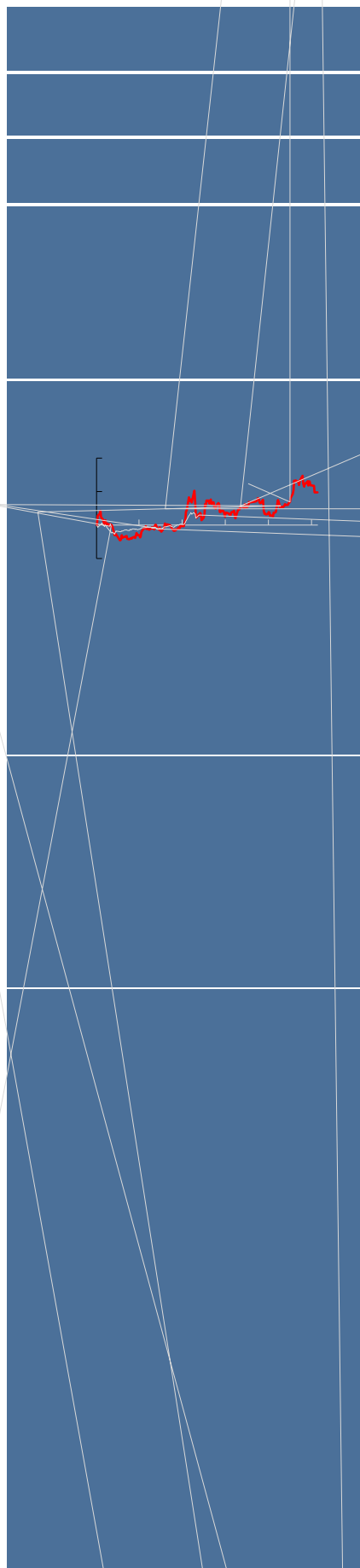


国内功率 IDM 龙头，国产替代稳步前行



+ IDM

2020

48.89

18.32%

6.87

2019

1.5

2020

+

8

IC

IDM

5G

MOSFET

-100V
Trench-

1500V
FS

600V-6500V IGBT

3 6

2 8

6

247

/ 8

133

/

12

199

62

69

2018

8

SiC
20

2025

GaN

29%

Yole
2024

7
SiC

6

1200V

650V

SiC

1000

/

SiC

SiC MOSFET

2021

IDM

GaN

GaN

2021

IDM

MOSFET

IC MCU

5G

2020-2022

69.30

85.27

101.00

9.67

13.39

15.66

EPS 0.80

0.99

1.16

PS

12.61/10.25/8.65

PE

81.30/65.25/55.80

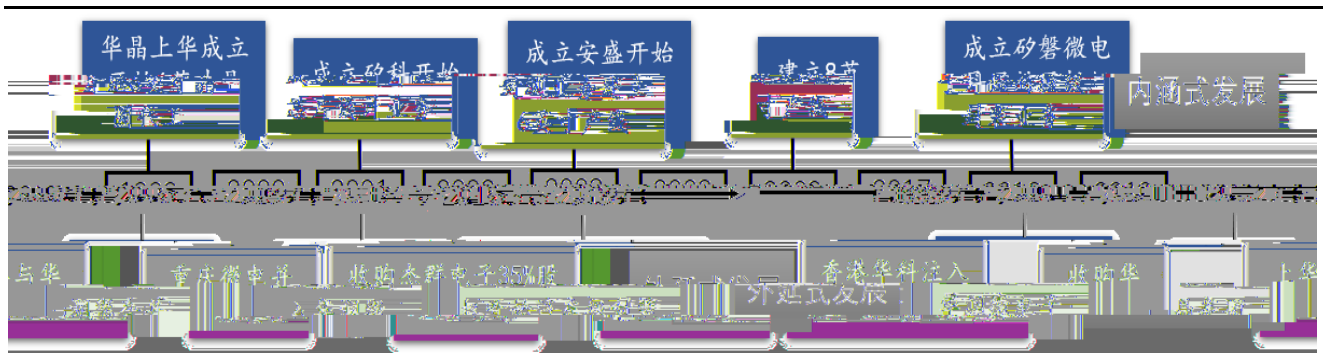


	2018	2019	2020E	2021E	2022E
	6,270.80	5,742.78	6,930.34	8,526.82	10,099.92
(%)	6.73%	-8.42%	20.68%	23.04%	18.45%
	429.44	400.76	967.38	1,339.22	1,566.08
(%)	511.02%	-6.68%	141.39%	38.44%	16.94%
(%)	25.20%	22.84%	28.58%	29.50%	28.84%
ROE(%)	10.76%	8.37%	12.06%	9.81%	9.01%
EPS	0.52	0.48	0.80	0.99	1.16
P/E	124.97	218.05	81.30	65.25	55.80
P/S	13.94	15.22	12.61	10.25	8.65

	.....	6
+	IDM	7
2	.....	
3	.....	
4	.....	
	.....	12
1	.....	
2	.....	
3	.....	
4	.....	
	.....	21
1	.....	
2	.....	
3	.....	
4	.....	
5	.....	
	.....	31
1	.....	
2	.....	







