

## Monolithic Power (MPWR)

**\$181.27** (As of 04/23/20)

Price Target (6-12 Months): **\$197.00**

Long Term: 6-12 Months

**Zacks Recommendation:**

**Neutral**

(Since: 03/05/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

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

**3-Hold**

Zacks Style Scores:

VGM:C

Value: F

Growth: B

Momentum: C

### Summary

Monolithic is expected to gain traction from solid demand for industrial security, autonomous driving and smart lighting applications. Its product portfolio that targets In-Car connectivity, infotainment and advanced driver assistance system will likely be a key catalyst. Moreover, increasing deployment of 5G is expected to aid growth in the Communications market. Further, increasing adoption of point of sales systems, security applications and smart meters bode well. Notably, the company's stock has outperformed the industry in the past year. However, the company is bearing the brunt of slowing economy in China where it has significant exposure amid coronavirus crisis. Further, sluggishness in certain consumer markets remains a major headwind. Additionally, rising competition in the highly fragmented analog market poses a serious threat.

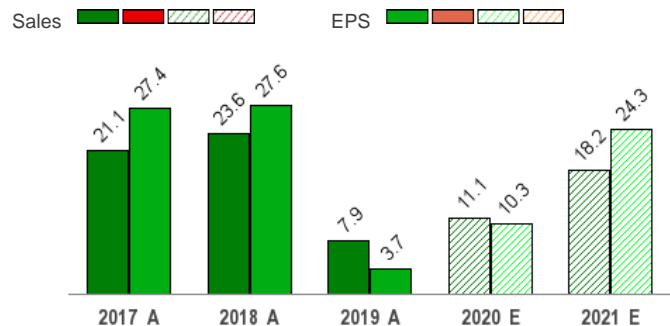
### Price, Consensus & Surprise



### Data Overview

52 Week High-Low	\$193.10 - \$114.84
20 Day Average Volume (sh)	341,160
Market Cap	\$8.1 B
YTD Price Change	1.8%
Beta	1.22
Dividend / Div Yld	\$2.00 / 1.1%
Industry	<a href="#">Semiconductor - Analog and Mixed</a>
Zacks Industry Rank	Bottom 38% (156 out of 253)

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



Last EPS Surprise	1.0%
Last Sales Surprise	2.2%
EPS F1 Est- 4 week change	-10.3%
Expected Report Date	04/28/2020
Earnings ESP	1.1%
P/E TTM	46.7
P/E F1	42.4
PEG F1	1.7
P/S TTM	12.9

### Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	181 E	198 E	223 E	222 E	825 E
2020	160 E	167 E	186 E	185 E	698 E
2019	141 A	151 A	169 A	167 A	628 A

### EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$1.07 E	\$1.23 E	\$1.47 E	\$1.47 E	\$5.32 E
2020	\$0.94 E	\$1.00 E	\$1.18 E	\$1.15 E	\$4.28 E
2019	\$0.84 A	\$0.92 A	\$1.08 A	\$1.04 A	\$3.88 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 04/23/2020. The reports text is as of 04/24/2020.

## 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 \$627.9 million in 2019. The company's key product families are direct current (DC to DC) products and Lighting Control products.

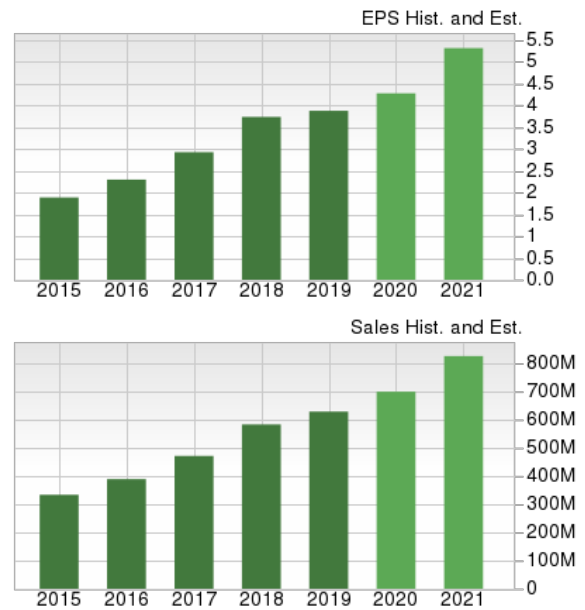
DC to DC ICs are used to convert and control voltages within a broad range of electronic systems, such as portable electronic devices, wireless LAN access points, computers and monitors, automobiles and medical equipment. The product line accounted for 93.9% of total revenue in 2019.

Lighting control ICs are used in backlighting and general illumination products. The product line accounted for 6.1% of total revenue in 2019.

