

ON 4Q: Making IGBTs and MOSFETs Great Again

ON	26 est.	ON Semiconductor	CY24rev:	-8%
Qtr:	4Q	Grade:	D	Growth (qtr-qtr)
Rev:	2,018.1	Rev:	++	Rev: -7.5%
GM:	46.7%	EPS:	++	Fcst: -11-6%
EPS:	\$1.25	Fcst:	--	Div:

ON Semiconductor (ON \$77.57 +1.38 on 2/26/24)

4Q Earnings: ON announced sequentially declining 4Q earnings on February 5 that exceeded expectations and the mid-point of guidance. 1Q guidance reflects a continuation of broad-based weakness. Nevertheless, the company is posting impressive gains in power semiconductors and image sensors to automotive and key industrial markets.

4Q Results: Total sales declined sequentially 4Q by -7.5% and by -1% for all of 2023. Power Solutions Group (PSG) declined -12% sequentially but grew +6% for 2023 and accounted for 54% of sales on strength from SiC, IGBT and MOSFETs in automotive and energy infrastructure. ON claims SiC leadership with its 25% share and is number two in IGBT and MOSFETs, with IGBT sales doubling over the last two years. Advanced Solutions Group (ASG) grew +1% sequentially but declined -12% for the year and accounted for 30% of sales due to softness in compute and mobile. Intelligent Sensing Group (ISG) declined -6% sequentially but gained +3% during the year for 16% of sales as gains in CMOS image sensors to automobiles more than offset declines in compute and industrial. The company pruned \$180M of non-core business last year across all three product groups, and the remaining legacy parts approximate corporate average gross margins.

Gross margin declined sequentially by only -60bp to 46.7% despite utilization decreasing to 66% from 72% due to restructuring over the last three years. Management expects gross margin above mid-40% with utilization in mid-60% and noted 2023 gross margin of 47.1% is 1,440 basis points higher than 2020 at comparable utilization levels. Inventory grew by +13 days sequentially to 179 including 74 days of strategic SiC inventory to support fab transitions. Distribution inventory was down -\$11M sequentially with weeks up to 7.2 versus 6.9. ON has been under serving distribution since the first hints of market softness from long-term supply agreements (LTSA) with direct OEMs, but expects to replenish the channel to a normal 7-9 weeks of inventory over the next few quarters. Operating cash flow for 4Q was \$611M, free cash flow was \$221M, and cap ex was \$391M while 136% of FCF was returned to shareholders via \$300M in share repurchases.

Silicon Carbide (SiC): SiC sales grew by 4-times last year to \$800M across 600 customers and delivered 25% leading market share with gross margin above 40%. The transition to 200mm from 150mm wafers is underway, the world's largest fab in South Korea was announced, and management expects to double whatever market growth is this year (+35% or +25%?) as customers ramp production in industrial and automotive.

Automotive: Automotive sales declined by -4% sequentially 4Q but grew +29% for all of 2023 to account for 52% of revenue on the strength of power chips (SiC, IGBTs and MOSFETs) and CMOS image sensors (CIS). CIS sales grew by +12% for the year on a doubling of 8-megapixel offerings to ADAS, and achieved leading automotive market share with \$1B in sales while design wins grew by +50%. Automotive electrification and advanced safety features are driving upside, with hybrid vehicle revenue nearly doubling on the year and significant content gains across all kinds of EVs including up to \$350 in hybrid electric drive trains and onboard chargers. ON also leads the market in automotive LED lighting, inductive and ultrasonic sensing. The company is adding new analog and mixed signal offerings and is already in production with a leading customer on their new 48-volt architecture.

Industrial: Industrial revenue declined by -19% sequentially 4Q and by -1% for 2023 to account for 28% of sales on weakness across all segments due to macroeconomic factors. Energy infrastructure is the company's strongest industrial segment where it leads in solar and energy storage solutions with IGBTs, SiC and modules. ON just released a full suite of power integrated modules for EV chargers enabling bidirectional charging capabilities that can be used at up to 350 kW to reduce charging time to 15-minutes for a near full charge.

Guidance (non-GAAP): 1Q revenue of \$1.8-1.9B and EPS of \$0.98-1.10 due to softness across all end-markets. Gross margin 44.5-46.5% due to lower utilization, op ex \$305-320M, other income at \$8M as interest income exceeds expense following debt restructuring, and a tax rate of 15.5-16.5% on 433M shares. Cap ex of \$310-340M

in brown-field investments in SiC and the East Fishkill fab. 2027 target model: revenue CAGR +10+12%, gross margin 53%, operating expenses 13%, operating margin 40%, capital expenditures 11%, and free-cash-flow 25-30%. Design win growth continues to outpace the company's long-term revenue growth target.