1

Semiconductor											
Category	Analog			Digital		Power		Microcontroller			
	IC	AC-DC	LED	IC	BMSIC	MOSFET	IGBT	SBD	FRD	IC	IC
								IC			
								IC			
Sub-category	MEMS										
						MCU		MCU		MCU	

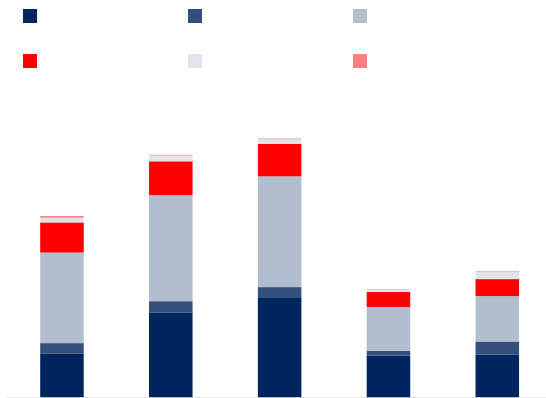
2

			2016	2018		43.97	
62.71			2017		2019		
		57.43	2020		48.89		18.32%
				2017			
	2018		4.29	2019			
4.01	2020						
					2019	1.5	
6.87							
			2016	2020		2016	14.49%
2020		28.12%					
2017		2018		6.84%	2019	6.98%	2020
		14.05%					

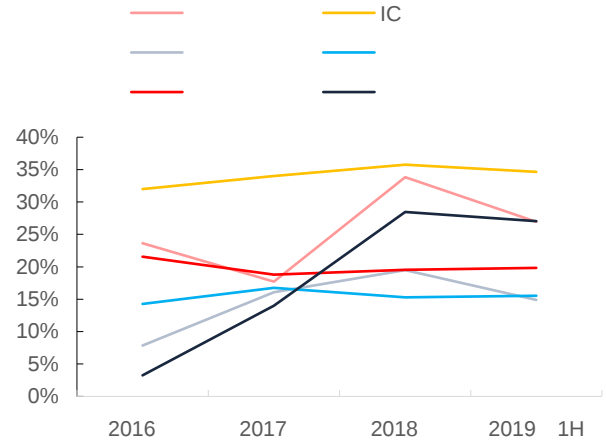
2016 23.61%
2019 14.90%

2019 1H 26.94%
2020

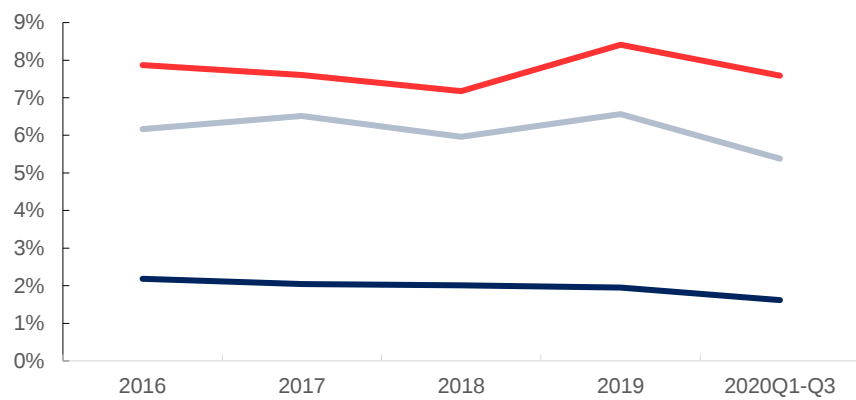
2016 7.85%
28.12%



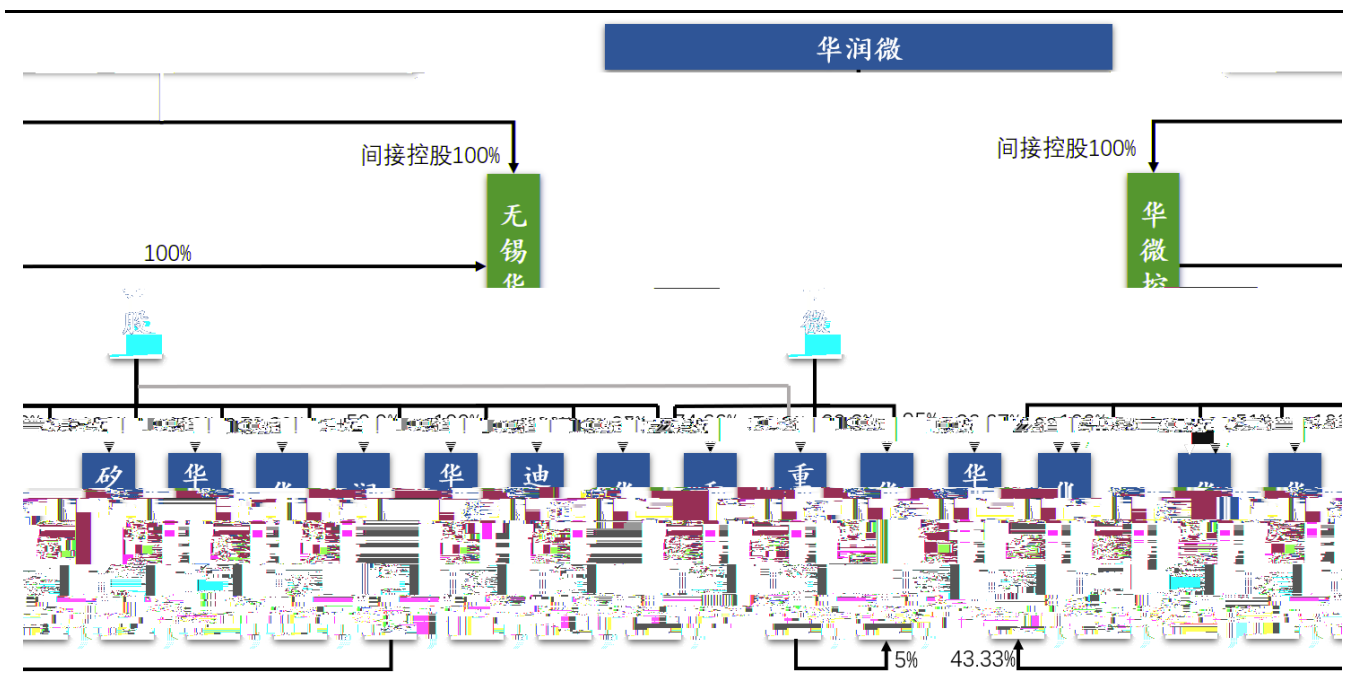
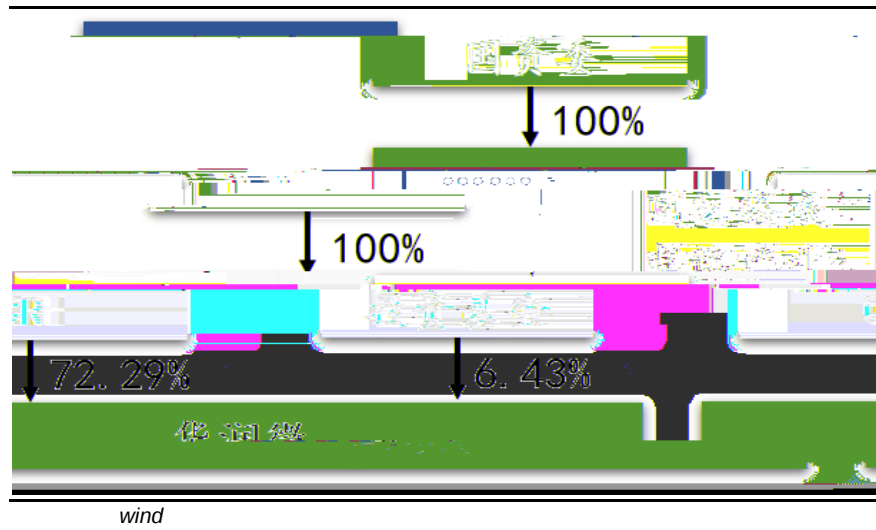
Wind

