688396 \

—— IDM

IDM

IDM

+

IDM
8

2020-2022 65.6
73.8 81.4 7.4 8.7 10.2
83.9% 17.7% 18.2% 0.61 0.71 0.84
PE 88 75 63x “ ”
1 2
3

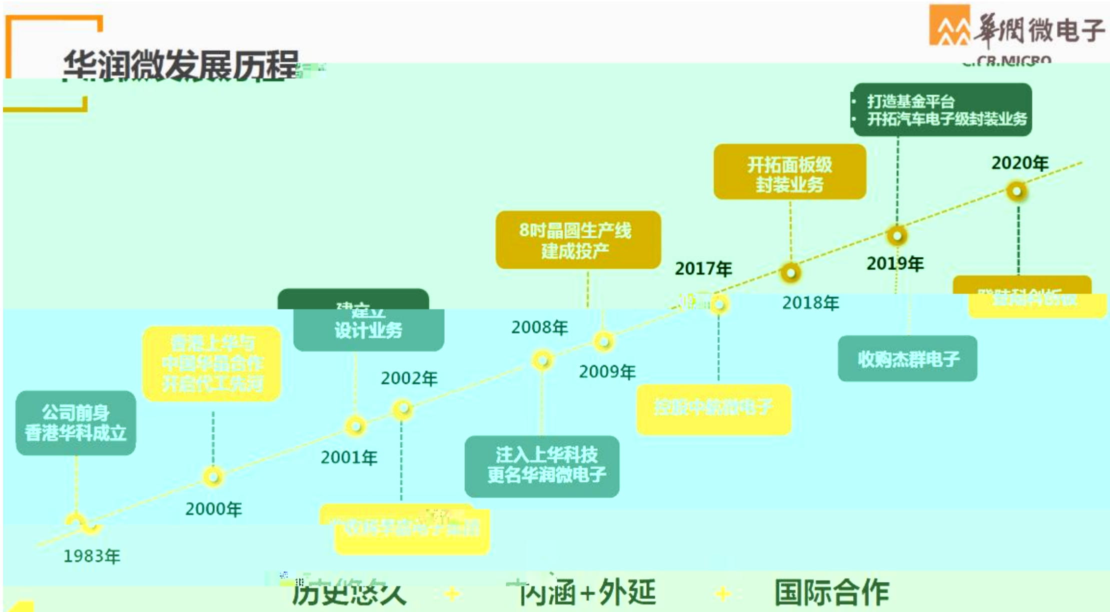
1. IDM

IDM

1.1.

