	9%	11%	4%

Design Activity: APAC Trends

APRIL 2024

Design Activity Index

Based on part level activity by engineers on the DSI Network. Activities included are related to part evaluation and part placement in designs via EDAs. Activities, are normalized, weighted, and scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum volume of activities in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following data provides a breakdown of design activities across the DSI Network in the APAC region.
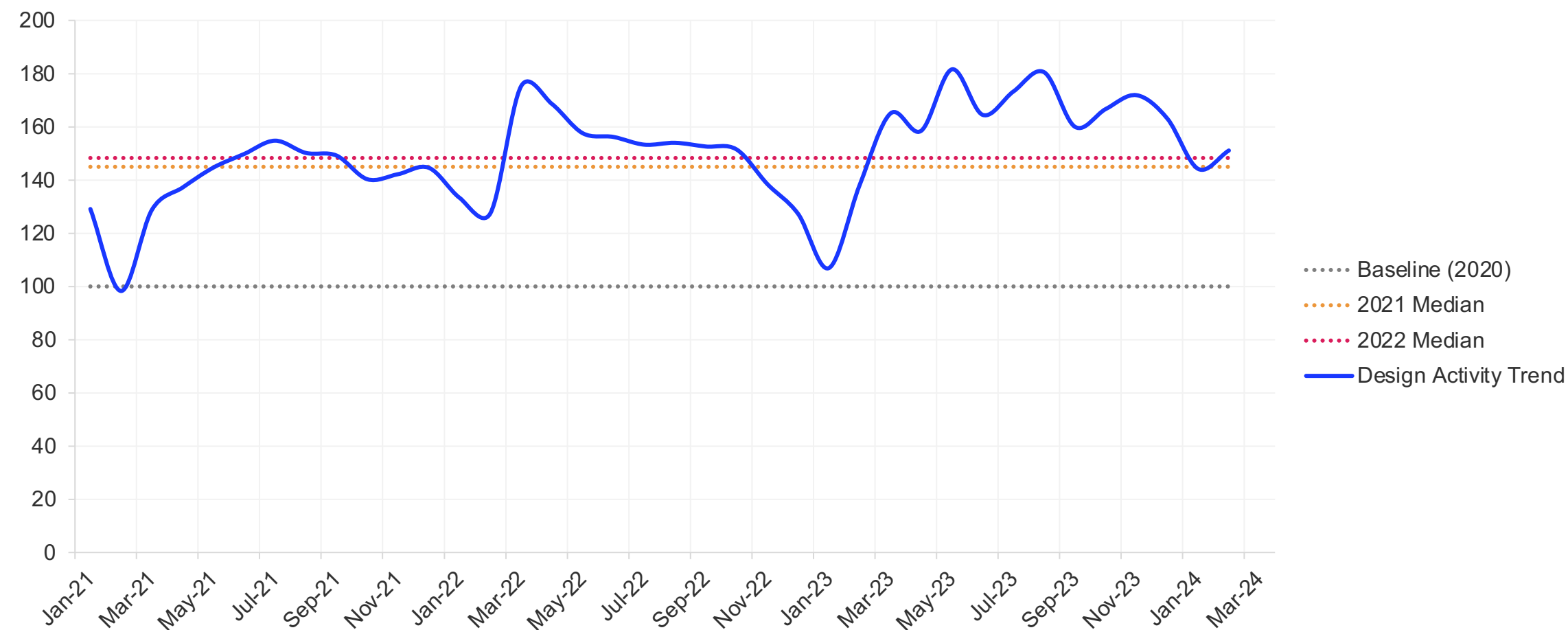
Chart 5. APAC Design Activity Trends

Legend:
- Baseline (2020)
- 2021 Median
- 2022 Median
- Design Activity Trend

Table 4. Top 15 Product Categories in APAC

Product Class	Design Activity Index	M/M%	Y/Y %	6mo. CMGR
Connectors	100.0	4%	24%	3%
Power Circuits	74.0	-5%	12%	1%
Capacitors	64.8	0%	25%	2%
Resistors	56.1	-4%	29%	3%
Diodes	53.9	1%	27%	2%
Transistors	37.2	4%	12%	1%
Microcontrollers and Processors	35.8	16%	6%	3%
Optoelectronics	26.5	7%	11%	2%
Drivers And Interfaces	25.5	7%	19%	2%
Amplifier Circuits	23.2	4%	8%	1%
Inductors	20.9	-6%	16%	1%
Signal Circuits	19.4	13%	13%	3%
Logic	19.3	-15%	11%	3%
Terminal Blocks	16.4	10%	28%	1%
Filters	14.2	2%	10%	2%

Sourcing Activity Overview

APRIL 2024

Sourcing Activity Index

Based on part level activity by buyers on the DSI Network. Activities included are related to buy clicks on the the DSI Network. Index is scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum value in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following seasonal trends, global sourcing activities decreased month-over-month in April.

