

## Monolithic Power (MPWR)

**\$176.87** (As of 01/10/20)

Price Target (6-12 Months): **\$187.00**

Long Term: 6-12 Months

**Zacks Recommendation:**

**Neutral**

(Since: 07/02/19)

Prior Recommendation: Underperform

Short Term: 1-3 Months

**Zacks Rank:** (1-5)

**3-Hold**

Zacks Style Scores:

VGM:C

Value: F

Growth: B

Momentum: B

## Summary

Monolithic has been gaining from solid demand for industrial security, autonomous driving and smart lighting applications. Additionally, Monolithic's robust product portfolio that targets In-Car connectivity and infotainment and ADAS is a key catalyst. The company's efforts to expand auto suppliers partner base is also a positive. Monolithic is expected to benefit from strategic business mix in diversified markets. Notably, shares have outperformed the industry in the past one year. However, sluggishness in demand for 5G based networking products along with sales for legacy router and wireless applications is a headwind. Uncertain macroeconomic conditions and imposition of tariff due to the trade war between the United States & China are concerns.

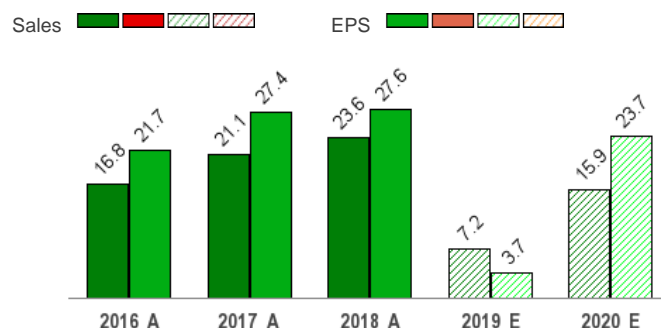
## Price, Consensus & Surprise



## Data Overview

52 Week High-Low	\$183.46 - \$114.84
20 Day Average Volume (sh)	267,924
Market Cap	\$7.7 B
YTD Price Change	-0.7%
Beta	1.62
Dividend / Div Yld	\$1.60 / 0.9%
Industry	<a href="#">Semiconductor - Analog and Mixed</a>
Zacks Industry Rank	Bottom 36% (163 out of 254)

## Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	1.9%
Last Sales Surprise	2.3%
EPS F1 Est- 4 week change	0.0%
Expected Report Date	02/11/2020
Earnings ESP	0.0%
P/E TTM	46.2
P/E F1	36.9
PEG F1	1.5
P/S TTM	12.5

## Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2020	159 E	174 E	196 E	195 E	723 E
2019	141 A	151 A	169 A	163 E	624 E
2018	129 A	140 A	160 A	154 A	582 A

## EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2020	\$0.97 E	\$1.12 E	\$1.33 E	\$1.32 E	\$4.80 E
2019	\$0.84 A	\$0.92 A	\$1.08 A	\$1.03 E	\$3.88 E
2018	\$0.79 A	\$0.90 A	\$1.06 A	\$0.99 A	\$3.74 A

\*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 01/10/2020. The reports text is as of 01/13/2020.

## Overview

Monolithic Power Systems, based in San Jose, CA, designs, develops and markets high-performance power solutions. The company focuses on the market for high-performance analog and mixed-signal integrated circuits (ICs).

Monolithic's products are widely utilized in industrial applications, telecommunication infrastructures, cloud computing, automotive and consumer applications.

Being a fabless company, Monolithic works with third-party contractors and chip assemblers for the manufacturing, assembling and testing of wafers and ICs. This approach permits the company to focus more on the designing and development of process technology at a lower-fixed cost.

Notably, unlike other fabless semiconductor companies, Monolithic installs its own proprietary process technologies in third-party contractors' equipment and facilities.

Monolithic reported total revenue of \$582.4 million in 2018, up 23.7% over 2017. The company's key product families are direct current to direct current (DC to DC) products and Lighting Control products.

DC to DC ICs are used to convert and control voltages within a broad range of electronic systems, such as portable electronic devices, wireless LAN access points, computers and monitors, automobiles and medical equipment. The product line accounted for 92.3% of total revenue in 2018.