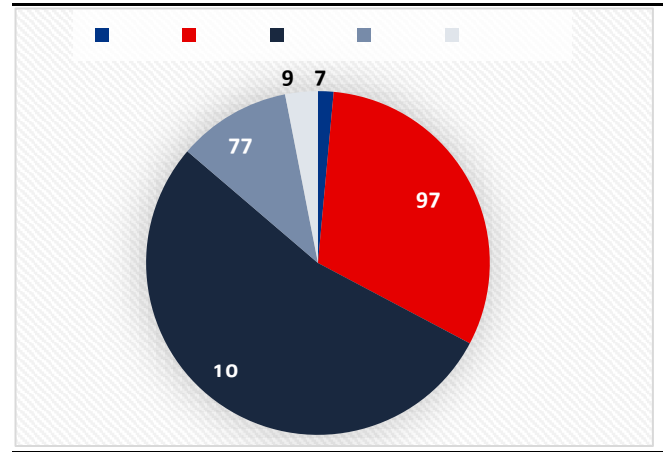
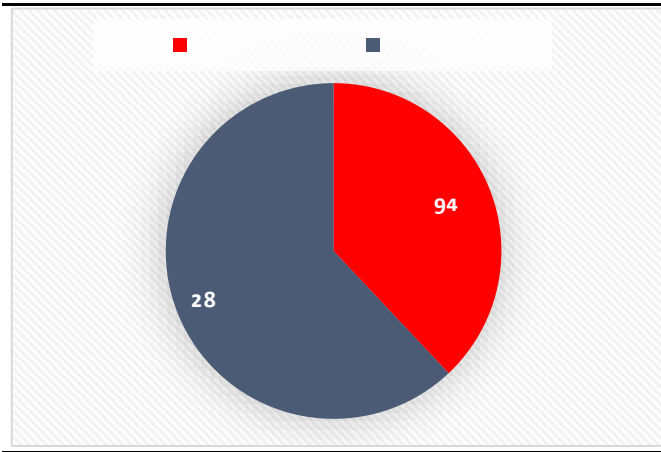


Wind



wind





1

2019

WSTS

2019

2019

3303.5

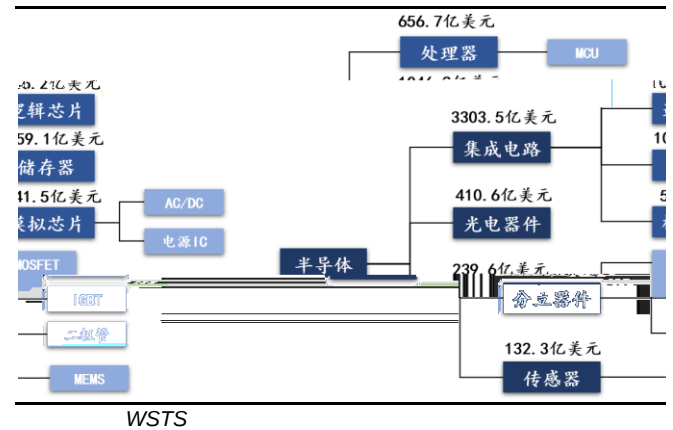
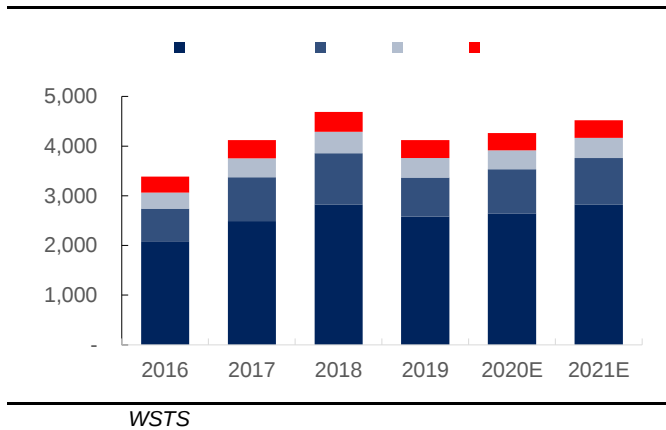
656.7