Global sourcing activities decreased -12% month-over-month and -19% year-over-year. All regions observed decreases in activities with the APAC region performing the worst (-17% month-over-month) and the Americas region performing the best (-4% month-over-month).

While all product categories observed month-over-month decrease in global sourcing activities, the following product categories showed signs of growth in global demand compared to last year: connectors (+10%), capacitors (+2%), resistors (+4%), and inductors (+19%).

In the Americas, interconnects and passive components observed year-over-year growth in demand (+5%), while the semiconductors categories observed an average of -30% decrease in demand compared to last year.
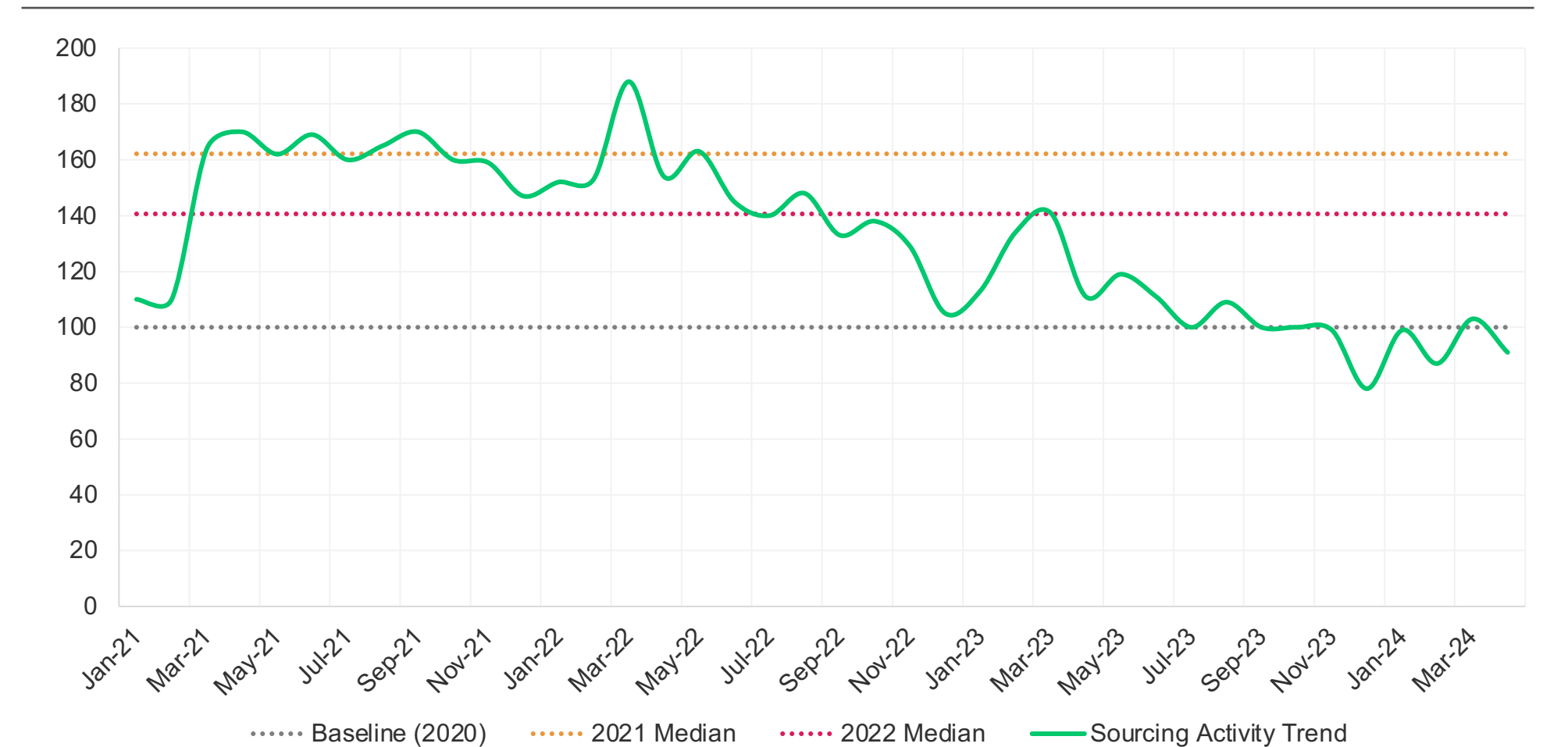
In the EMEA region, interconnects, passives, and circuit protection devices observed year-over-year growth in demand while all other product categories observed decreases in demand.