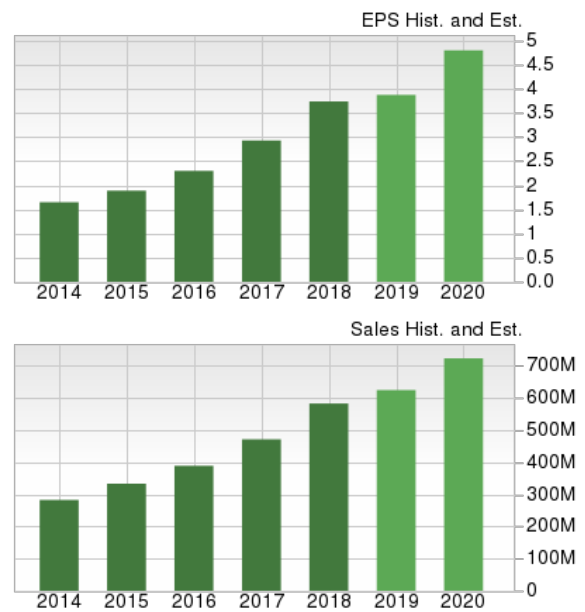
Lighting control ICs are used in backlighting and general illumination products. The product line accounted for 7.7% of total revenue in 2018.

Geographically, 88% of total revenue came from customers based in Asia for the year ended Dec 31, 2018.

Precisely, China, Taiwan, Europe, Korea, South East Asia, Japan, United States and others contributed 57.5%, 12.9%, 8.5%, 7.1%, 6.3%, 4.6%, 3% and 0.1%, respectively to fiscal 2018 revenues.

We note that the company ended 2018 with 1,133 patents, which possibly helps it to maintain this technological lead.

Monolithic's primary competitors are Analog Devices, Infineon Technologies, Renesas Electronics (post Intersil acquisition), Analog Devices (post Linear Technology acquisition), Maxim Integrated Products, NXP Semiconductors (pending acquisition by Qualcomm), ON Semiconductor, Power Integrations, ROHM Semiconductor, Semtech and Texas Instruments.



---

## Reasons To Buy:

- ▲ Automotive is one of the foremost industries that is benefiting from the emergence of Internet of Things (IoT) and artificial intelligence (AI). The increasing demand for analog ICs and sensors bodes well for semiconductor component providers like Monolithic. Management has stated that the company is winning increasing dollar content in the automotive market. Moreover, its deep-rooted partnerships with leading auto suppliers will further boost top line. The company anticipates served addressed market (SAM) for the automotive industry expanded from \$6 billion in 2015 to \$7 billion in 2018. Moreover, management expects Automotive business to witness a CAGR of 40-50% between 2013 and 2021. Monolithic has strong growth opportunity due to its robust product portfolio that targets In-Car connectivity and infotainment, advanced driver assistance system (ADAS) and rapid adoption of LED lightings in cars and vehicles.
- ▲ Apart from automotive, Monolithic is investing in markets like industrial, server and communications that have strong growth potential over the long term. The ongoing adoption of cloud computing is driving demand for servers, which bodes well for the company's power management solutions. We expect Monolithic to benefit from the ongoing Grantley to Purley platform conversion in the server market. Higher dollar content in new servers based on Purley will drive top-line growth. Management anticipates cloud computing to be a notable growth driver, particularly increasing demand for solid state drives (SSDs) and servers. SAM for cloud computing which includes server and storage expanded from \$800 million in 2015 to \$1 billion in 2018.
- ▲ Moreover, Monolithic projects e-commerce as the upcoming growth driver. The company is now engaged in developing its e-commerce platform, which will allow customers input their specific needs. The company will leverage AI software to predict performance for the consumer's desired product. Monolithic expects to deliver Amazon-like consumer experience through its e-commerce platform. This will not only expand customer base but also help the company to rapidly penetrate the small and medium (SMB) businesses.
- ▲ Being a fabless company, Monolithic works with third-party contractors and chip assemblers for the manufacturing, assembling and testing of wafers and ICs. This approach permits the company to focus more on the designing and development of process technology at a lower-fixed cost. However, unlike other fabless semiconductor companies, Monolithic installs its own proprietary process technologies in third-party contractors' equipment and facilities. Monolithic claims that its proprietary process helps in achieving higher level of integration within its chips. We note that the company has 1,133 patents as of Dec 31, 2018, which possibly helps it to maintain this technological lead.
- ▲ Management execution has been good in recent times. This has helped Monolithic build cash and short-term investments balance of \$418.7 million as of Sep 30, 2019. The company generated \$141.5 million of cash from operating activities in fiscal 2018. The significant amount of cash provides the flexibility required to pursue any growth strategy, by way of acquisitions or otherwise. Notably, over the 2008-2018, the company has returned 51% of cash through share buybacks and dividends.