541.5

239.6

MOSFET IGBT

132.3



PC

BCG Analysis

15%

30% 40%

10%

IC Insights

2019

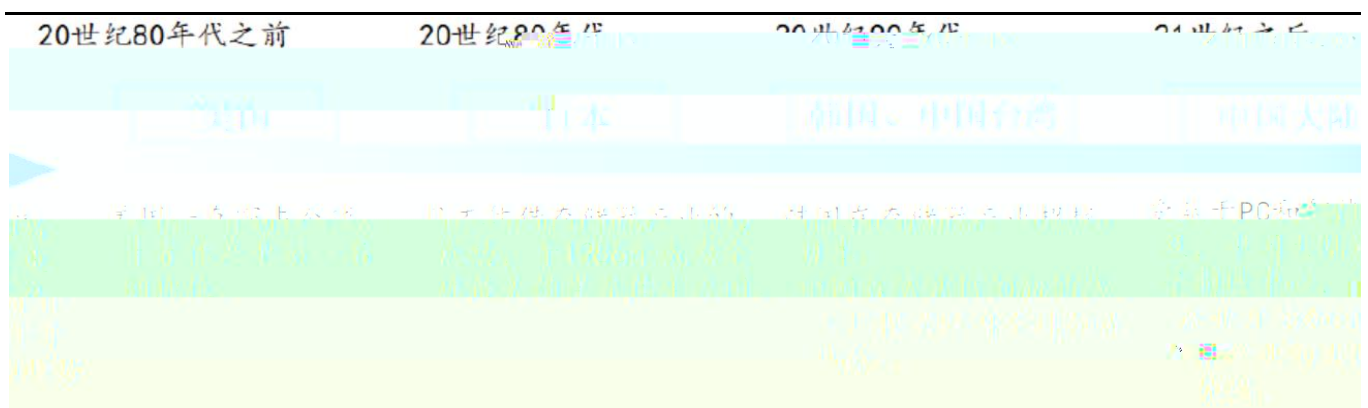
1250

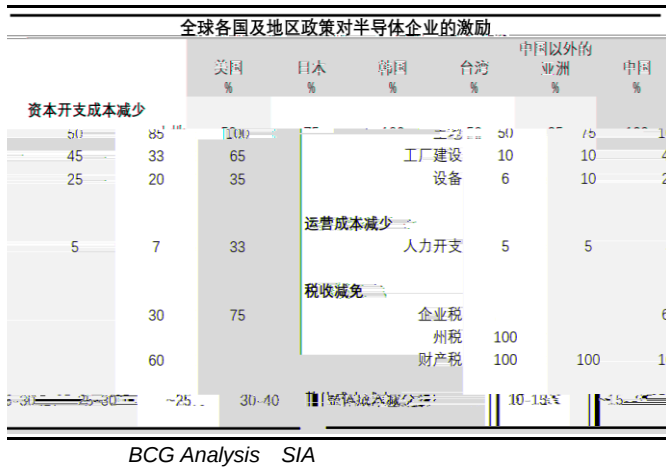
15.60%

2024

20%

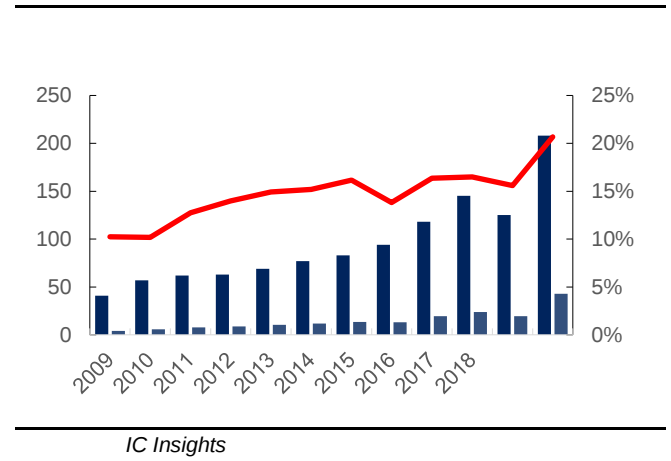
2000





SIA

60%



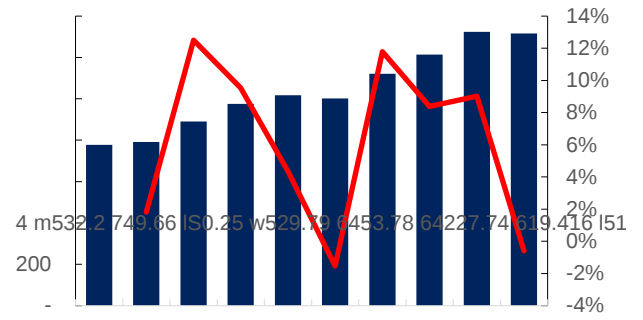
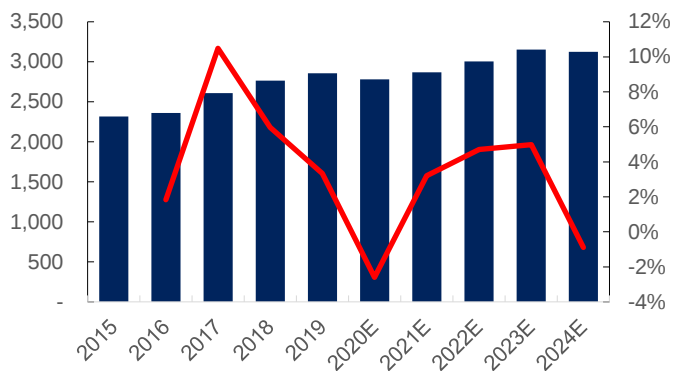
47%