For calendar Q2 2024, global sourcing activities are projected to decrease between -1% to -5% quarter-over-quarter following seasonal trends.

Table 5. Sourcing Activity Summary

		vs. Prior Month	vs. Prior Year	6mo. CMGR
Global		-11.7%	-18.5%	-1.6%

Region	Sourcing Activity Index	vs. Prior Month	vs. Prior Year	6mo. CMGR
APAC	100.0	-16.7%	-18.1%	-1.4%
AMER	60.9	-4.1%	-13.9%	-1.2%
EMEA	34.6	-9.0%	-26.5%	-2.9%

Top 10 Countries / Territories

Country / Territory	Sourcing Activity Index	vs. Prior Month	vs. Prior Year	6mo. CMGR
China (incl. Hong Kong)	100.0	-20%	-19%	0%
United States	91.5	-4%	-17%	-1%
India	27.1	-10%	-28%	-3%
Republic of Korea	22.9	-8%	-18%	-1%
Germany	14.7	-8%	-27%	-1%
Taiwan	11.6	-24%	-22%	-3%
Canada	10.7	-5%	4%	0%
Singapore	8.5	-5%	10%	-3%
Malaysia	8.5	-10%	33%	-1%
Italy	6.5	-14%	-23%	-3%

Chart 6. Global Sourcing Activity Trends

····· Baseline (2020)   ----- 2021 Median   ····· 2022 Median   —— Sourcing Activity Trend

Sourcing Activity: Americas Trends

APRIL 2024

Sourcing Activity Index

Based on part level activity by buyers on the DSI Network. Activities included are related to buy clicks on the the DSI Network. Index is scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum value in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following data provides a breakdown of sourcing activities across the DSI Network in the Americas region.

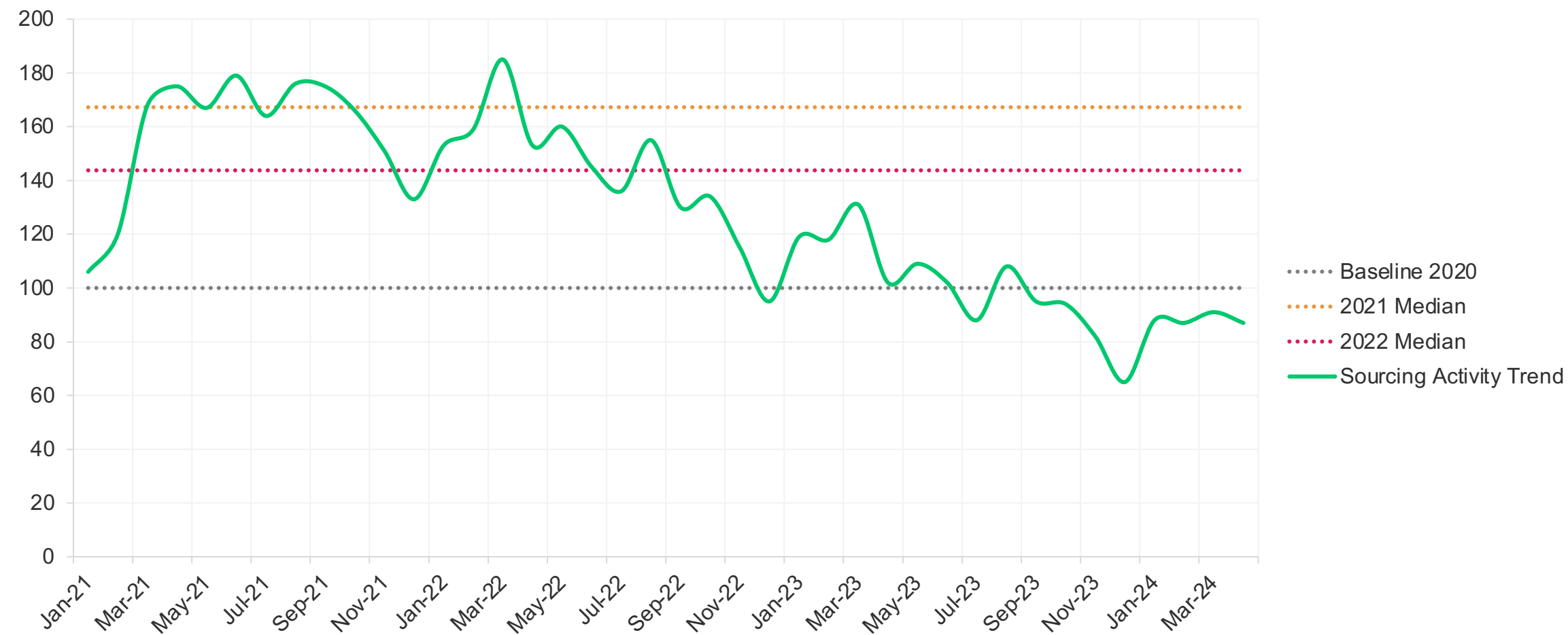**Chart 7. Americas Sourcing Activity Trends**

