

/

IDM

2020

2

IDM

9

IDM

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$\frac{1}{2}$ ''

IDM

1.	IDM	5
1.1.	IDM	5
1.2.		7
1.3.		9
1.4.		12
2.		13
2.1.		13
2.2.	MOSFET	15
2.2.1.		15
2.2.2.		17
2.3.		19
2.4.	MOSFET	23
3.		24
3.1.	15	24
3.2.		24
4.		27
4.1.		27
4.2.		30

1	IDM	5
2		6
3	2018	6
4		7
5		7
6		8
7		9
8		9
9		

2

排名	企业	2018年销售额(亿元)	业务模式
1	深圳市海思半导体有限公司	509	设计
2	紫光展锐科技有限公司	239	设计
3	南通华达微电子有限公司	225	封测
4	中芯国际集成电路制造有限公司		代工
5	北京矽成(集团)有限公司	107	设计
6	上海华虹(集团)有限公司	97	代工
7	天水华天科技股份有限公司	65	封测
8	中芯国际集成电路制造有限公司	63	设计
9	华大半导体有限公司		IDM
10	发行人		设计

2018 57%
43%
75%
90%

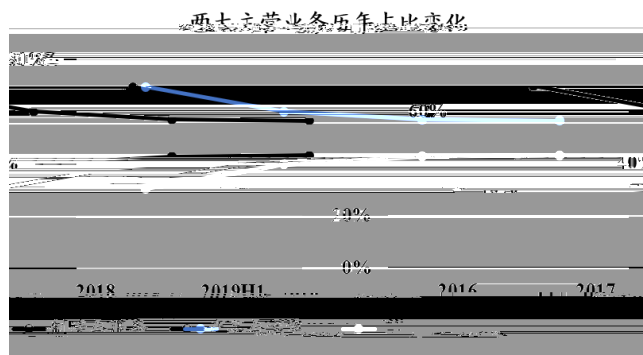
3 2018



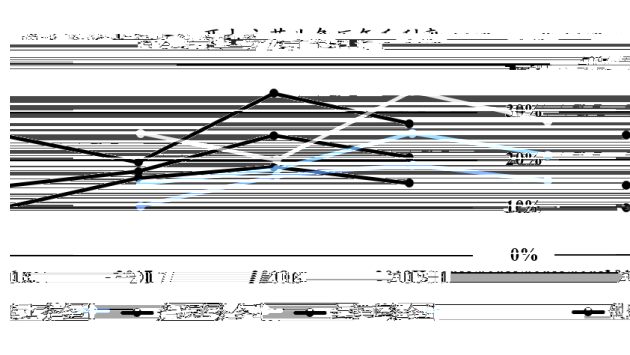
CMOS/ANALOG BICMOS RF/Mixed-Signal CMOS
BCD MEMS
0.8μm/1.0μm UHV BCD
DMOS DMOS IGBT BJT