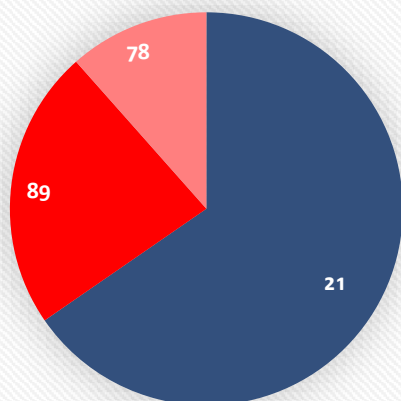
5%

SIA

SIA







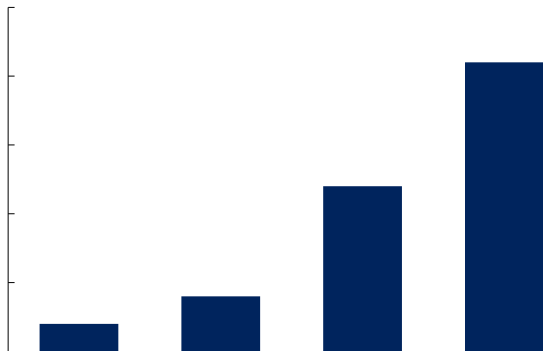
iPhone12

Mate 40

Components supply chain in Green Power China*



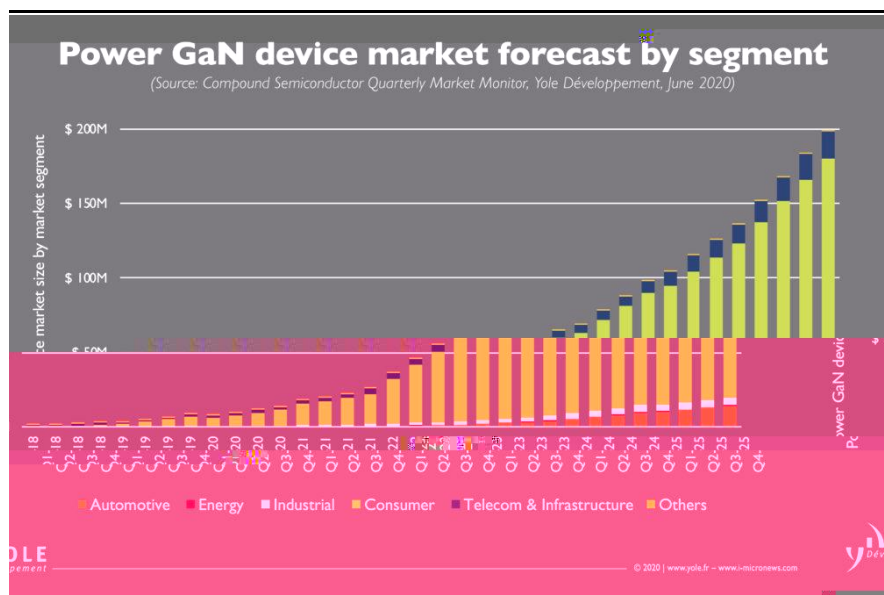
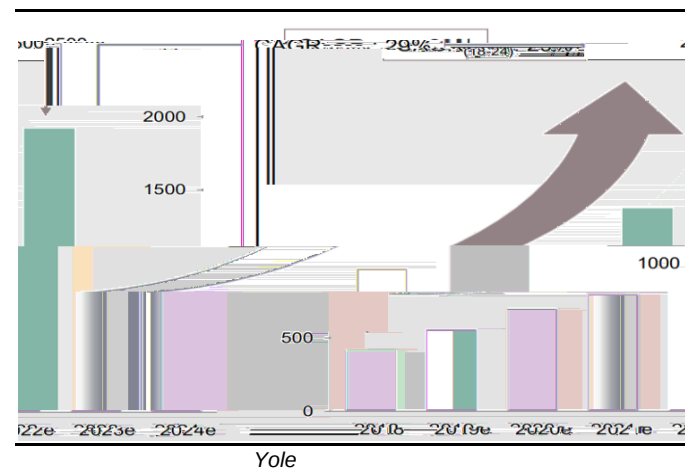
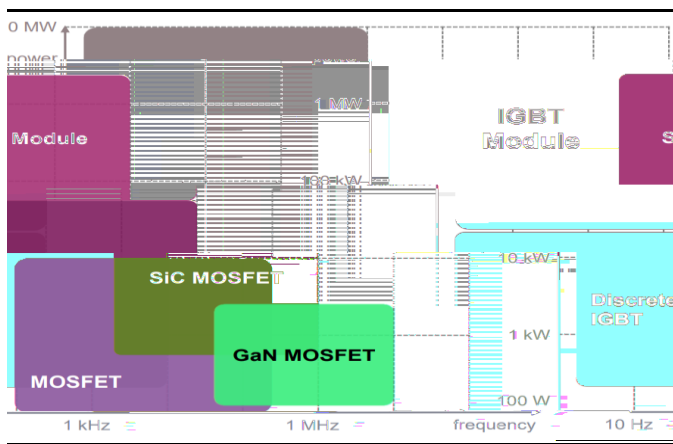
YOLE



