

IDM

IDM

5100V

IC

-100V

MOSFET

1.						4
1.1	IDM			MOSFET		4
1.2						6
1.3	5%	20%	IPO			8
2.						11
2.1						11
2.2						13
2.3	“	”				15
3.						17
3.1	IDM					17
3.2						19
3.3	+					22
4.						24
5.						24

1						4
2	2016-2020					6
3	2016-2020					6
4	2016-2020H1					7
5	2020H1					7
6	2016-2020Q3					7
7	2016-2020Q3					7
8	2016-2020Q3					8
9	2016-2020Q3					8
10						8
11						9
12	2014-2021E					11
13	2019					11
14	2014-2021E					11
15	2019					11
16	2018					12
17						12
18	MOSFET					12
19	IGBT					12
20						13
21	IGBT					13

22	MOSFET		.....	14
23	MOSFET		.....	14
24			.....	15
25			.....	15
26	2020	PC	.....	16
27	5G		.....	16
28	IDM		.....	17
29	2018-2019		.....	19
30	MOSFET	IGBT	.....	22
31	2016-2018	MOSFET IGBT	.....	22
32			.....	23

1	.....	5
2	.....	5
3	.....	9
4	.....	16
5	.....	18
6	.....	18
7	.....	20
8	.....	21

IC

1

IC	MOSFET	MOS	MOS	MOS	MOS					
			-100V-1500V							
	IGBT	600V-1200V								
	SBD	45V-150V	SBD	SBD						
			200mA-30A							
	FRD	200V-6500V								
	AC-DC	AC-DC								
	LED IC	LED								
	BMS IC									
	IC	100mA-1A	78	1117						
	IC	100W								
	IC									
IC										
IC	5mW-50W		AB	D						

1.0-0.11 μ m

CMOS Bipolar BiCMOS

BCD

6

IGBT SOI MEMS BCD CMOS

GaN SiC

MEMS

									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	62
		IPM							
									69
									2.4

15%

MPS International, Ltd Diodes

Incorporated

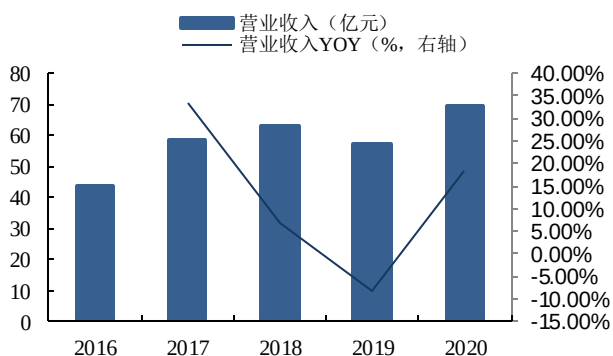
2016-2019

13.4% 11.1% 11.1% 11.3%

1.2

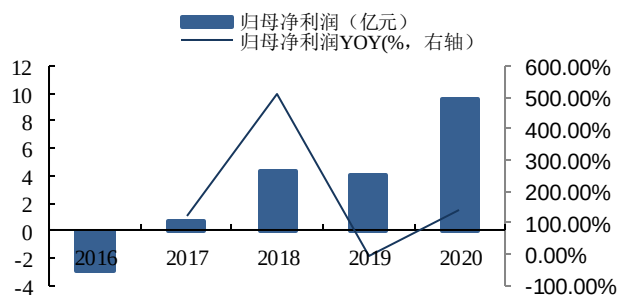
2016-2018	57.43	19	43.97	58.76	62.71	20	19.42%	2019	2019
			8.42%						
						5G	AI	VR/AR	
2020	139.66%	20	69.77			21.49%		9.60	