IGBT 3300 V-6500 V

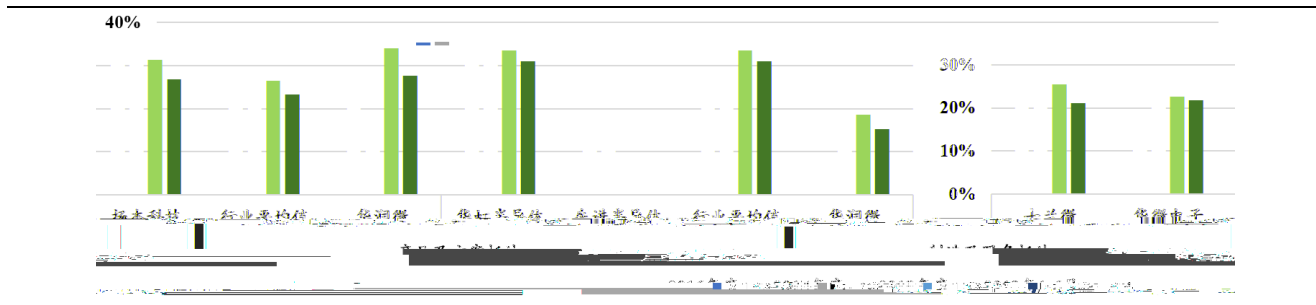
10



11

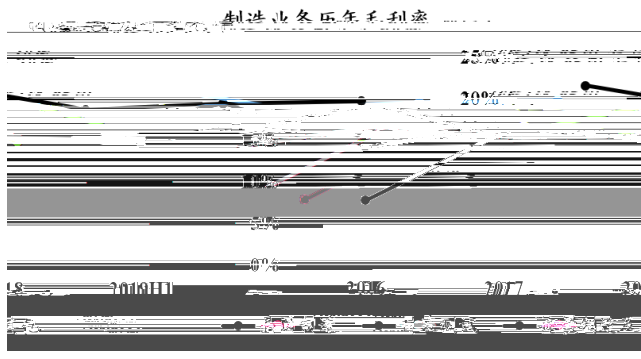


12

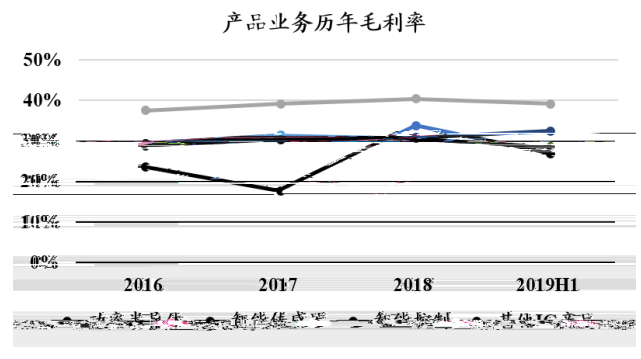