Investments in high-growth fields like automotive, industrial, server and communications are anticipated to drive growth in the long haul.

---

## Reasons To Sell:

- ▼ Monolithic derives a significant proportion of its revenues from Asia. Notably, for year ended Dec 31, 2018, the company generated 88% of total revenues from customers based in Asia. Hence, changes in the relative value of the dollar against Asian currencies may create pricing pressure for the company's products. Moreover, lack of geographic diversity in terms of end-customers is a significant headwind. The company generates majority of revenues from a limited number of customers. Customer concentration lowers the company's ability to hike price, which is a major concern.
- ▼ Monolithic is considerably exposed particularly to the demand environment in China (57.5% of revenues in fiscal 2018), which is at present quite sluggish. Further, imposition of tariffs owing to trade war between the United States and China is anticipated to negatively impact growth prospects. The uncertainty over the recent trade war truce has impacted investors' confidence and is likely to remain an overhang on the company's performance.
- ▼ Monolithic operates in a highly competitive market. The company faces significant competition in the analog market (including power management sub-segment), which is highly fragmented. Moreover, most competitors have strong financial resources and broader distribution channel than Monolithic. Being relatively small in size, the company doesn't have significant flexibility to reduce price as compared with its peers, which is a headwind. We expect intensifying competition to keep profitability under pressure at least in the near-term.
- ▼ Monolithic's business, in particular and in the semiconductor industry in general, is highly cyclical. It is characterized by constant and swift technological changes, as well as rapid product obsolescence and price erosion, evolving standards, short product life-cycles. Additionally, semiconductor manufacturing is very capital-intensive. The manufacturing capacities that are essential to maintain a competitive cost position require large capital investments. A high percentage of the cost of operating a fab is fixed; therefore, increases or decreases in capacity utilization can have a significant impact on profitability.
- ▼ Moreover, the company is trading at premium in terms of Price/Earnings (P/E). Monolithic currently has a trailing 12 month P/E ratio of 76.57. This level compares unfavorably with what the industry witnessed in the last year. Additionally, the ratio is higher than the average level of 60.36 and is near the high end of the valuation range in this period. Consequently, the valuation looks slightly stretched from P/E perspective.

Monolithic's business in the highly cyclical semiconductor industry and dependence on China amid macroeconomic uncertainty remain major concerns.

## Last Earnings Report

### Monolithic Power Q3 Earnings & Revenues Top

Monolithic Power Systems reported third-quarter 2019 non-GAAP earnings of \$1.08 per share, which beat the Zacks Consensus Estimate by a couple of cents. Notably, the figure improved 1.9% on a year-over-year basis.

Revenues of \$168.8 million improved 5.5% from the year-ago quarter, surpassing the Zacks Consensus Estimate of \$165 million. The reported figure was also higher than management's guidance of \$162 million to \$168 million.

Sturdy demand of industrial security applications, 5G based networking products, and smart lighting aided year-over-year growth.

DC to DC segment (94.6% of total revenues) revenues improved 8.1% year over year to \$159.7 million. However, Lighting Control (5.4% of total revenues) declined 25.8% to \$9.1 million.

### Quarter in Details

**Computing & Storage** (31.3% of total revenues) revenues rose 10.8% year over year to \$52.8 million. Design wins in AI applications and high-end servers drove performance.

**Industrial** (17.1%) revenues advanced 16.1% to \$28.9 million, primarily on the back of increased adoption of point of sales systems, security applications and smart meters.

**Automotive** (14.5%) revenues were \$24.4 million, up 23.5%. Higher product sales for applications in smart lighting, infotainment and autonomous driving application products aided growth.

However, **Communications** (11.1%) revenues declined 1.9% to almost \$18.8 million. Consumer (26%) revenues fell 9.4% from the year-ago quarter to \$43.9 million.

Non-GAAP gross margin contracted 50 bps from the year-ago quarter to 55.6%. Management had envisioned the figure in the range of 55.3% to 55.9%.

Non-GAAP operating expenses were \$42.5 million during the reported quarter, up 4.9% year over year.