Legend:
- Baseline 2020
- 2021 Median
- 2022 Median
- Sourcing Activity Trend

Table 6. Top 15 Product Categories in Americas

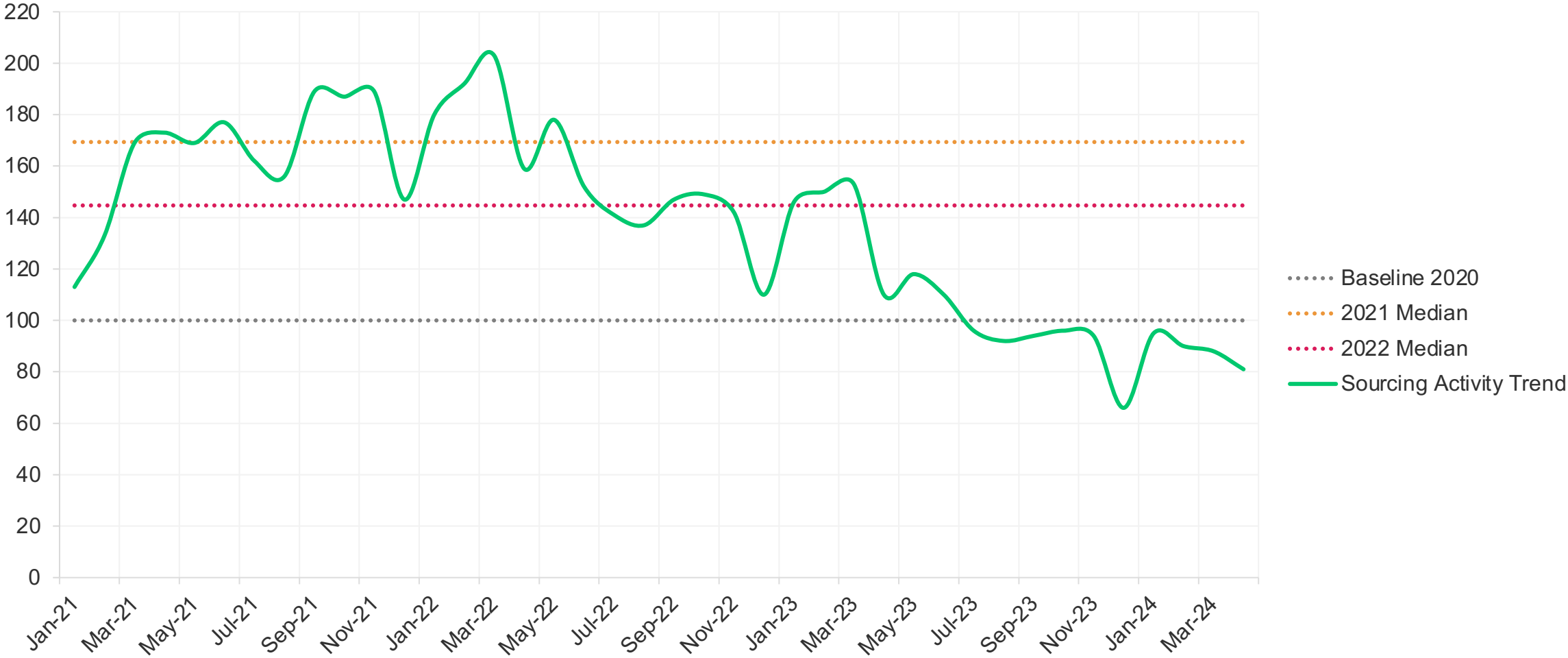| Product Class	Sourcing Activity Index	M/M%	Y/Y %	6mo. CMGR
Connectors	100.0	-2%	5%	0%
Capacitors	79.9	1%	4%	-1%
Resistors	73.7	-1%	4%	0%
Power Circuits	42.2	-7%	-37%	-3%
Diodes	39.0	-7%	-12%	-2%
Connector Support	35.2	-6%	8%	1%
Transistors	29.7	-7%	-32%	-3%
Microcontrollers and Processors	21.9	-8%	-52%	-5%
Terminal Blocks	21.2	-2%	-2%	0%
Optoelectronics	19.7	-5%	-3%	0%
Inductors	18.1	-12%	12%	1%
Logic	14.6	-7%	-14%	-2%
Amplifier Circuits	14.0	-10%	-47%	-5%
Drivers And Interfaces	13.4	-11%	-42%	-4%
Memory	11.1	-9%	-30%	-3%