2 2016-2020



wind

3 2016-2020

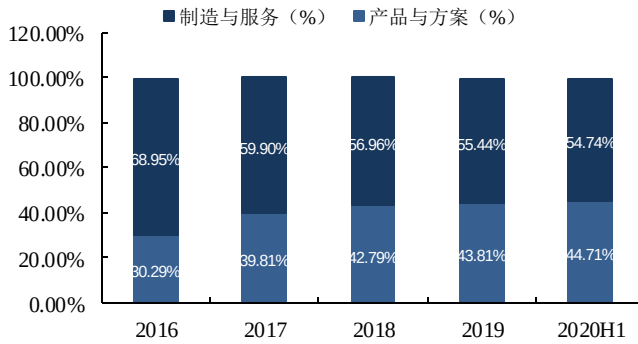


wind

2016	30.00%	20	44.70%
2020			
IC		IC	

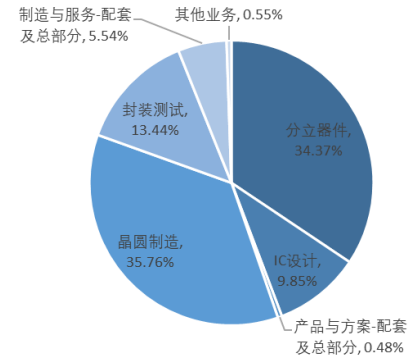
34.37%

4 2016-2020H1



wind

5 2020H1



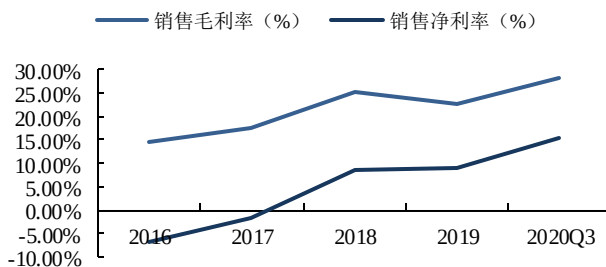
wind

2016 9.91% 2016-2020Q3
2019 17.76% 2019

2019 29.48%
14.49% 17.62% 25.20% 22.84% 28.13%

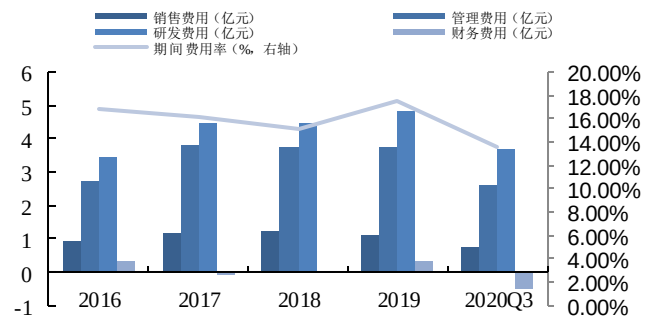
13.6% 2016- 2018 2016-2020Q3 2020
16.9% 16.1% 15.2% 17.5% 2019