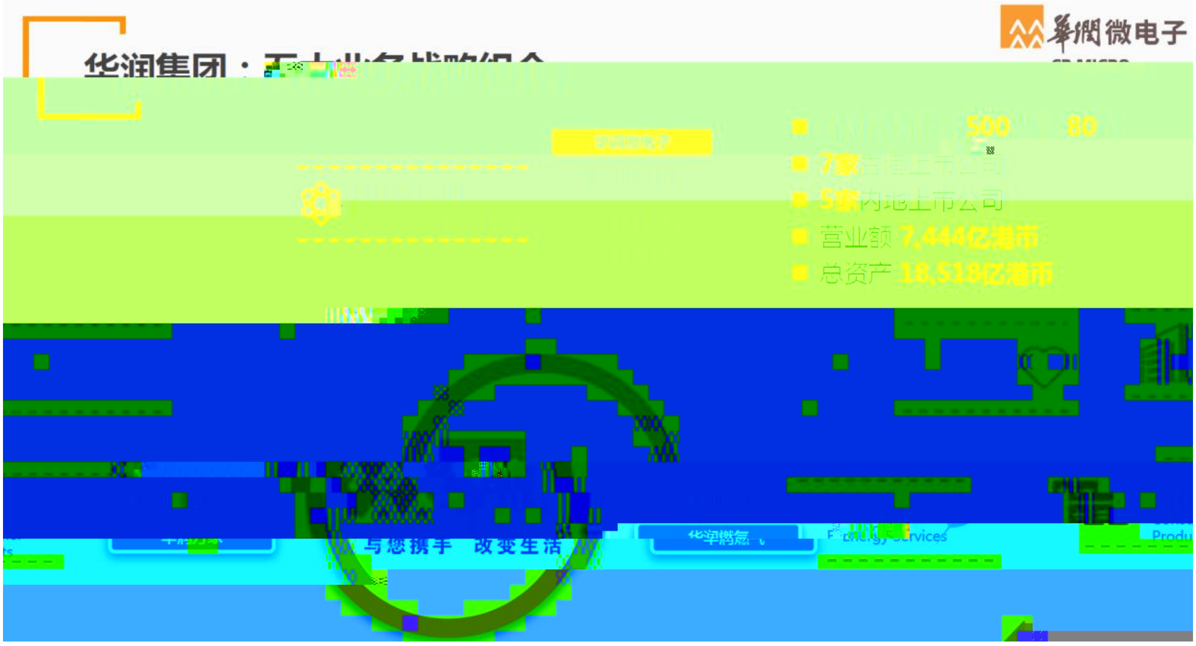
4 40 1983 4

1



14,000 2019 “ 500 ”
80

2

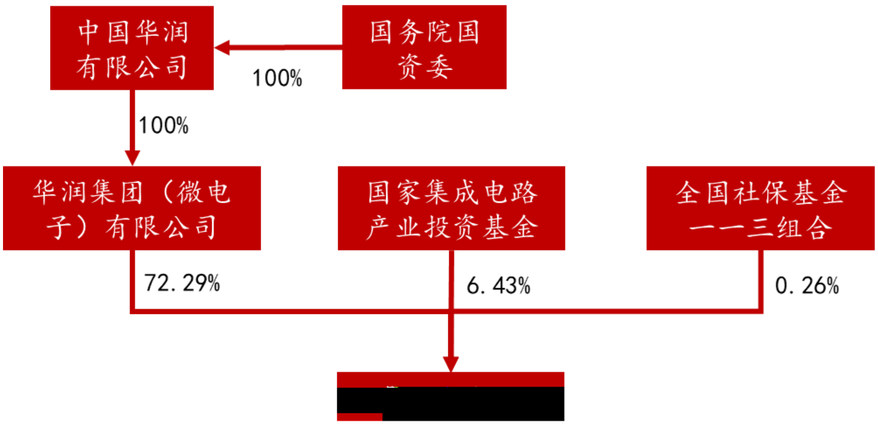


IPO

“ ” 7812.5

IPO

3



80

SK

1/6

4

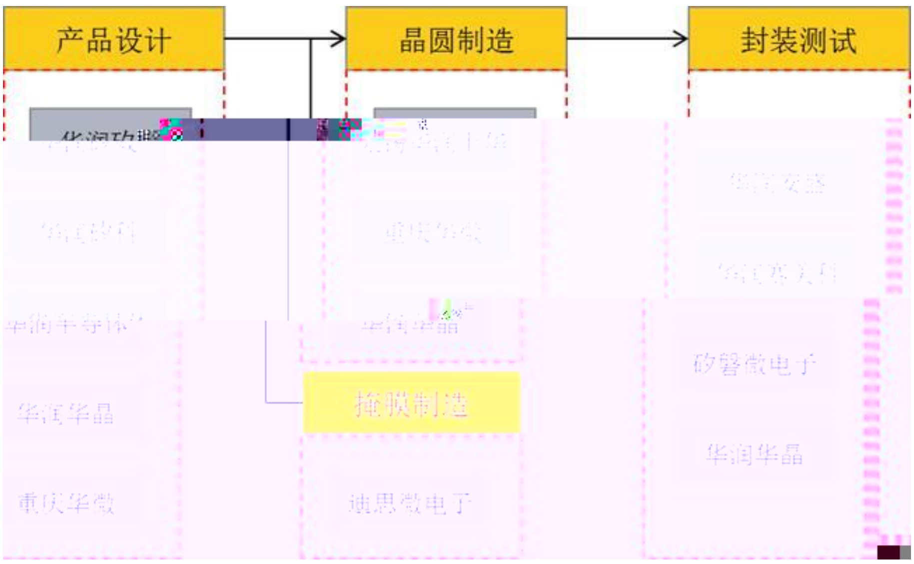
	1 SK 2 3
	1 2
	1 2
MEMS	1 2 3

eeworld

1.2.

IDM “ - - ”

5

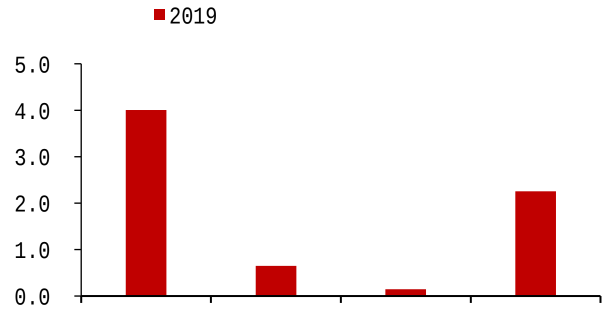


IDM IDM Fabless+ IDM “ Fabless+ ”

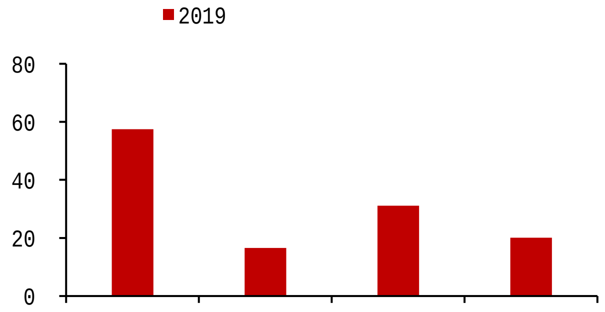
IDM IHS Markit

IDM

8 IDM



9 IDM



1.3.