End-market wise, 30.1% of total revenue came from Computing and storage for the year ended Dec 31, 2019.

Precisely, Consumer, Industrial, Automotive and Communications end-markets contributed 26.2%, 15.8%, 14.4% and 13.5%, respectively to 2019 revenues.

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.



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## 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 \$455.4 million as of Dec 31, 2019. The company generated \$61 million of cash from operating activities in fourth quarter of 2019. 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.

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## 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 76.16. This level compares unfavorably with what the industry witnessed in the last year. 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's Q4 Earnings & Revenues Beat Estimates

Monolithic Power Systems, Inc. reported fourth-quarter 2019 non-GAAP earnings of \$1.04 per share, which beat the Zacks Consensus Estimate by almost 1%. Notably, the figure improved 5.1% on a year-over-year basis.

Revenues of \$166.8 million improved 8.6% from the year-ago quarter, surpassing the Zacks Consensus Estimate of \$163 million. The reported figure was also better than the higher end of management's guidance of \$160 million to \$166 million.

Strong demand across Computing & Storage, Automotive and Communications end-markets drove year-over-year growth.

### Quarter in Details

#### Revenues by Product Family

DC to DC segment (94.5% of total revenues) revenues improved 10.1% year over year to \$157.5 million. However, Lighting Control (5.5% of total revenues) declined 12.1% to \$9.2 million.

#### Revenues by End Market

**Computing & Storage** (33.4% of total revenues) revenues rose 27.8% year over year to \$55.6 million.

**Industrial** (16%) revenues declined 0.7% year over year to \$26.7 million.

**Automotive** (14.5%) revenues were \$24.1 million, up 8.6%.

**Communications** (13.1%) revenues improved 8.5% to almost \$21.9 million.

**Consumer** (23%) revenues fell 5.7% from the year-ago quarter to \$38.4 million.

### Margins in Detail

Non-GAAP gross margin contracted 10 basis points (bps) from the year-ago quarter to 55.5%. Management had predicted the figure between 55.2% and 55.8%.

Non-GAAP operating expenses were \$41.8 million during the reported quarter, up 7.9% year over year. As a percentage of revenues, the figure expanded 110 bps on a year-over-year basis to 25%.

Non-GAAP operating income improved almost 9% year over year to \$50.8 million. Non-GAAP operating margin (as a percentage of revenues) expanded 10 bps from the year-ago quarter to 30.5%.

### Balance Sheet & Cash Flow

As of Dec 31, 2019, cash, cash equivalents and short-term investments were \$455.4 million, up from \$418.7 million reported at the end of the previous quarter.

Monolithic Power generated operating cash flow of approximately \$61 million compared with \$72.4 million in the prior quarter.

### Guidance

For first-quarter 2020, Monolithic Power forecasts revenues between \$161 million and \$167 million.

Management anticipates non-GAAP gross margin between 55.4% and 56%.

Quarter Ending **12/2019**

Report Date	Feb 05, 2020
Sales Surprise	2.23%
EPS Surprise	0.97%
Quarterly EPS	1.04
Annual EPS (TTM)	3.88

## Recent News

On Apr 9, Monolithic announced that it has built a low cost emergency ventilator based on an open-source MIT design, to aid medical workers in their fight against the coronavirus pandemic.

On Feb 5, 2020, Monolithic Power Systems' board of directors approved a cash dividend of 50 cents per share, up from 40 cents per share, payable Apr 15, 2020, to shareholders as on Mar 31, 2020.

## Valuation

Monolithic shares are up 1.8% in the year-to-date period and 16.4% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are down 20.3% and 6.9% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry is down 11.9% while the sector is up 0.2%.

The S&P 500 index is down 13.2% in the year-to-date period and 4.8% in the past year.

The stock is currently trading at 39.36X forward 12-month earnings, which compares to 21X for the Zacks sub-industry, 21.44X for the Zacks sector and 19.31X for the S&P 500 index.