77%

15



16



8

6

6

8

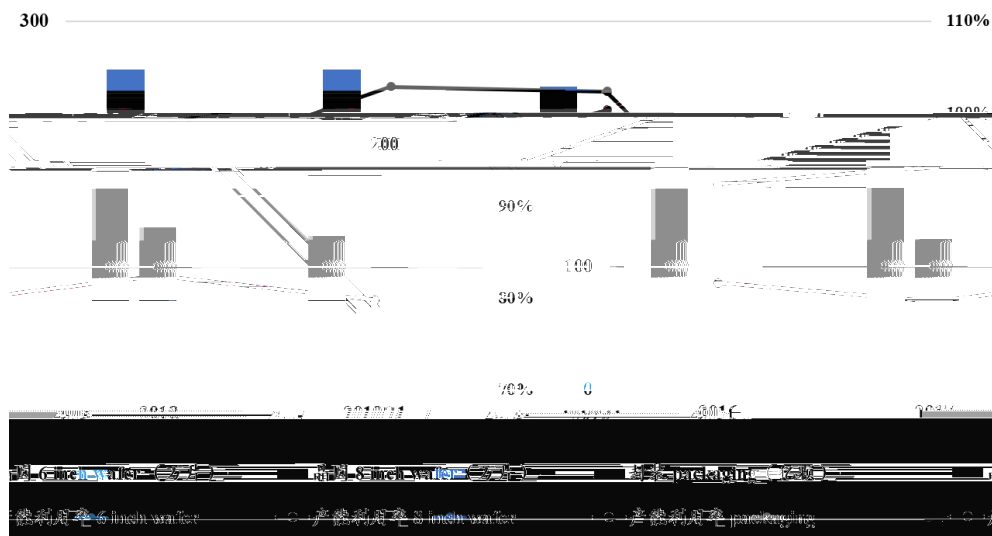
2018

8

6

17

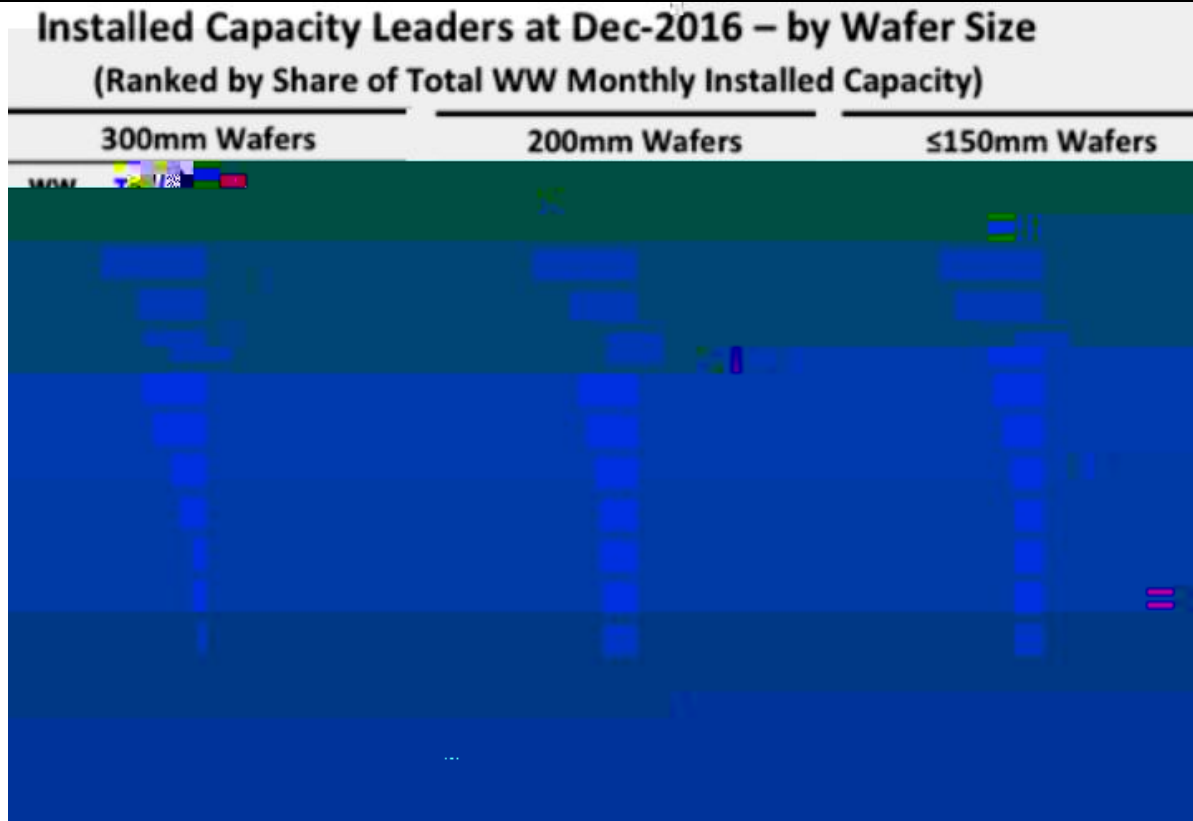
公司历年全年产能



22.2% MOSFET

2.2.2.