7%

3000

40%

2019 3268 1401

10

11

BCD

BCD

Bipolar CMOS DMOS IC

BCD 5700V BCD

BCD SOI BCD BCD

0.11 m

MEMS

MEMS **CMOS** **MEMS**

MEMS

MEMS

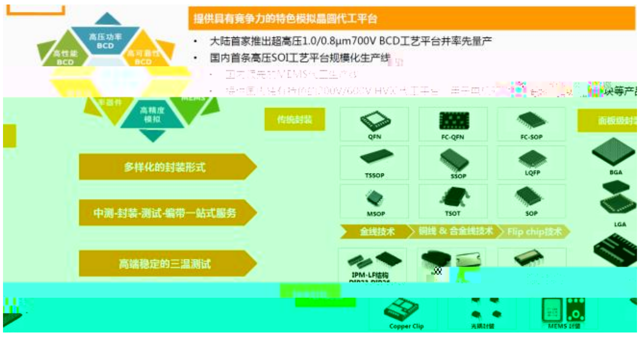
IPM

TO-220 TO-3P TO247 DPAK PDFN PQFN

IPM

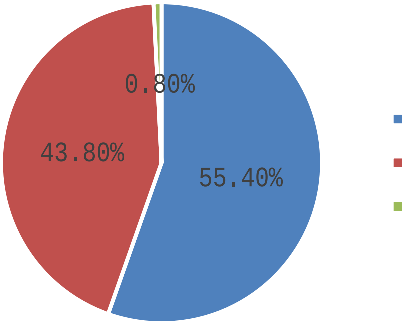
12

13



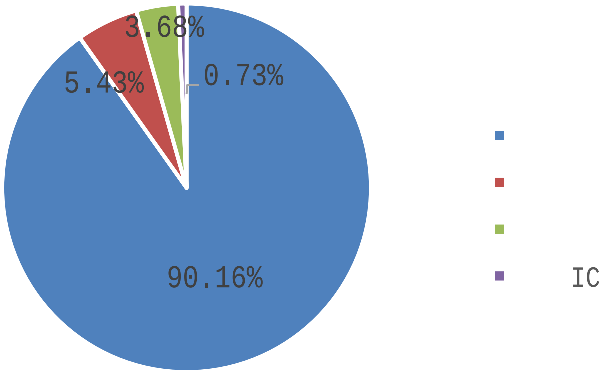
55% 44% 2019

14



15

16



MOSFET

IDM

-100V 1500V

MOSFET MOSFET

VDMOS MOS MOS

17 MOSFET

	30V-900V	40V-900V	-60V-150V	**-100V-1500V**
	MOS MOS MOS MOS MOS	MOS MOS	MOS MOS MOS P MOS	**MOS**

FRD

IC BCD

BCD

IC IC IC

IC LED IC IC

+

MEMS

1 MEMS

2

ESD

UL

3

19

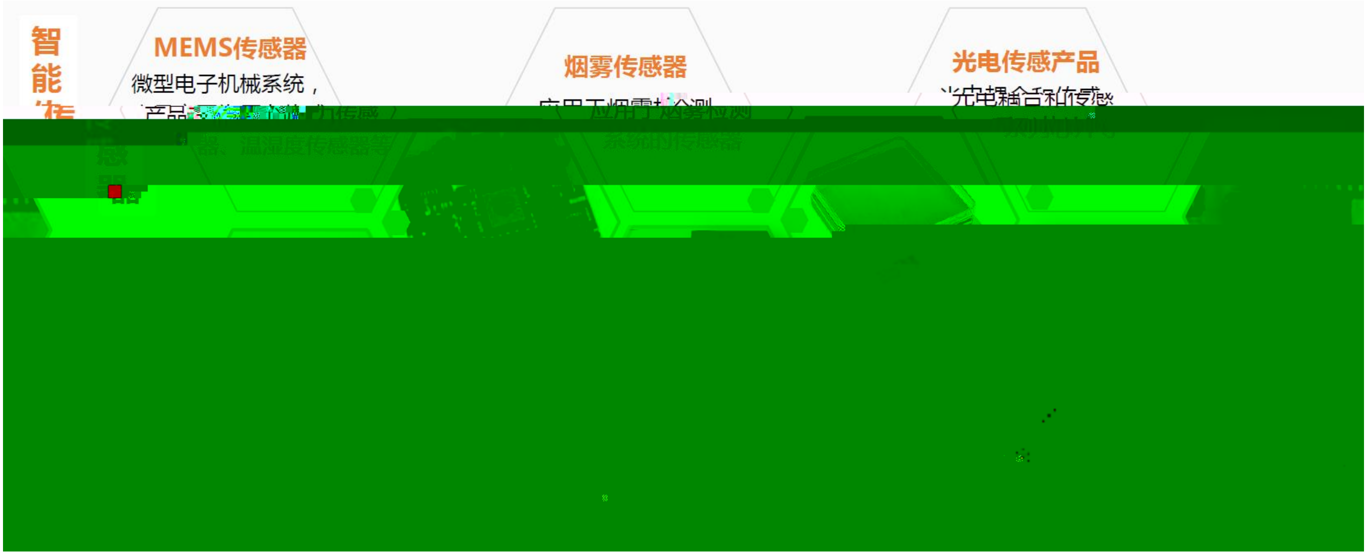
	MEMS		

MCU MCU MCU

OTP MTP FlashCMOS 4 8

16 32 CPU

20 “ + ”



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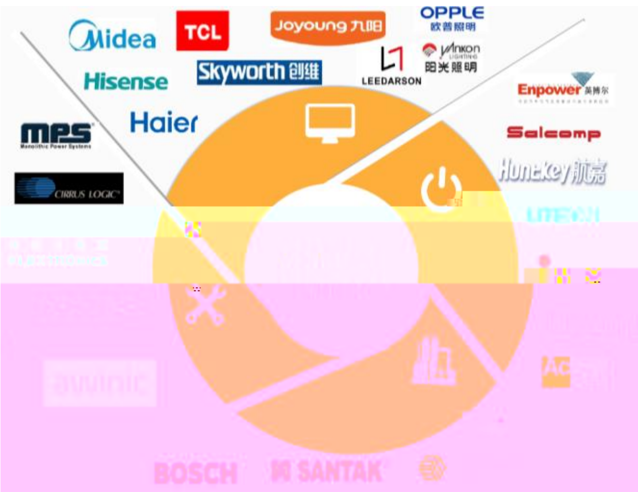
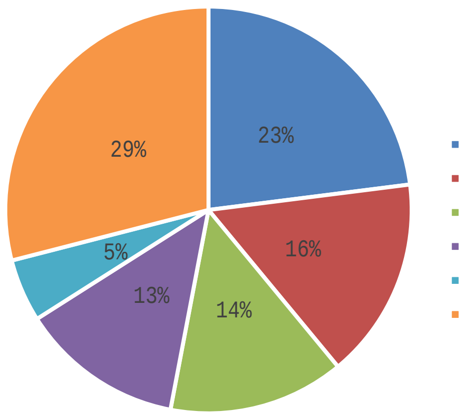