Non-GAAP operating income grew 4.4% year over year to \$51.4 million. Non-GAAP operating margin (as a percentage of revenues) contracted 30 bps from the year-ago quarter to 30.4%.

Cash, cash equivalents and short-term investments were \$418.7 million at the end of the third quarter, up from \$366.5 million reported at the end of the previous quarter.

### Guidance

For the fourth quarter of 2019, Monolithic Power forecasts revenues between \$160 million to \$166 million.

Management anticipates non-GAAP gross margin between 55.2% and 55.8%.

Quarter Ending 09/2019

Report Date	Oct 22, 2019
Sales Surprise	2.28%
EPS Surprise	1.89%
Quarterly EPS	1.08
Annual EPS (TTM)	3.83

## Recent News

On **Dec 12, 2019**, Monolithic Power Systems announced its fourth-quarter dividend of 40 cents per share to shareholders held in record as on Dec 31, 2019, to be paid on Jan 15, 2019.

## Valuation

Monolithic shares are up 23.6% in the year-to-date period and 48.5% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 13.3% and 13.7% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and the sector are up 44.6% and 36.1%, respectively.

The S&P 500 index is up 10% in the year-to-date period and 28.4% in the past year.

The stock is currently trading at 36.55X forward 12-month earnings, which compares to 22.75X for the Zacks sub-industry, 22.67X for the Zacks sector and 18.88X for the S&P 500 index.

Over the past five years, the stock has traded as high as 78.71X and as low as 34.57X, with a 5-year median of 46.14X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$187 price target reflects 38.64X forward 12-month earnings.

The table below shows summary valuation data for MPWR

Valuation Multiples - MPWR					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	36.55	22.75	22.67	18.88
	5-Year High	78.71	22.78	22.67	19.34
	5-Year Low	34.57	13.42	16.87	15.17
	5-Year Median	46.14	18.12	19.24	17.44
P/S F12M	Current	10.56	4.72	3.65	3.5
	5-Year High	12.5	4.72	3.65	3.5
	5-Year Low	4.98	2.81	2.3	2.54
	5-Year Median	7.87	3.68	3.01	3
P/B TTM	Current	10.46	4.21	5.47	4.46
	5-Year High	11.06	6.22	5.48	4.47
	5-Year Low	5.06	2.49	3.13	2.85
	5-Year Median	8.36	3.66	4.22	3.61

As of 01/10/2020

## Industry Analysis Zacks Industry Rank: Bottom 36% (163 out of 254)



## Top Peers

Cirrus Logic, Inc. (CRUS)	Neutral
Infineon Technologies AG (IFNNY)	Neutral
Microchip Technology Incorporated (MCHP)	Neutral
Maxim Integrated Products, Inc. (MXIM)	Neutral
NXP Semiconductors N.V. (NXPI)	Neutral
ON Semiconductor Corporation (ON)	Neutral
Texas Instruments Incorporated (TXN)	Neutral
Analog Devices, Inc. (ADI)	Underperform