YOLE

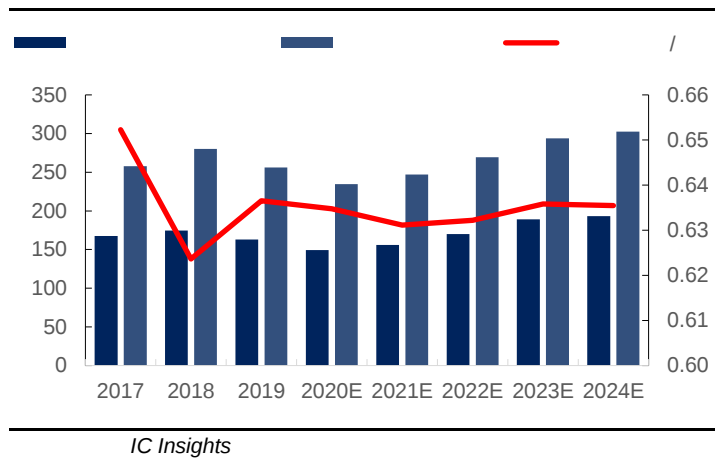
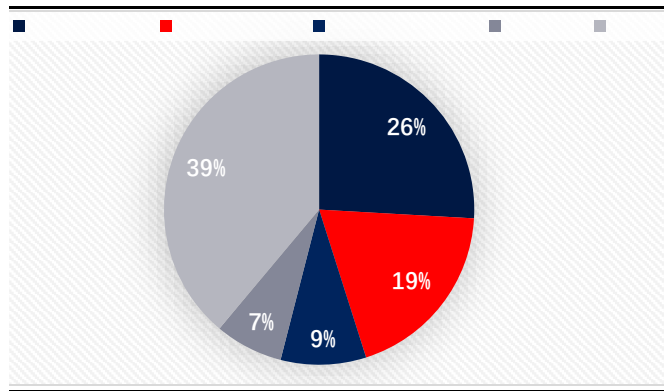
2