22

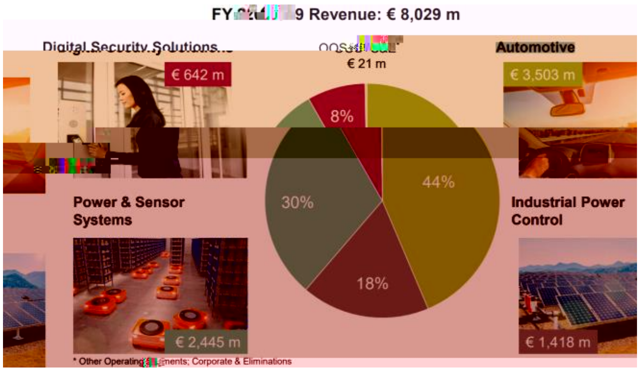


“ ”

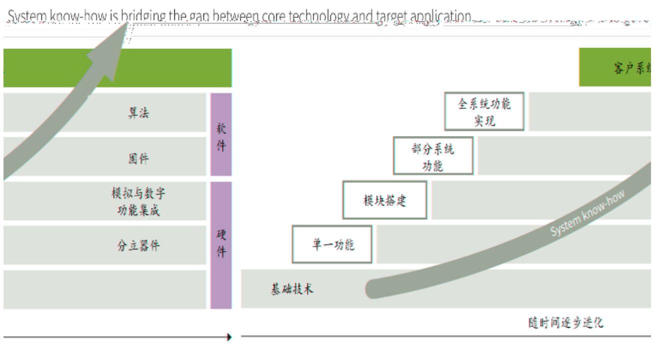
IDM

IDM “ ” “ ”

23



24 “ ”



2. +

IDM

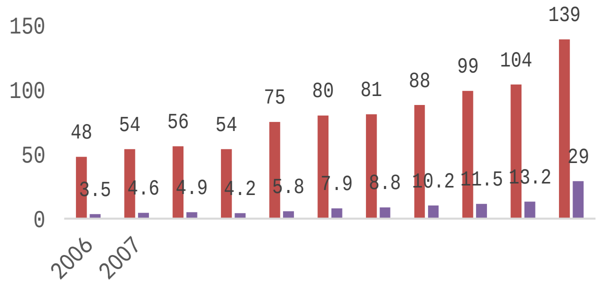
8

2.1.

2015

950

25 IC



IC Insight

26

2.2.