Industry Comparison Industry: Semiconductor - Analog And Mixed				Industry Peers		
	MPWR Neutral	X Industry	S&P 500	IFNNY Neutral	NXPI Neutral	TXN Neutral
<b>VGM Score</b>	<b>C</b>	-	-	<b>B</b>	<b>B</b>	<b>C</b>
Market Cap	7.68 B	6.42 B	24.03 B	29.62 B	36.24 B	121.52 B
# of Analysts	8	9	13	2	11	10
Dividend Yield	0.90%	0.00%	1.78%	0.89%	1.16%	2.77%
<b>Value Score</b>	<b>F</b>	-	-	<b>B</b>	<b>B</b>	<b>D</b>
Cash/Price	0.05	0.10	0.04	0.15	0.10	0.04
EV/EBITDA	54.87	19.60	14.04	11.29	9.18	15.68
PEG Ratio	1.49	1.98	2.02	NA	1.23	2.58
Price/Book (P/B)	10.46	4.92	3.32	2.76	3.86	13.52
Price/Cash Flow (P/CF)	62.28	18.65	13.52	12.01	10.82	19.62
P/E (F1)	37.35	30.90	18.82	24.67	15.32	26.10
Price/Sales (P/S)	12.50	5.54	2.63	3.27	4.04	8.24
Earnings Yield	2.71%	3.27%	5.31%	4.05%	6.53%	3.83%
Debt/Equity	0.00	0.55	0.72	0.18	0.78	0.59
Cash Flow (\$/share)	2.84	2.86	6.94	1.97	11.98	6.62
<b>Growth Score</b>	<b>B</b>	-	-	<b>B</b>	<b>B</b>	<b>B</b>
Hist. EPS Growth (3-5 yrs)	28.95%	15.13%	10.56%	16.05%	13.04%	21.02%
Proj. EPS Growth (F1/F0)	23.83%	11.70%	7.49%	-4.00%	11.27%	-3.02%
Curr. Cash Flow Growth	25.38%	-6.04%	14.83%	-3.50%	-15.36%	20.88%
Hist. Cash Flow Growth (3-5 yrs)	28.80%	25.11%	9.00%	11.38%	25.48%	13.94%
Current Ratio	5.99	3.49	1.23	3.58	1.90	4.34
Debt/Capital	0.00%	35.79%	42.99%	15.09%	44.63%	37.11%
Net Margin	16.93%	5.11%	11.08%	10.85%	4.51%	35.10%
Return on Equity	15.23%	12.94%	17.16%	13.74%	23.37%	58.00%
Sales/Assets	0.72	0.49	0.55	0.66	0.42	0.84
Proj. Sales Growth (F1/F0)	15.81%	2.46%	4.20%	0.00%	6.08%	-2.13%
<b>Momentum Score</b>	<b>B</b>	-	-	<b>D</b>	<b>D</b>	<b>D</b>
Daily Price Chg	-1.04%	-0.21%	-0.33%	-1.27%	0.36%	-1.01%
1 Week Price Chg	-0.93%	-0.53%	-0.30%	0.09%	-0.69%	-0.56%
4 Week Price Chg	1.80%	4.59%	1.71%	2.03%	4.57%	3.12%
12 Week Price Chg	23.93%	11.81%	6.05%	28.63%	18.06%	-0.10%
52 Week Price Chg	44.04%	42.42%	22.39%	13.87%	61.99%	33.03%
20 Day Average Volume	267,924	488,781	1,580,816	112,598	1,898,860	3,642,032
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(F1) EPS Est 4 week change	0.00%	0.00%	0.00%	0.00%	-0.24%	0.00%
(F1) EPS Est 12 week change	-9.71%	-7.47%	-0.50%	-6.80%	-5.17%	-14.06%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.00%	NA	-0.08%	0.00%

---

## Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

### Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

### Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

---

### Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	F
Growth Score	B
Momentum Score	B
VGM Score	C

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

---

### Disclosures

**This report contains independent commentary to be used for informational purposes only. The analysts contributing to this report do not hold any shares of this stock. The analysts contributing to this report do not serve on the board of the company that issued this stock. The EPS and revenue forecasts are the Zacks Consensus estimates, unless indicated otherwise on the reports first page.** Additionally, the analysts contributing to this report certify that the views expressed herein accurately reflect the analysts personal views as to the subject securities and issuers. ZIR certifies that no part of the analysts compensation was, is, or will be, directly or indirectly, related to the specific recommendation or views expressed by the analyst in the report.

Additional information on the securities mentioned in this report is available upon request. This report is based on data obtained from sources we believe to be reliable, but is not guaranteed as to accuracy and does not purport to be complete. Any opinions expressed herein are subject to change.

ZIR is not an investment advisor and the report should not be construed as advice designed to meet the particular investment needs of any investor. Prior to making any investment decision, you are advised to consult with your broker, investment advisor, or other appropriate tax or financial professional to determine the suitability of any investment. This report and others like it are published regularly and not in response to episodic market activity or events affecting the securities industry.

This report is not to be construed as an offer or the solicitation of an offer to buy or sell the securities herein mentioned. ZIR or its officers, employees or customers may have a position long or short in the securities mentioned and buy or sell the securities from time to time. ZIR is not a broker-dealer. ZIR may enter into arms-length agreements with broker-dealers to provide this research to their clients. Zacks and its staff are not involved in investment banking activities for the stock issuer covered in this report.

ZIR uses the following rating system for the securities it covers. **Outperform-** ZIR expects that the subject company will outperform the broader U.S. equities markets over the next six to twelve months. **Neutral-** ZIR expects that the company will perform in line with the broader U.S. equities markets over the next six to twelve months. **Underperform-** ZIR expects the company will underperform the broader U.S. equities markets over the next six to twelve months.

No part of this report can be reprinted, republished or transmitted electronically without the prior written authorization of ZIR.