Valuation: On a TTM, current and next FY basis, price/sales is at 4.1x, 4.5x and 4.1x, respectively, while price/earnings is at 15.0x, 18.0x and 15.0x on expected sales and earnings growth next year. Price/book is at 4.4x going up to 5.8x on a tangible basis and the company's debt drives net cash negative, although FCF is positive and the company has been repurchasing shares over the last two years. Valuation metrics appear consistent with current expectations with potential for incremental upside, although accelerating growth of key power and sensing products to automotive and industrial markets could easily drive more significant share price upside, in my opinion.

ON Financials

	2021					2022					2023				
	1Q	2Q	3Q	4Q	2021	1Q	2Q	3Q	4Q	2022	1Q	2Q	3Q	4Q	2023
Business Segment															
PSG	747.0	846.6	892.1	953.4	3,439.1	986.7	1,057.1	1,116.1	1,048.4	4,208.3	1,012.8	1,119.8	1,230.6	1,085.8	4,449.0
ASG	531.5	607.6	613.5	647.3	2,399.9	689.3	716.7	734.3	701.0	2,841.3	592.8	649.5	621.6	624.6	2,488.5
ISG	203.2	215.7	236.5	245.4	900.8	269.0	311.1	342.2	354.2	1,276.5	354.1	325.1	328.6	307.7	1,315.5
Total Revenue	1,481.7	1,669.9	1,742.1	1,846.1	6,739.8	1,945.0	2,084.9	2,192.6	2,103.6	8,326.1	1,959.7	2,094.4	2,180.8	2,018.1	8,253.0
GM (Non-GAAP)	35.2%	38.4%	41.5%	45.2%	40.4%	49.4%	49.7%	49.3%	48.4%	49.2%	46.8%	47.4%	47.3%	46.7%	47.1%
EPS (GAAP)	0.20	0.42	0.70	0.96	2.27	1.18	1.02	0.70	1.35	4.25	1.03	1.29	1.29	1.28	4.89
EPS (non-GAAP)	0.35	0.63	0.87	1.09	2.95	1.22	1.34	1.45	1.32	5.33	1.19	1.33	1.39	1.25	5.16
Segment Percent															
PSG	50.4%	50.7%	51.2%	51.6%	51.0%	50.7%	50.7%	50.9%	49.8%	50.5%	51.7%	53.5%	56.4%	53.8%	53.9%
ASG	35.9%	36.4%	35.2%	35.1%	35.6%	35.4%	34.4%	33.5%	33.3%	34.1%	30.2%	31.0%	28.5%	30.9%	30.2%
ISG	13.7%	12.9%	13.6%	13.3%	13.4%	13.8%	14.9%	15.6%	16.8%	15.3%	18.1%	15.5%	15.1%	15.2%	15.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Segment Growth															
PSG		13.3%	5.4%	6.9%	32%	3.5%	7.1%	5.6%	-6.1%	22.4%	-3.4%	10.6%	9.9%	-11.8%	5.7%
ASG		14.3%	1.0%	5.5%	26%	6.5%	4.0%	2.5%	-4.5%	18.4%	-15.4%	9.6%	-4.3%	0.5%	-12.4%
ISG		6.2%	9.6%	3.8%	22%	9.6%	15.7%	10.0%	3.5%	41.7%	0.0%	-8.2%	1.1%	-6.4%	3.1%
Total		12.7%	4.3%	6.0%	28%	5.4%	7.2%	5.2%	-4.1%	23.5%	-6.8%	6.9%	4.1%	-7.5%	-0.9%
Gross Profit															
PSG	246.5	314.3	346.0	411.5	1,318.3	474.7	511.2	508.5	499.9	1,994.3	480.3	536.7	591.0	503.3	2,111.3
ASG	206.8	252.3	280.1	316.4	1,055.6	366.7	380.3	381.7	345.8	1,474.5	260.1	301.5	283.6	286.7	1,131.9
ISG	67.9	73.5	94.7	104.3	340.4	119.9	145.6	168.1	174.8	608.4	177.1	155.2	156.1	151.9	640.3
Total (GAAP)	521.2	640.1	720.8	832.2	2,714.3	961.3	1,037.1	1,058.3	1,020.5	4,077.2	917.5	993.4	1,030.7	941.9	3,883.5