1

400

IC

IHS Markit 2018 391 2021 441 CAGR 4.1% MOSFET IGBT 5

27

IHS Markit

35%

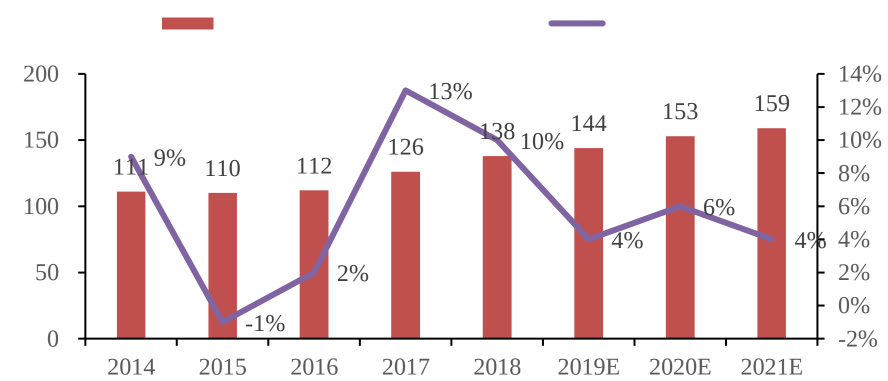
2018

138 9.5% 35%

2021 159

4.8%

28



IHS Markit

IGBT IHS Markit

IC MOSFET IGBT

61% 20% 14% IGBT

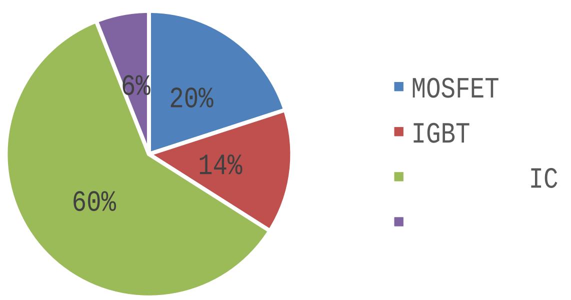
IGBT

IGBT

MOSFET

IC MOSFET IGBT

29



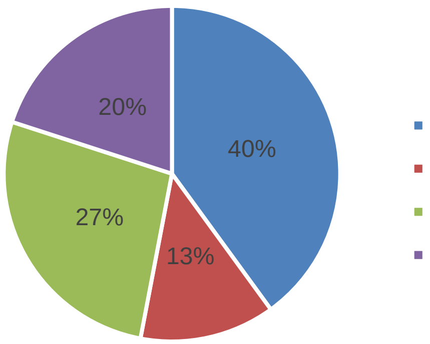
IHS Markit

ASP

Gartner 2016 40% 13%
27%

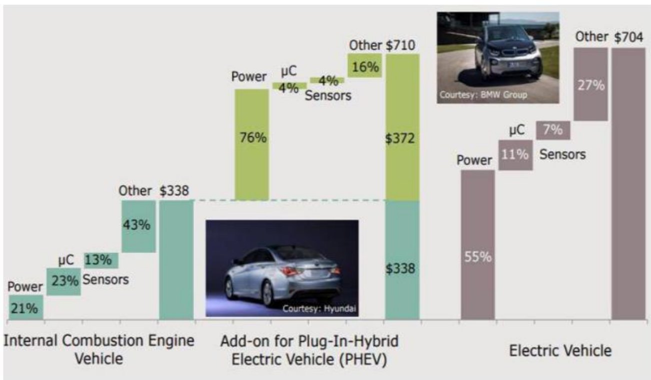
strategic Aanalysis
338 704 108%
21%
55% 71 387
5