6 2016-2020Q3



wind

7 2016-2020Q3



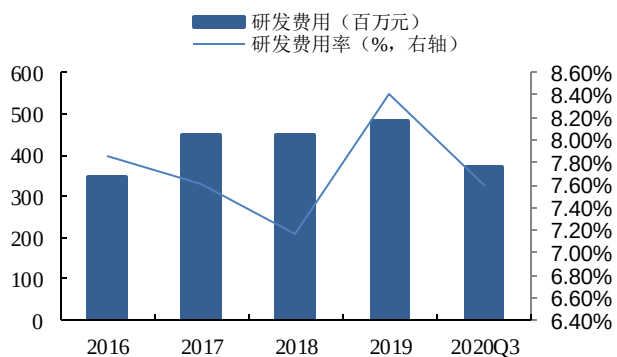
wind

20 50% 2016-2020Q3 3.46 4.47
4.50 4.83 3.71 7.86% 7.61% 7.17 8.40% 7.59% 7%
2016-2018 19

20

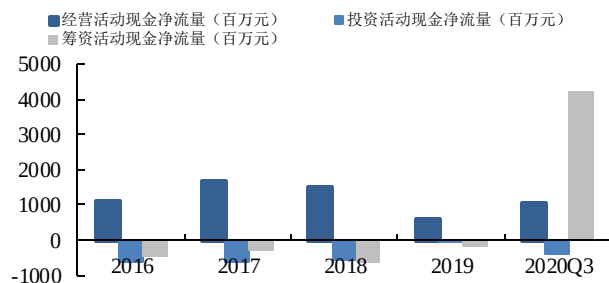
20

8 2016-2020Q3



wind

9 2016-2020Q3



wind

20

2016-2020Q3

11.03 16.68 14.82 5.76 10.32

1.3

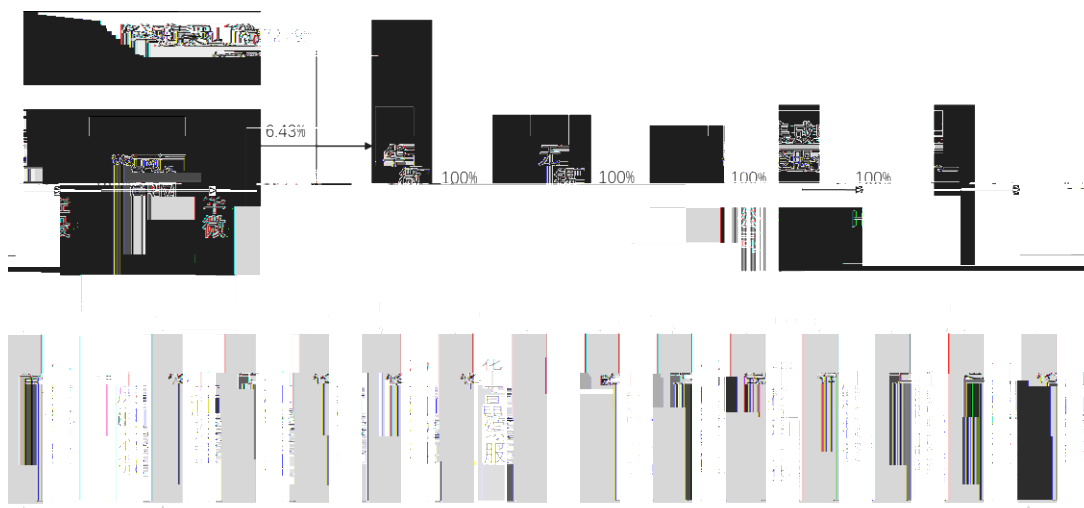
5% 20% IPO

5%

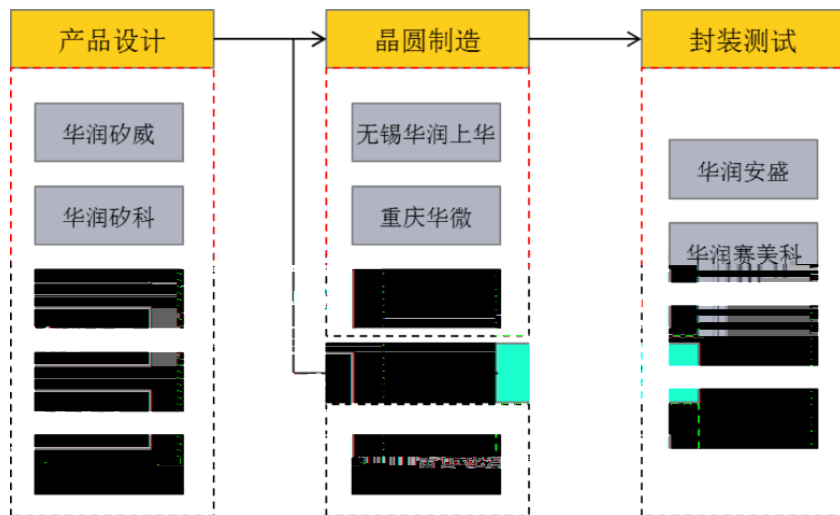