Gross Margin															
PSG	33.0%	37.1%	38.8%	43.2%	38.3%	48.1%	48.4%	45.6%	47.7%	47.4%	47.4%	47.9%	48.0%	46.4%	47.5%
ASG	38.9%	41.5%	45.7%	48.9%	44.0%	53.2%	53.1%	52.0%	49.3%	51.9%	43.9%	46.4%	45.6%	45.9%	45.5%
ISG	33.4%	34.1%	40.0%	42.5%	37.8%	44.6%	46.8%	49.1%	49.4%	47.7%	50.0%	47.7%	47.5%	49.4%	48.7%
Total (GAAP)	35.2%	38.3%	41.4%	45.1%	40.3%	49.4%	49.7%	48.3%	48.5%	49.0%	46.8%	47.4%	47.3%	46.7%	47.1%
End Market															
Automotive	516.4	555.9	575.6	641.0	2,288.9	714.5	784.0	873.6	988.7	3,360.8	986.0	1,061.8	1,157.8	1,114.3	4,319.9
Industrial	367.3	433.1	479.8	522.0	1,802.2	543.2	581.8	613.2	552.4	2,290.6	556.2	609.3	615.8	497.1	2,278.4
Others	597.9	680.9	686.8	683.0	2,648.6	687.3	719.2	705.8	562.6	2,674.9	417.5	423.2	407.1	406.8	1,654.6
Total	1,481.6	1,669.9	1,742.2	1,846.0	6,739.7	1,945.0	2,085.0	2,192.6	2,103.7	8,326.3	1,959.7	2,094.3	2,180.7	2,018.2	8,252.9
Market Percent															
Automotive	34.9%	33.3%	33.0%	34.7%	34.0%	36.7%	37.6%	39.8%	47.0%	40.4%	50.3%	50.7%	53.1%	55.2%	52.3%
Industrial	24.8%	25.9%	27.5%	28.3%	26.7%	27.9%	27.9%	28.0%	26.3%	27.5%	28.4%	29.1%	28.2%	24.6%	27.6%
Others	40.4%	40.8%	39.4%	37.0%	39.3%	35.3%	34.5%	32.2%	26.7%	32.1%	21.3%	20.2%	18.7%	20.2%	20.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Market Growth															
Automotive		7.6%	3.5%	11.4%		11.5%	9.7%	11.4%	13.2%	46.8%	-0.3%	7.7%	9.0%	-3.8%	28.5%
Industrial		17.9%	10.8%	8.8%		4.1%	7.1%	5.4%	-9.9%	27.1%	0.7%	9.5%	1.1%	-19.3%	-0.5%
Others		13.9%	0.9%	-0.6%		0.6%	4.6%	-1.9%	-20.3%	1.0%	-25.8%	1.4%	-3.8%	-0.1%	-38.1%
Total		12.7%	4.3%	6.0%		5.4%	7.2%	5.2%	-4.1%	23.5%	-6.8%	6.9%	4.1%	-7.5%	-0.9%
Regional Percent															
Americas	12%	14%	14%	15%		16%	17%	19%	18%		20%	18%	20%	19%	
Asia Pacific	63%	63%	64%	61%		59%	58%	56%	54%		51%	52%	52%	53%	
Europe	18%	17%	16%	17%		18%	17%	17%	20%		21%	22%	21%	21%	
Japan	6%	7%	7%	7%		7%	7%	7%	8%		8%	8%	7%	7%	
Channel Percent															
Direct	37%	34%	34%	38%	36%	41%	41%	42%	45%	42%	47%	46%	48%	50%	48%
Distribution	63%	66%	66%	62%	64%	59%	59%	58%	55%	58%	53%	54%	52%	50%	52%

LEGEND

			Grade
+++	exceeded the high-end of the range	A	all +++
++	above consensus, within the high-end of the range	B	all +
+	slightly above consensus	C	all o/+
o	met consensus	D	mixed -/o/+
-	slightly below consensus	E	all o/-
--	missed consensus, within the low-end of the range	F	all -
---	missed the low-end of the range		

—Dan K. Scovel
Semiconductor Analyst

Tokeneke Research LLC
Rowayton, CT 06853
dscovel@tokenekeresearch.com
www.tokenekeresearch.com
203-554-4621

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