30



Gartner 2016

31

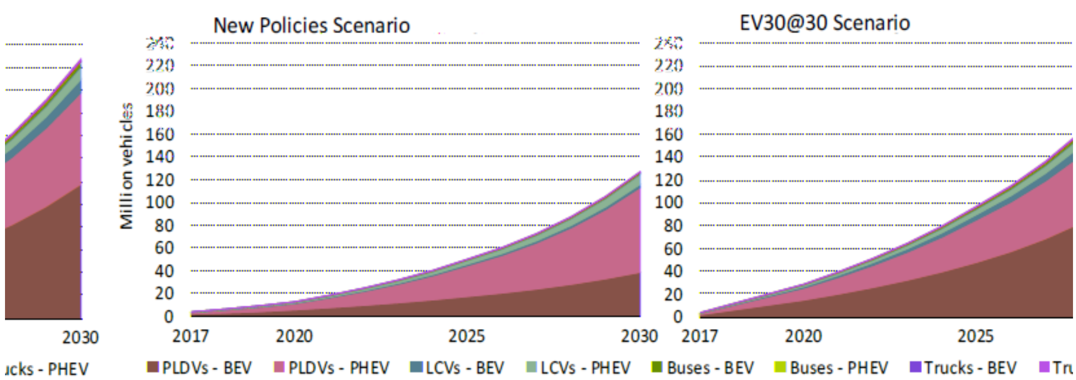


StrategicAnalysis

50

IEA
2020
310 1300 24% 2030 12500
50

32



IEA

2 MEMS

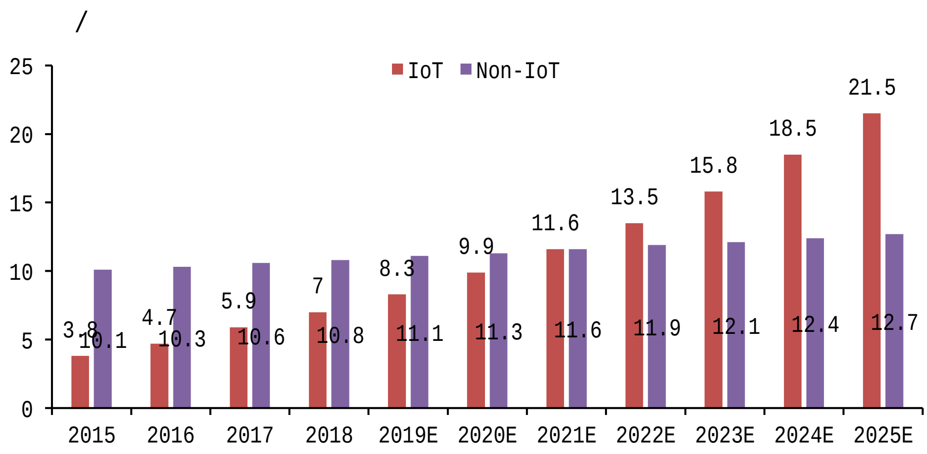
IoT Analytics 2020

4570 CAGR 28.5%

100 2025 220

MEMS

33



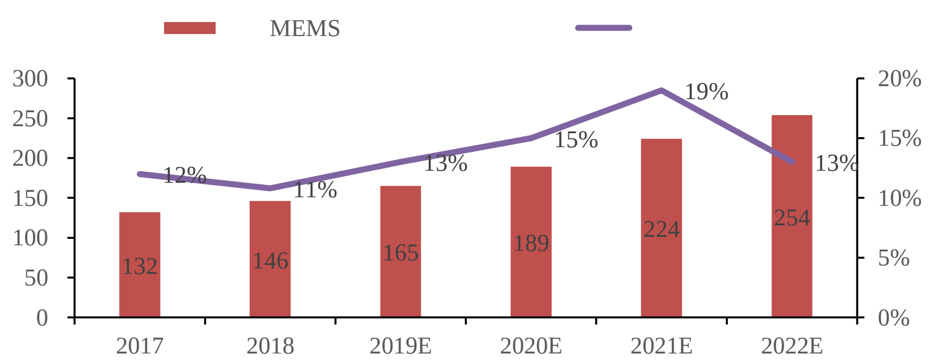
IoT Analytics

MEMS 146

MEMS Yole

Development 2018-2022 MEMS 14.85%

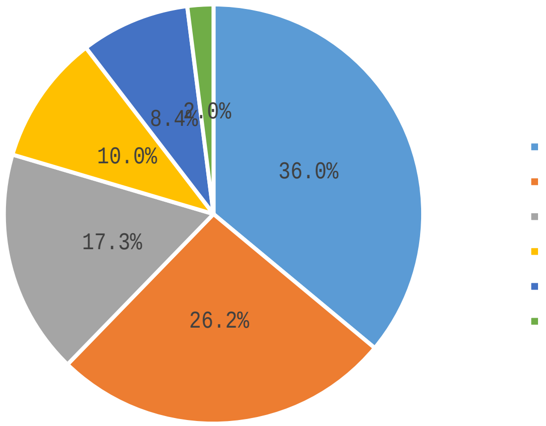
34 MEMS



Yole

30% BIS Research 36%
26.2% 17.2% 10.21%
8.35%

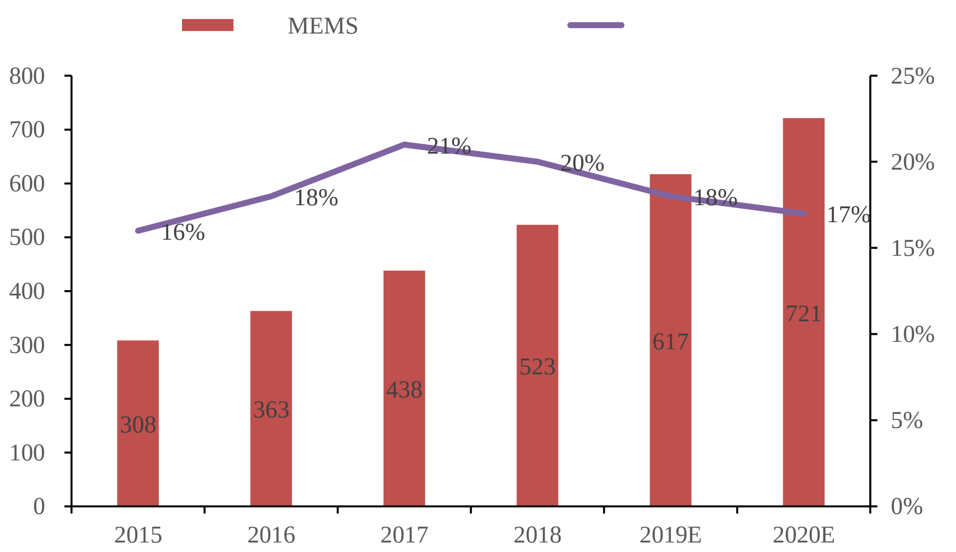
35



BIS Research

MEMS **60%**
2018 MEMS 523 19.5% 2018-2020