		eV
	Ge	0.66
	Si	1.12
	GaAs	1.42
	SiC	3.05
	GaN	3.44
	AlN	6.2
	C	5.47
	AnO	3.37



YOLE





IC Insights

1

IDM

IDM

8
IDM

IDM

2017

2017

IDM

2017

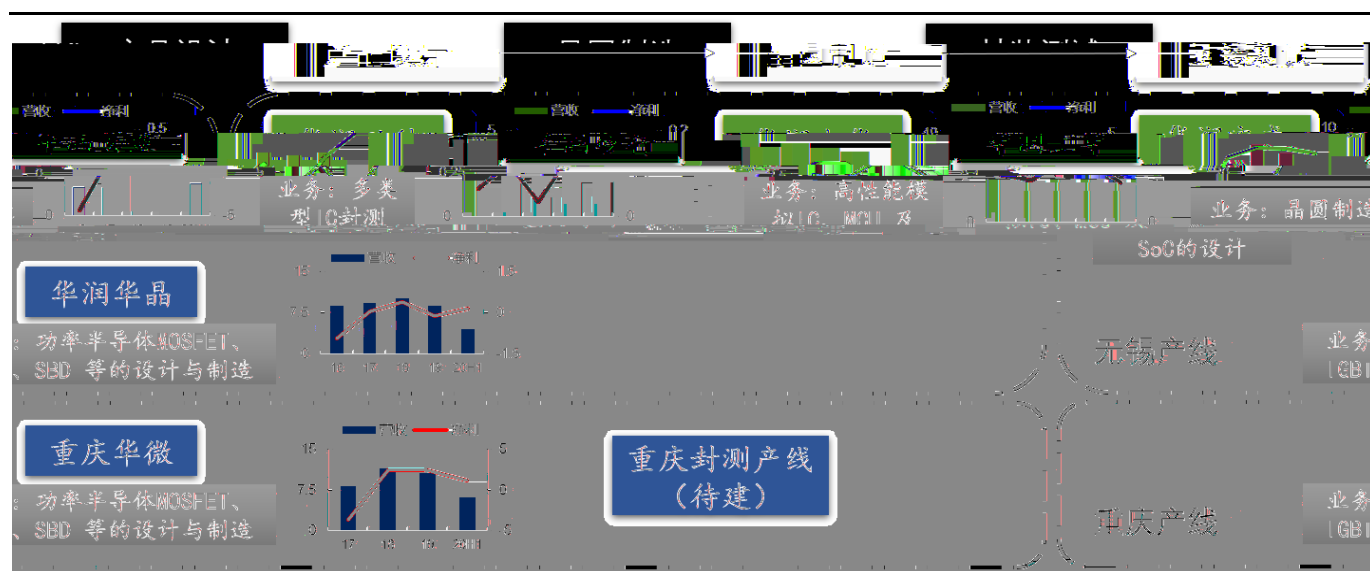
3.62

2018

2.41

2019

2.45



2017

IDM

2018

IDM

IDM

IDM

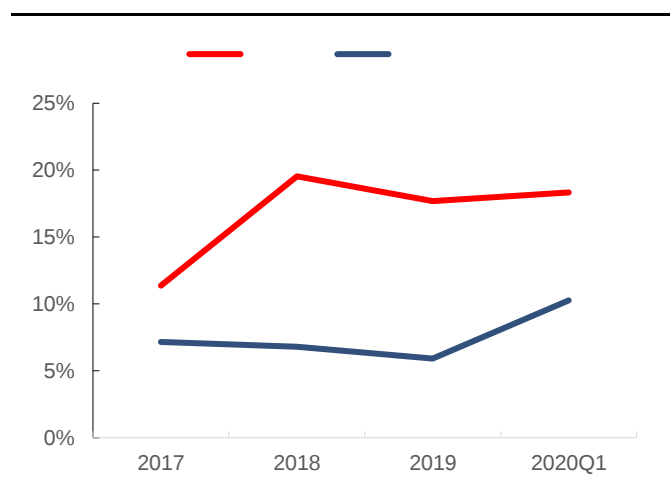
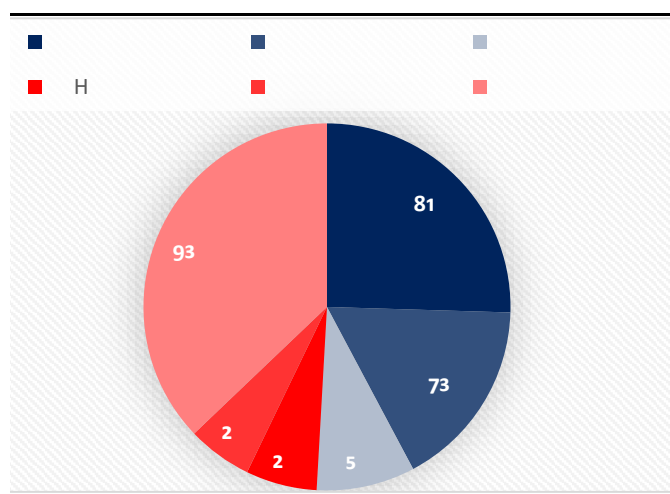
IDM

IDM

3 2018

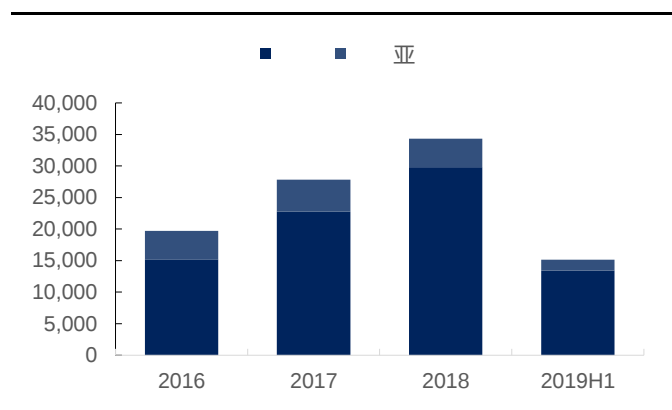
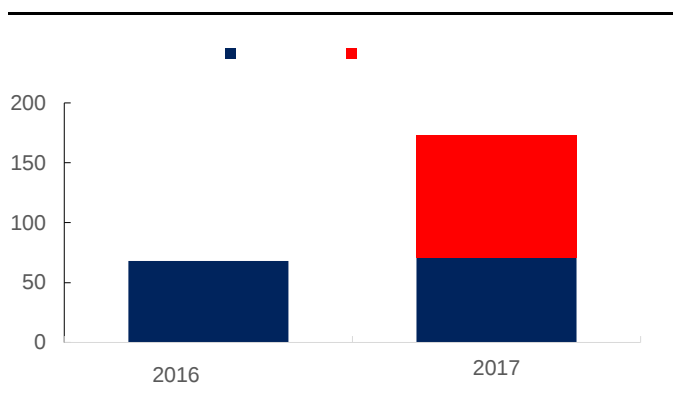
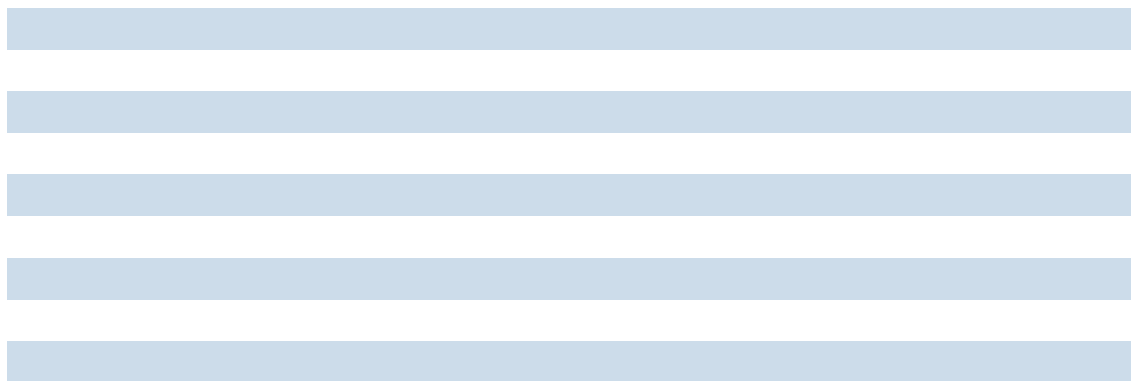
1	509	1	Samsung Electronics	759	IDM
2	248	2	Intel	659	IDM
3	239	3	SK hynix SK	364	IDM
4	225	4	Micron Technology	306	IDM

5		111	5	Broadcom	165
6	()	107	6	Qualcomm	154
7		92	7	Texas Instruments	148
8		66	8	Western Digital	93
9		65	9	ST Microelectronics	93
10		63	10	NXP	90
		IDM			IDM

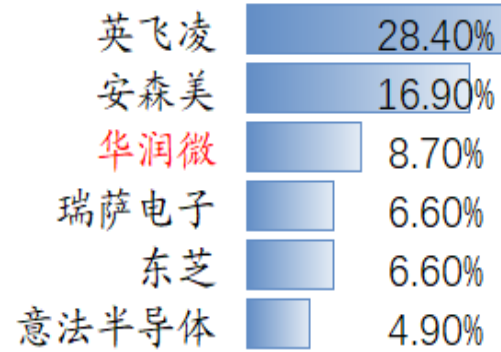


2

4 2018



[illegible]