Over the past five years, the stock has traded as high as 78.81X and as low as 34.57X, with a 5-year median of 46.26X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$197 price target reflects 42.82X 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 F 12M	Current	39.36	21.00	21.44	19.31
	5-Year High	78.81	22.80	21.91	19.34
	5-Year Low	34.57	13.42	16.71	15.19
	5-Year Median	46.26	18.12	19.21	17.45
P/S F12M	Current	10.40	3.89	3.32	3.14
	5-Year High	12.52	4.52	3.59	3.44
	5-Year Low	4.98	2.81	2.32	2.54
	5-Year Median	8.13	3.69	3.09	3.01
P/B TTM	Current	10.45	3.26	4.40	3.71
	5-Year High	11.06	6.22	5.38	4.55
	5-Year Low	5.06	2.49	3.16	2.84
	5-Year Median	8.56	3.64	4.28	3.64

As of 04/23/2020

## Industry Analysis Zacks Industry Rank: Bottom 38% (156 out of 253)



## Top Peers

Company (Ticker)	Rec	Rank
Analog Devices, Inc. (ADI)	Neutral	3
Cirrus Logic, Inc. (CRUS)	Neutral	3
Infineon Technologies AG (IFNNY)	Neutral	3
Microchip Technology Incorporated (MCHP)	Neutral	4
Maxim Integrated Products, Inc. (MXIM)	Neutral	4
NXP Semiconductors N.V. (NXPI)	Neutral	4
Texas Instruments Incorporated (TXN)	Neutral	3
ON Semiconductor Corporation (ON)	Underperform	4

Industry Comparison Industry: Semiconductor - Analog And Mixed				Industry Peers		
	MPWR	X Industry	S&P 500	IFNNY	NXPI	TXN
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	4	3
VGM Score	C	-	-	F	C	D
Market Cap	8.09 B	5.08 B	19.03 B	20.93 B	24.57 B	101.38 B
# of Analysts	8	8.5	14	2	12	12
Dividend Yield	1.10%	0.00%	2.23%	1.20%	1.70%	3.26%
Value Score	F	-	-	D	C	D
Cash/Price	0.05	0.10	0.05	0.24	0.04	0.05
EV/EBITDA	61.08	16.00	11.66	7.19	13.21	14.61
PEG Ratio	1.70	1.79	2.20	14.97	1.44	2.82
Price/Book (P/B)	10.18	3.48	2.56	1.90	2.55	13.11
Price/Cash Flow (P/CF)	61.84	15.96	10.31	8.49	5.66	17.02
P/E (F1)	42.60	26.58	17.77	38.04	14.42	26.35
Price/Sales (P/S)	12.88	4.15	1.97	2.34	2.77	7.18
Earnings Yield	2.36%	3.78%	5.48%	2.63%	6.94%	3.79%
Debt/Equity	0.00	0.55	0.72	0.15	0.76	0.71
Cash Flow (\$/share)	2.93	2.91	7.01	1.97	15.55	6.49
Growth Score	B	-	-	F	C	B
Hist. EPS Growth (3-5 yrs)	28.83%	13.72%	10.92%	13.69%	13.59%	20.28%
Proj. EPS Growth (F1/F0)	10.34%	-14.62%	-5.06%	-56.00%	-32.11%	-19.99%
Curr. Cash Flow Growth	5.71%	-12.47%	5.92%	-3.50%	10.37%	-4.66%
Hist. Cash Flow Growth (3-5 yrs)	20.59%	22.53%	8.55%	11.38%	24.47%	8.82%
Current Ratio	6.67	2.78	1.23	4.14	1.82	3.49
Debt/Capital	0.00%	36.52%	43.90%	13.42%	43.27%	41.56%
Net Margin	17.33%	3.29%	11.32%	10.36%	2.74%	35.17%
Return on Equity	15.07%	12.19%	16.60%	11.71%	24.03%	57.45%
Sales/Assets	0.70	0.48	0.55	0.61	0.43	0.80
Proj. Sales Growth (F1/F0)	11.23%	-2.15%	-0.78%	0.00%	-6.25%	-14.91%
Momentum Score	C	-	-	D	D	D
Daily Price Chg	-1.90%	-0.18%	0.15%	-4.04%	-1.10%	-1.36%
1 Week Price Chg	10.62%	2.57%	0.42%	1.92%	0.22%	5.44%
4 Week Price Chg	3.71%	7.83%	4.04%	4.80%	-1.83%	2.51%
12 Week Price Chg	1.55%	-15.91%	-21.19%	-25.59%	-33.08%	-11.22%
52 Week Price Chg	16.39%	-11.80%	-15.14%	-28.93%	-9.83%	-5.73%
20 Day Average Volume	341,160	938,392	2,802,273	443,576	3,058,176	6,832,761
(F1) EPS Est 1 week change	0.00%	0.00%	-0.10%	0.00%	0.00%	-7.65%
(F1) EPS Est 4 week change	-10.35%	-17.21%	-6.64%	-50.00%	-25.05%	-14.44%
(F1) EPS Est 12 week change	-16.97%	-16.97%	-11.78%	-54.17%	-30.88%	-18.13%
(Q1) EPS Est Mthly Chg	-11.59%	-13.06%	-10.38%	NA	-33.77%	-29.43%

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## 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.

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### 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	C
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.

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