17.41%

36 MEMS



MEMS
IDM MEMS
MEMS
MEMS
Yole Development 2017 MEMS IDM

3 MCU

MCU MCU Micro Control Unit

CPU RAM ROM

I/O

MCU

MCU 4 8 16

32

MCU **240** MCU

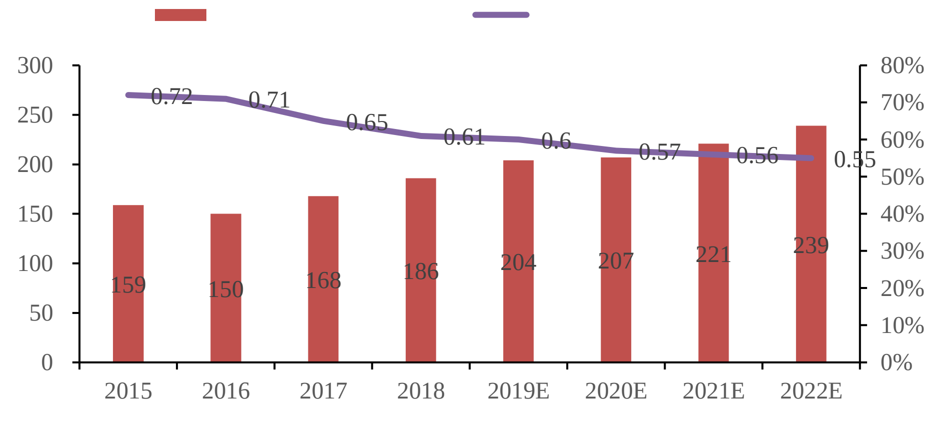
MCU IC Insights

2018 MCU 186.2 3 11.4%

2018-2022 6.42% 2022 MCU

240

37 MCU



IC Insights

MCU **40**

MCU IHS Markit 2017 MCU

46 5 9.5%

38

60

62 69

PEPINNOVATION

40 IDM

IDM	
5 6 8 230 8 8 73 3 12 8 /	
4 100 6 4 /	8 MOSFET IGBT

8 8

8 BCD 8 MEMS

BCD MEMS 16,000 23.11

2.75 2018 9

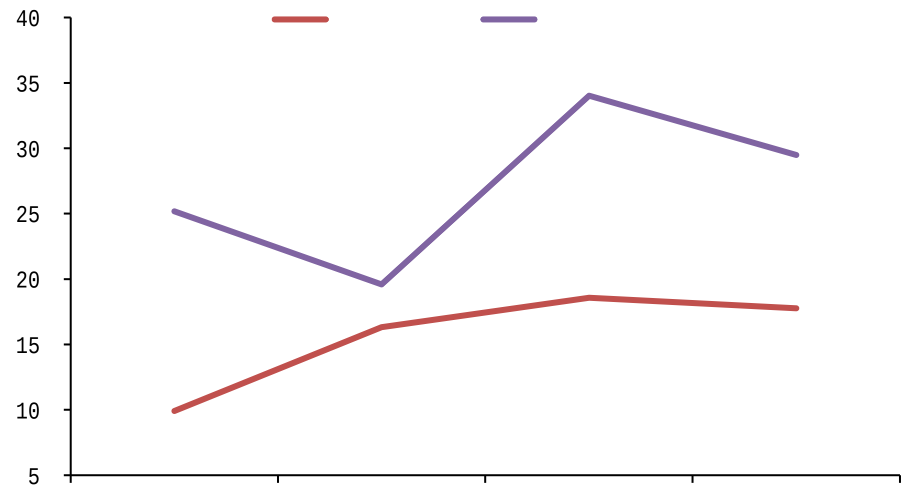
3.