27



IC Insights

12 8

12 300 mm wafer

Micron SK Hynix Toshiba

TSMC Intel Global Foundry UMC SMIC 6 150

mm wafer

6 IDM STMicro

35% 2018 8

TSMC SMIC

12 8

IDM Infineon OnSemi Renesas 12

IDM CRM Silan 8

12 2.5

12

8

wafer

29 12

Dieginn

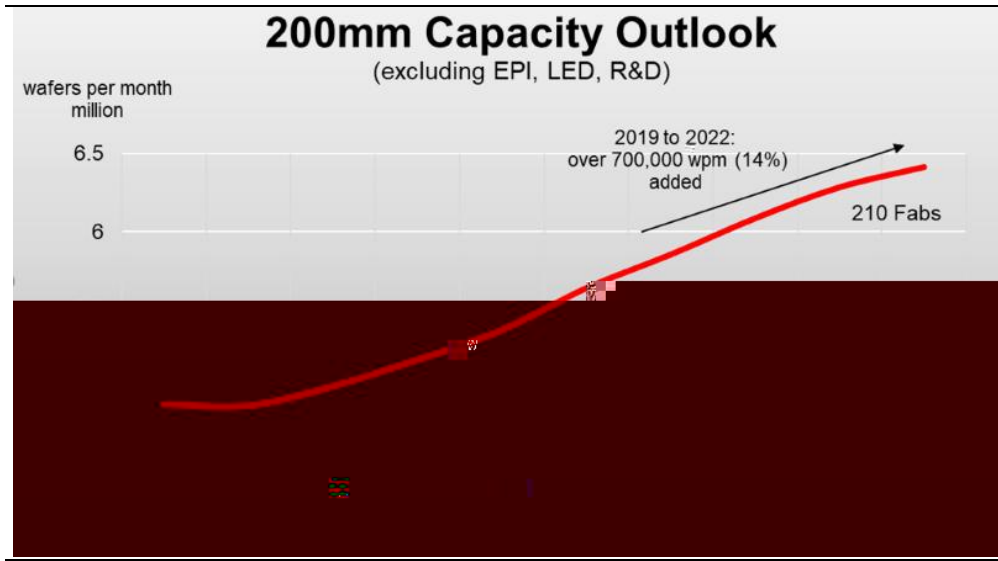
300mm GDPW: 142

200mm GDPW: 57

8		CAGR	2.89%			
SEMI	8	200 mm Wafer		2019	580	/
		IDM	8	2022		650
/		2.89%				
3.56%	8					

30

8



SEMI

IDM

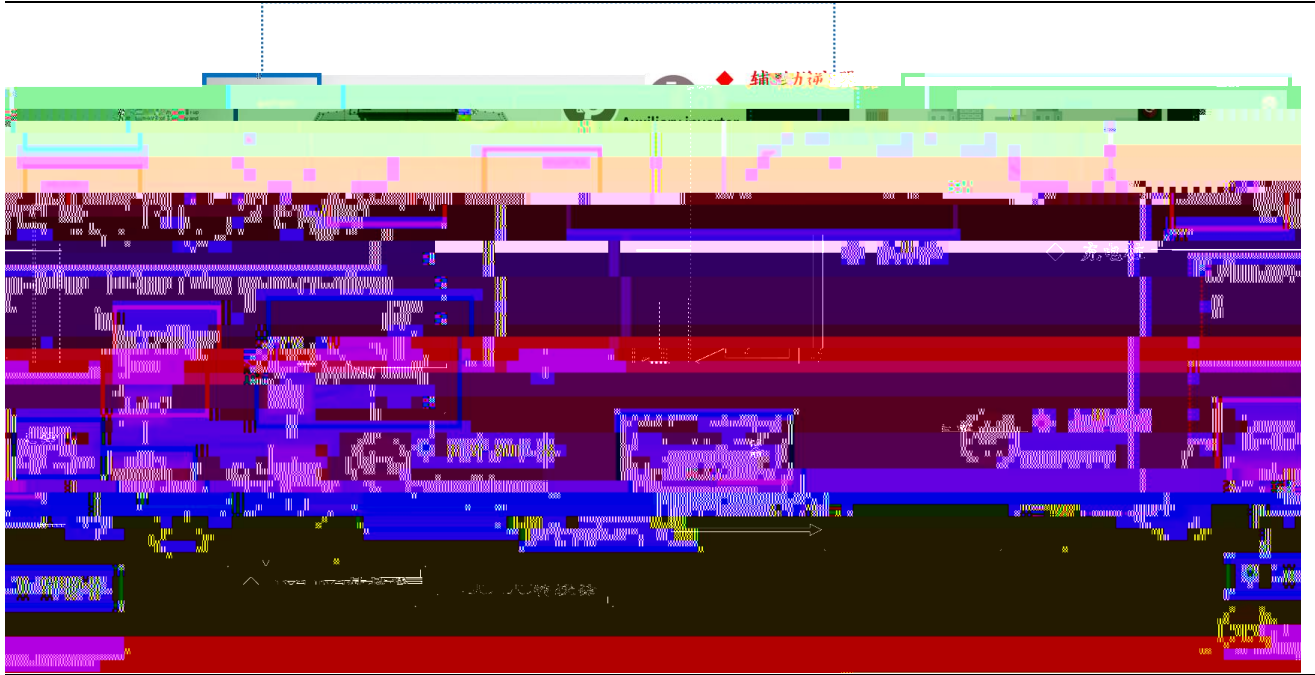
Infineon

2019

22%

30%

15%



Infineon Toshiba

DC-AC		Inverter	
SiC MOSFET		Model S	IGBT
IGBT	Model 3	24	84
		SiC MOSFET	

converter	DC-DC	LV-HV	DC-DC	DC-DC
voltage				
Model S		400 V		650 V
	LV-HV	DC-DC	400 V	650 V
		HV-LV	DC-DC	400 V
	MOSFET	DC-DC		