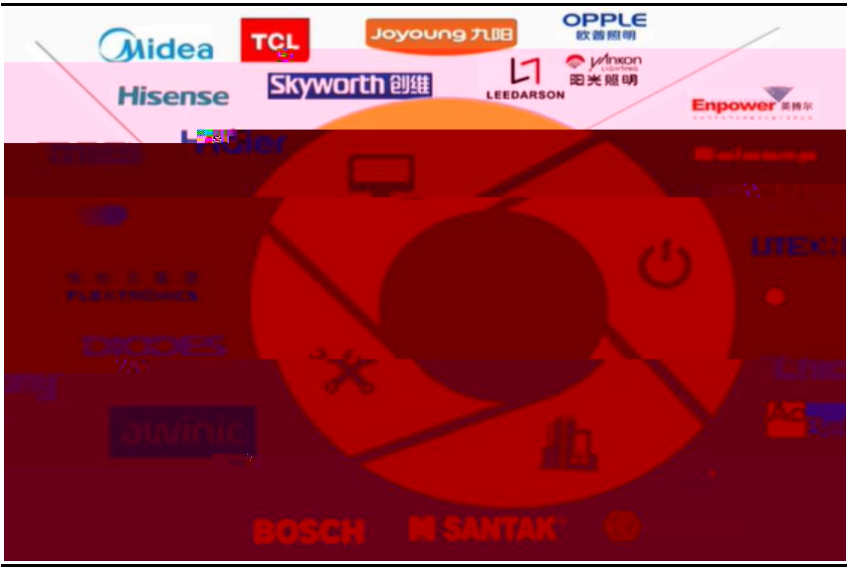


6 MOSFET

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

7 IC

AC-DC	AC-DC
LED	LED
IC	
BMS IC	
IC	78 1117 100mA-1A
IC	100W
IC	
IC	AB D 5mW-50W



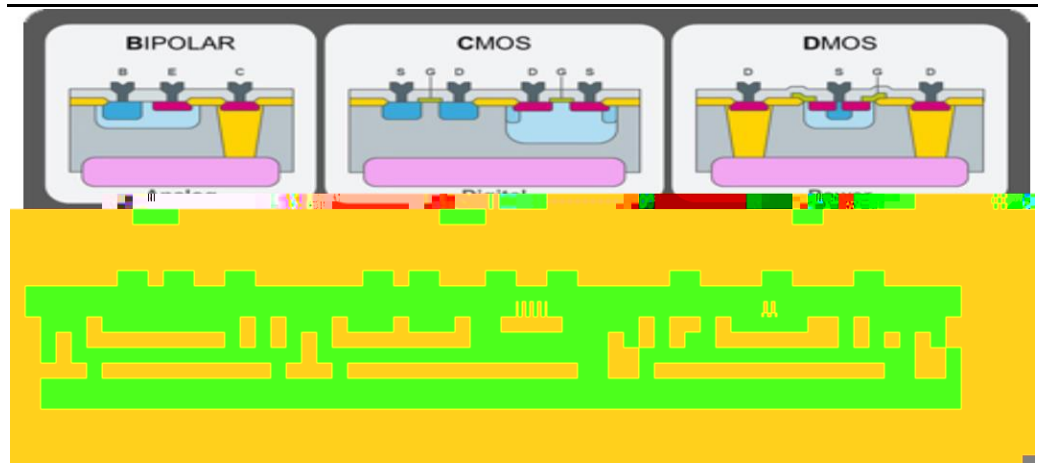
3

8 2019	
1	
2	
3	
4	SK
5	
6	
7	
8	
9	
10	

										2018
	3	6	Analog	BCD	MEMS	DMOS	Power Discrete			247
	1	8	Advance	BCD	Analog	DMOS				73
	1	8	MOS		MOS	MOS	SBD			60
										199
	QFP	QFN	PQFN	FC-QFN	TSSOP	SSOP	MSOP	IPM	62	
									69	

SGT MOSFET

11

[illegible]

12

						MEMS	IPM	48
						MOS	IGBT/SBD/FRD	123
ASIC		MCU	SOC IC			MCU	ASIC	177
					BCD	MEMS	analog CMOs	154
					QFP	QFN	3D IPM	54
								8
								28

IC		,	BMS	AC-DC	44
					5

13

2018	10	IGBT	iPOWER Semiconductor	5
2017	11			5
2016	10			3
2016	5			5
2015	10			5



	2018A	2019A	2020E	2021E	2022E		2018A	2019A	2020E	2021E	2022E
	5,106.31	5,092.50	10,599.44	17,100.35	18,973.98		6,270.80	5,742.78	6,930.34	8,526.82	10,099.92
	1,537.64	1,930.67	6,499.83	12,094.31	13,359.50		4,690.26	4,431.29	4,949.38	6,011.08	7,186.93
	506.85	190.96	483.02	522.34	552.82		84.55	66.16	79.85	98.24	116.36
	601.61	815.01	816.36	1,270.47	1,504.92		126.13	112.02	107.74	136.43	161.60
	68.18	51.89	67.52	79.93	92.59		373.62	376.84	379.39	466.78	552.90
	1,181.25	1,054.76	1,130.17	1,320.46	1,537.43		449.76	482.62	526.24	630.98	747.39
	1,210.77	1,049.21	1,602.53	1,812.85	1,926.72		0.24	30.99	-65.05	-178.62	-301.74
	4,885.74	5,002.79	5,004.09	5,076.20	5,134.70		71.74	-5.69	-23.44	-33.32	-46.68
	0.00	81.71	81.71								



信达证券
CINDA SECURITIES