Sourcing Activity: EMEA Trends

APRIL 2024

Sourcing Activity Index

Based on part level activity by buyers on the DSI Network. Activities included are related to buy clicks on the the DSI Network. Index is scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum value in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following data provides a breakdown of sourcing activities across the DSI Network in the EMEA region.

Chart 8. EMEA Sourcing Activity Trends

Legend:
- Baseline 2020
- 2021 Median
- 2022 Median
- Sourcing Activity Trend

Table 7. Top 15 Product Categories in EMEA

Product Class	Sourcing Activity Index	M/M%	Y/Y %	6mo. CMGR
Connectors	100.0	-7%	4%	-1%
Capacitors	98.6	-8%	-7%	-1%
Resistors	86.4	-5%	6%	0%
Power Circuits	67.9	-15%	-49%	-5%
Diodes	61.3	-6%	-25%	-3%
Transistors	49.9	-10%	-43%	-5%
Microcontrollers and Processors	45.3	-9%	-54%	-6%
Optoelectronics	33.1	-2%	-16%	-1%
Inductors	31.4	-12%	20%	2%
Amplifier Circuits	28.8	-11%	-49%	-8%
Connector Support	27.3	-11%	8%	-2%
Drivers And Interfaces	26.3	-9%	-50%	-6%
Logic	19.0	-19%	-34%	-5%
Memory	18.9	-8%	-44%	-5%
Filters	18.3	-8%	5%	1%