AC-DC DC-DC
MOSFET IGBT

36

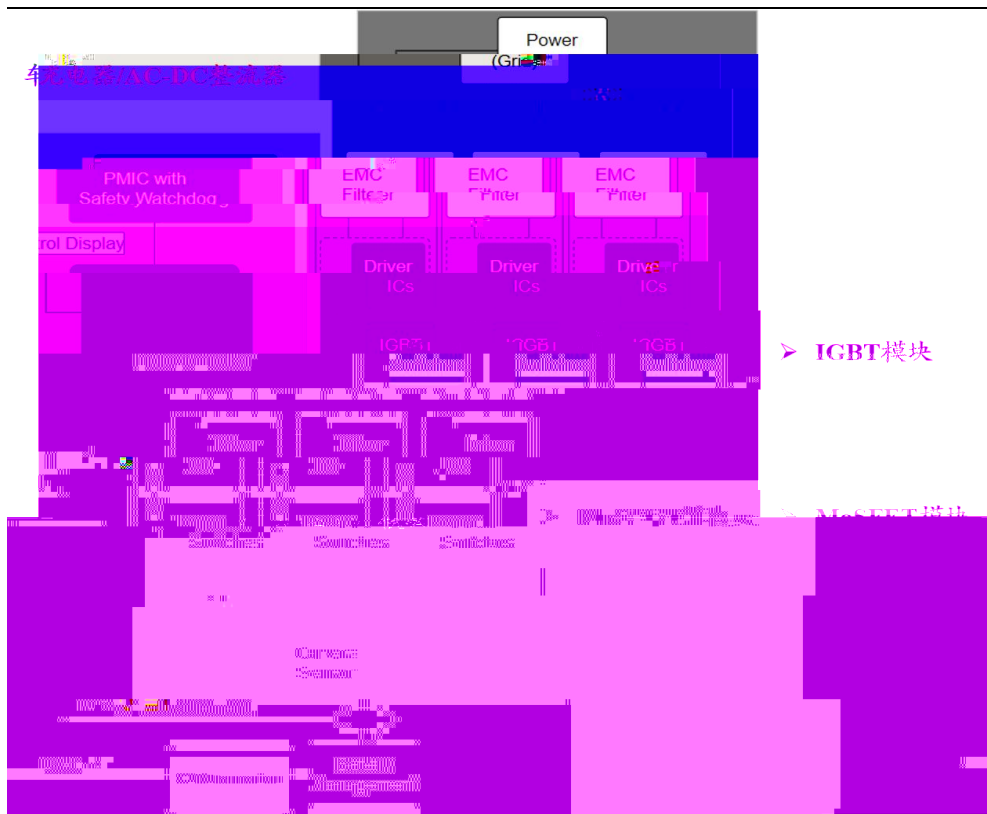


Infineon

OBC On-Board Charger IGBT MOSFET

IGBT MOSFET

37

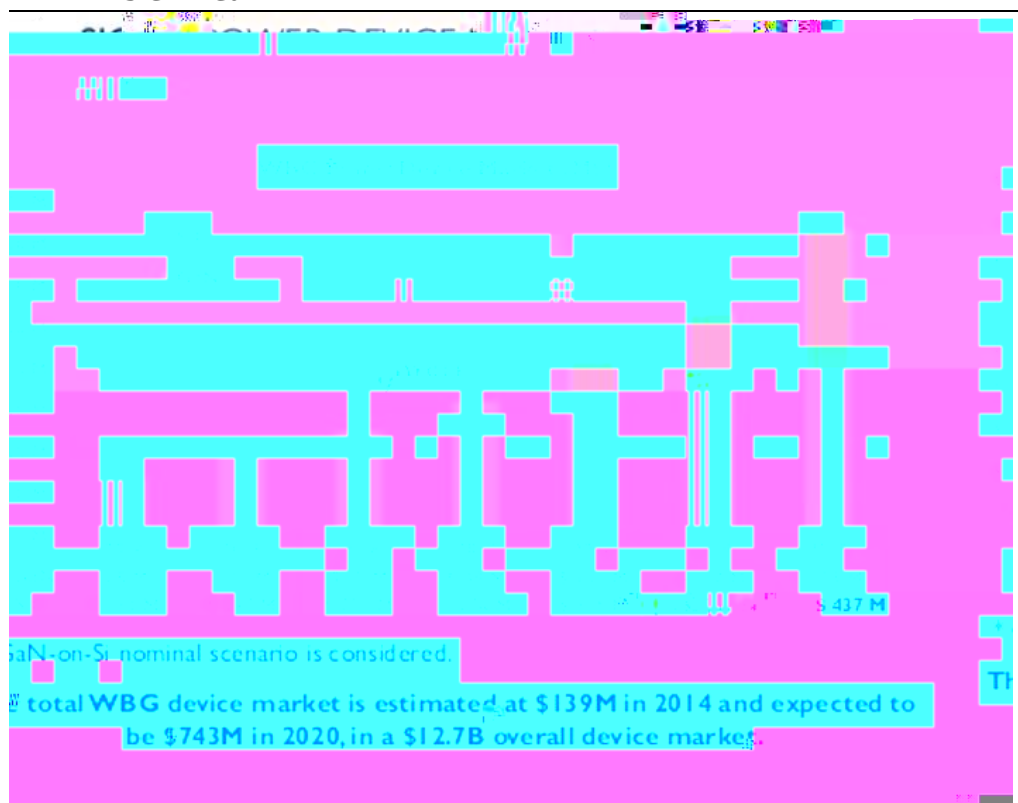


Infineon

3.

3.1. 15

41 SiC GaN



Yole

SiC-MOSFET

4.

4.1.

4.2.

				2020	2022		64.4
74.5	82.4	EPS	0.38	0.50	0.60	PE	90.6 69.0 57.7

IDM

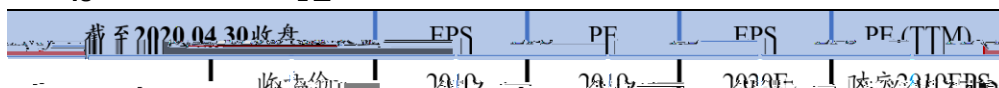
IDM

Fabless

A		IDM				PE