3.1.

20% 30%

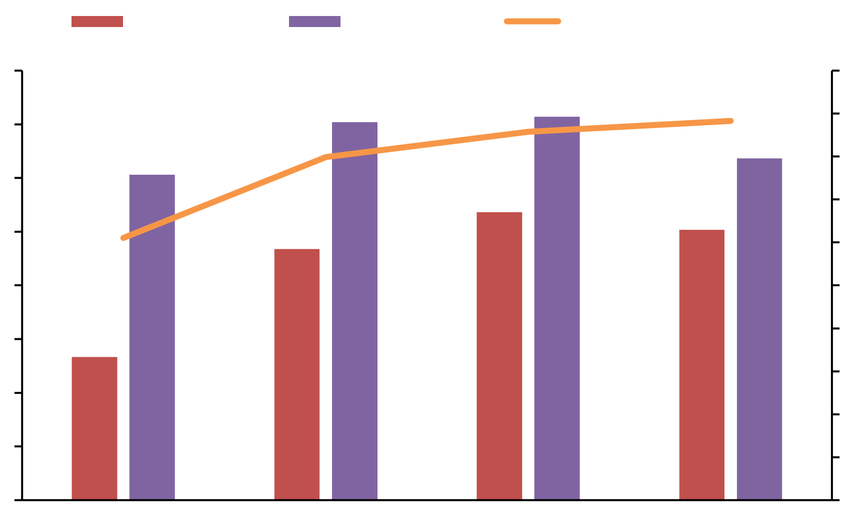
MCU 30% MEMS 40%

41 %



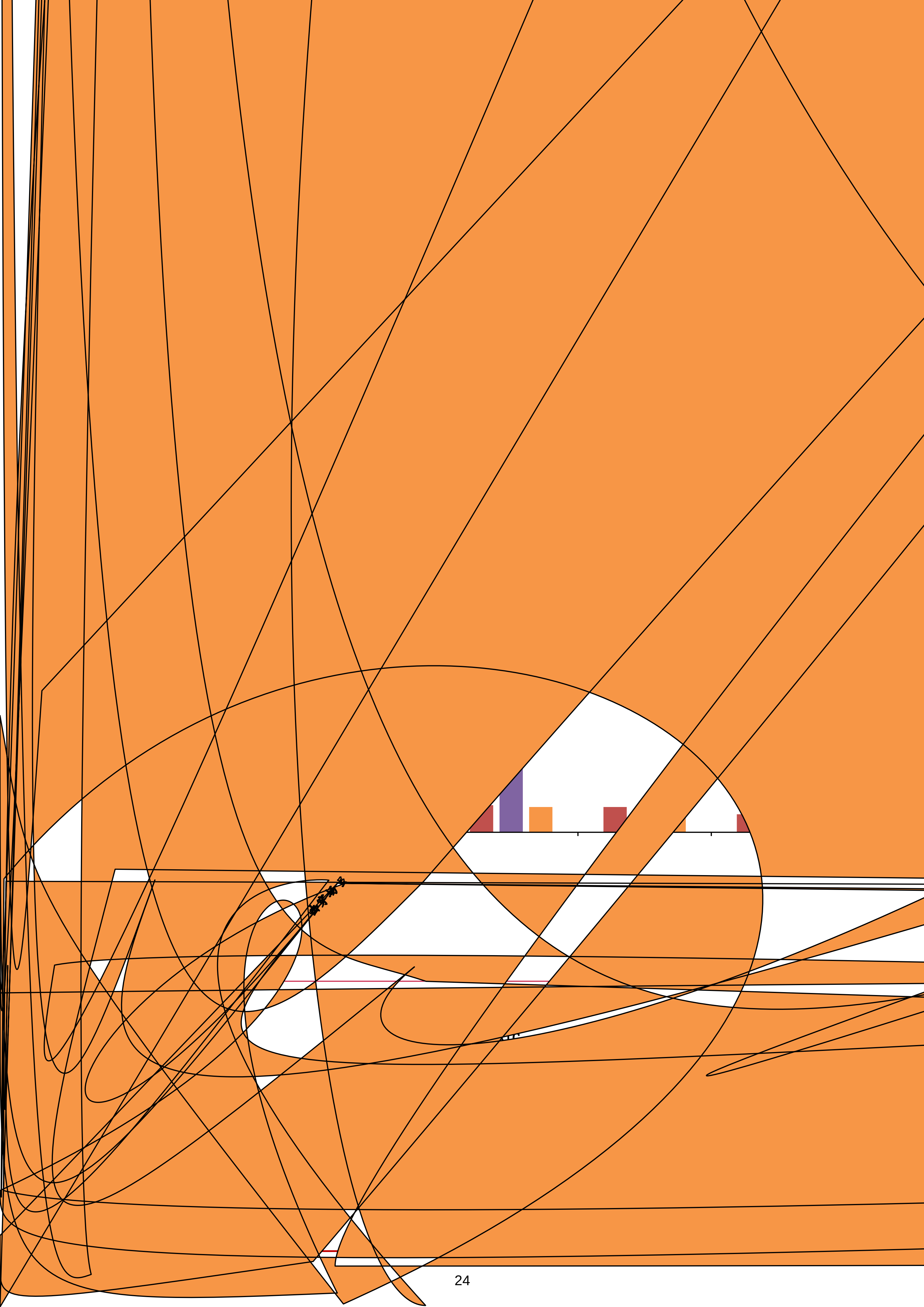
2016 30%
2019 44%

42

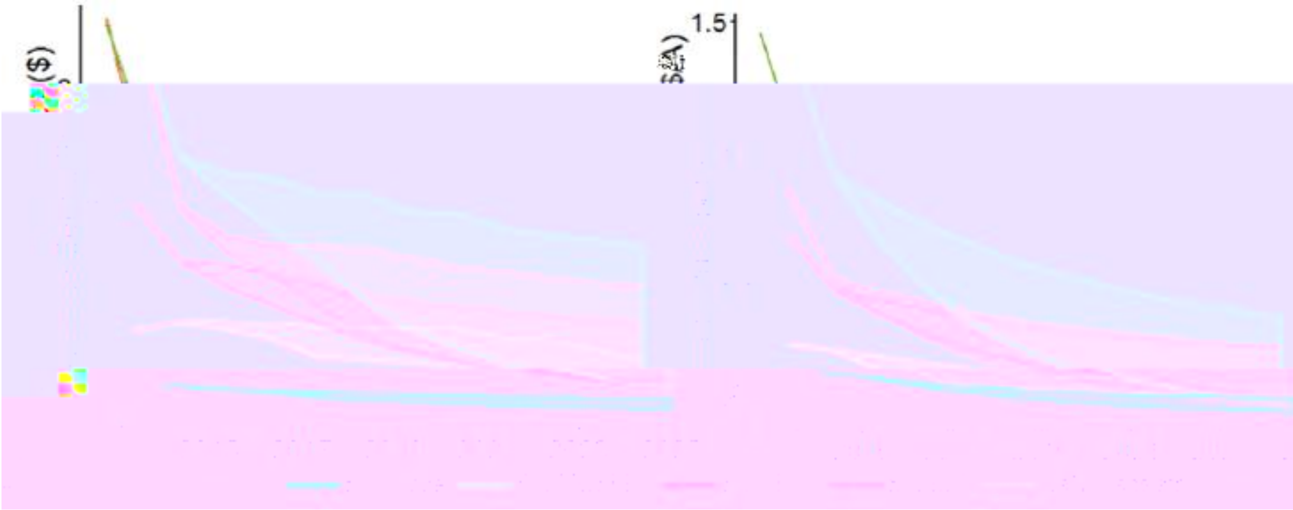


3.2.

IGBT



44 SiC



IHS(2016)

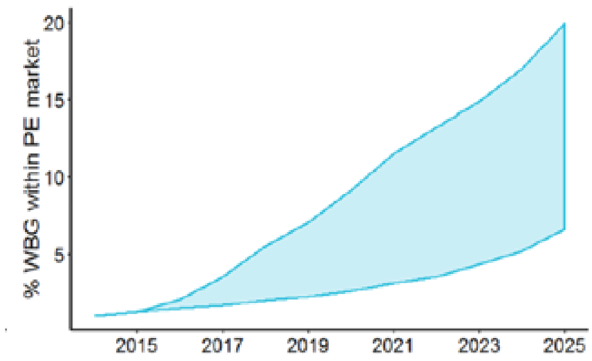
2025

12 50

45 SiC

IHS(2016)

46



IHS(2016)

4.

1

IDM 2

3 8

2020-2022 65.6 73.8 81.4

7.4 8.7 10.2 2020-2022

0.61 0.71 0.84 PE 88 75 63

47

/	2018	2019	2020E	2021E	2022E
	3,572.00	3,184.00	3502.40	3782.59	4009.55
	1.50%	-11.00%	10.00%	8.00%	6%
	18.57%	17.76%	18.50%	18.50%	18.50%
	2,683.00	2,516.00	3,019.20	3,562.66	4,097.05
	14.70%	-6.20%	20.00%	18.00%	15.00%
	34.02%	29.48%	33.50%	34.00%	34.50%
	15.00	44.00	35.00	35.00	35.00
	-22%	193.00%	-20%	0%	0%
	28.46%	10.04%	15.00%	15.00%	15.00%
	6,271.0	**5,743.0**	**6,556.54**	**7,380.04**	**8,141.66**
	6.72%	-8.42%	14.17%	12.56%	10.32%
	25.20%	22.84%	25.39%	25.97%	26.54%

IDM

2021 80

“ ”

48

		EPS			PE		
		2020E	2021E	2022E	2020	2021E	2022E
	247	0.17	0.22	0.26	111	86	73
	345	1.10	1.52	2.13	195	142	101
	132	0.50	0.63	0.79	54	43	34
	148	0.63	0.80	1.04	50	39	30
					103	**77**	**60**

wind 2020 8 12

5.

1

2

3

49

:	2018A	2019A	2020E	2021E	2022E
	1538	1931	3110		

:	2018A	2019A	2020E	2021E	2022E

	6	20%	
	6	10%	
	6	5%	
	6		10% 10%
	6	10%	
	6		
	6		
	6		

“ ”

/

/

/

8 9

0510-82833337

0510-82833217

1198 3704 3705 3706

021-61649996