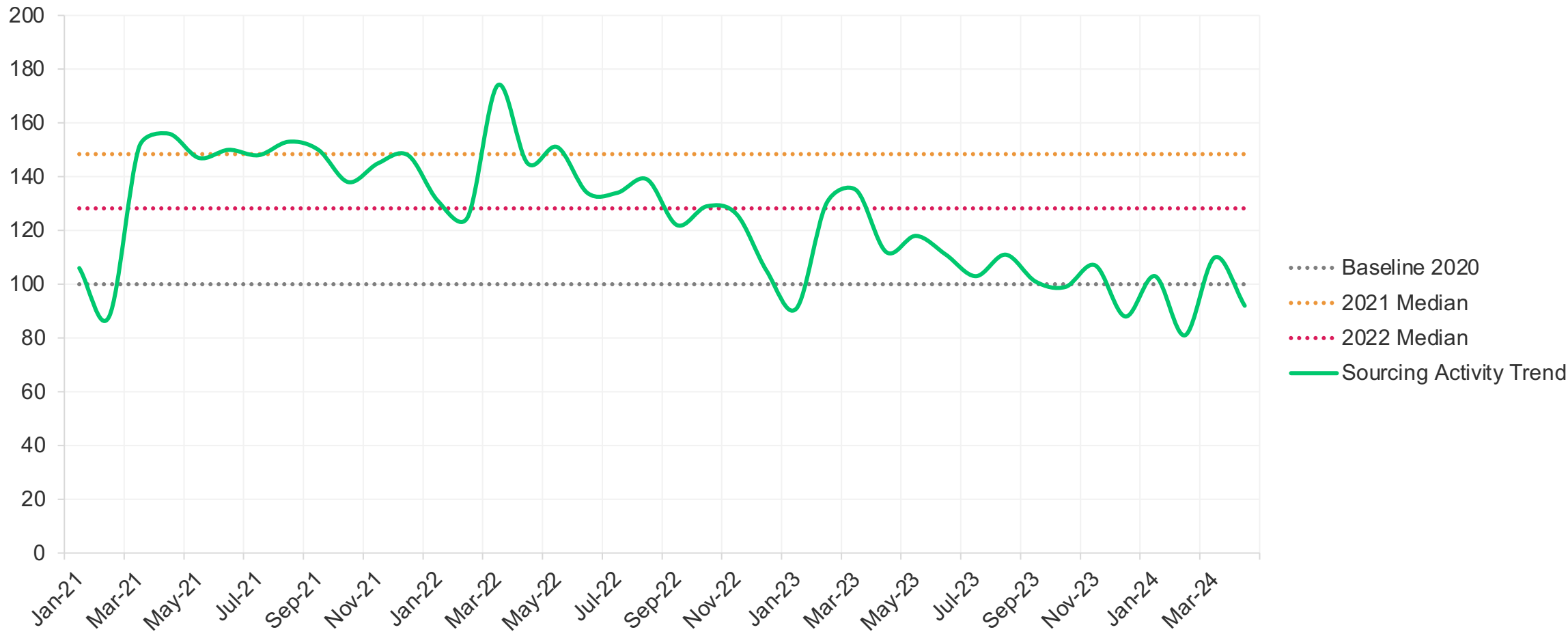Supplyframe

Sourcing Activity: APAC Trends

APRIL 2024

Sourcing Activity Index

Based on part level activity by buyers on the DSI Network. Activities included are related to buy clicks on the the DSI Network. Index is scored on a scale of 0 – 100.

Index scores are relative to the dimensions of data being included in the analyses (ie. Country, manufacturer, categories). A value of 100 reflects maximum value in the given data set. A value of 50 reflects half of the maximum value in the given data set.

Following data provides a breakdown of sourcing activities across the DSI Network in the APAC region.

Chart 9. APAC Sourcing Activity Trends

Baseline 2020
2021 Median
2022 Median
Sourcing Activity Trend

Table 8. Top 15 Product Categories in APAC

Product Class	Sourcing Activity Index	M/M%	Y/Y %	6mo. CMGR
Connectors	100.0	-13%	16%	1%
Capacitors	76.0	-16%	4%	0%
Power Circuits	66.0	-15%	-36%	-3%
Resistors	62.2	-13%	3%	0%
Diodes	49.8	-22%	-24%	-4%
Transistors	48.0	-21%	-36%	-4%
Microcontrollers and Processors	47.3	-21%	-46%	-5%
Connector Support	30.2	-10%	26%	2%
Inductors	24.2	-20%	24%	2%
Optoelectronics	23.6	-14%	-8%	-1%
Drivers And Interfaces	23.3	-19%	-44%	-3%
Memory	20.0	-20%	-31%	-3%
Amplifier Circuits	19.5	-27%	-46%	-5%
Logic	18.8	-20%	-24%	-3%
Signal Circuits	16.3	-17%	-29%	-2%

Recap

APRIL 2024

- Global design and sourcing activities performed in line with seasonal trends for April 2024

- Global design activities continued to show signs of growth after a slow start to the calendar year. Activities grew +1% month-over-month and +17% year-over-year

- Global sourcing activities decreased month-over-month across all regions. Activities decreased -12% month-over-month and -19% year-over-year

- We've observed strong growth rates over the last six month in design activities from the following countries: Australia (+6%), China (+3.7%), South Korea (+3.3%), India (+2%), and Japan (+2%). In these countries, components that fall into the following product groups observed the largest growth in design activities over the same period: sensors (+6%), memory (+5%), circuit protection (+4%), integrated circuits (+4%), and embedded controllers and processors (+3%).

- Q2 forecasts remain unchanged. Global design activities are projected to grow between +5% to +8% quarter-over-quarter, while global sourcing activities are projected to decrease between -1% to -5% quarter-over-quarter

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