107.51		Fabless				PE
142.56						
120	PE	2020		45.6		

48

PE

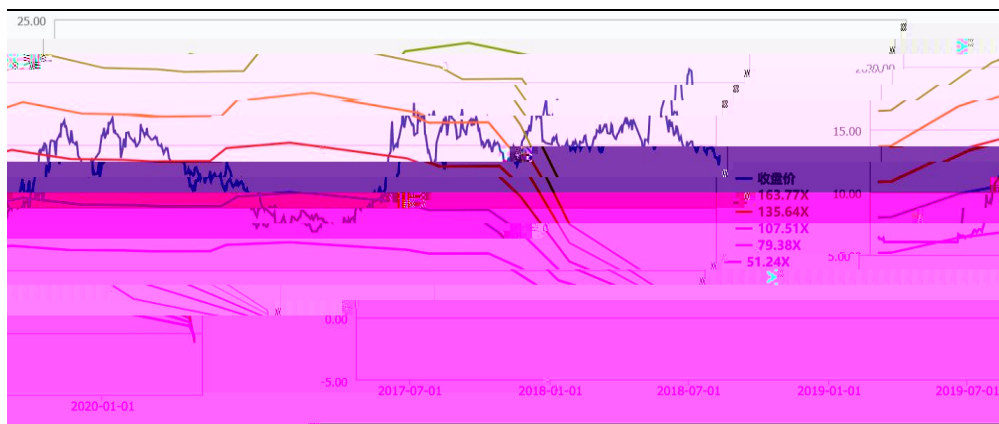


Wind

49

IDM

PE Band



Wind

	2018A	2019E	2020E	2021E		2018A	2019E		
	1,931	2,775	3,998	5,290		512	516		
	508	508	508	508		6	0	0	0
	1,006	1,171	1,332	1,477		709	681	654	610
	594	1,214	1,200	1,207		69	30	30	30
	5,092	6,822	8,381	9,946		0	-4	-4	-5
	0	0	0	0		-715	-632	-36	-46
	82	82	82	82		-5			