70%

6.43%

10



11



IPO

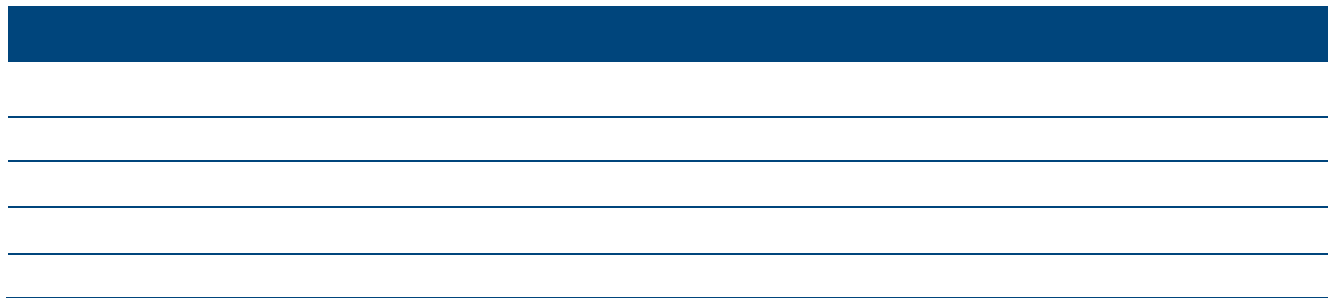
35%

14%

8

36%

3



8

8 BCD

BCD

8 MEMS

MEMS

16000

2.75

15

12

6

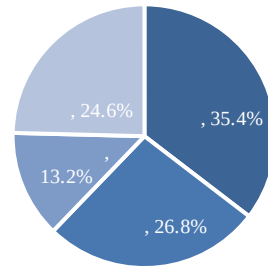
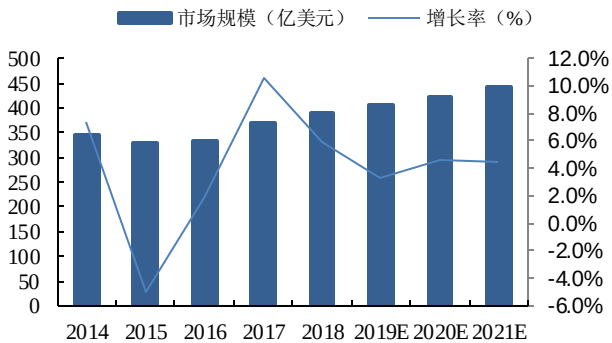
2018

9

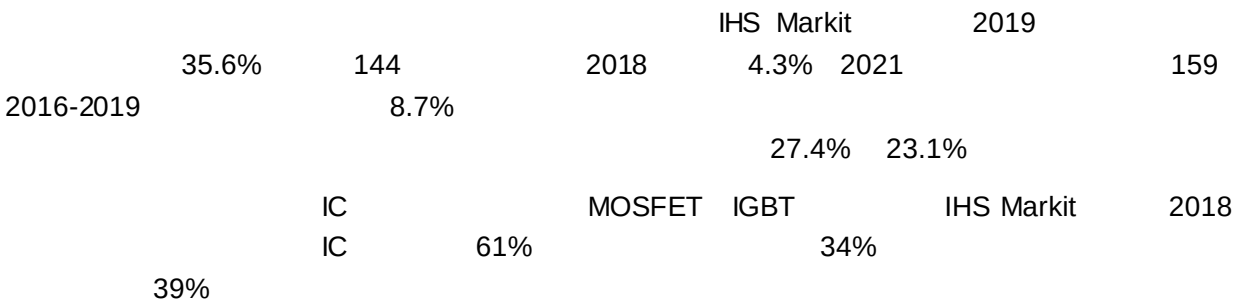
Year	IC	MEMS
2019	3	5
2020	6	1
2021	24	3

2.

2.1

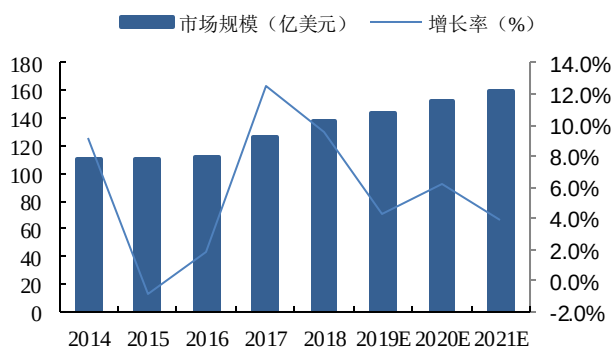


IHS Markit

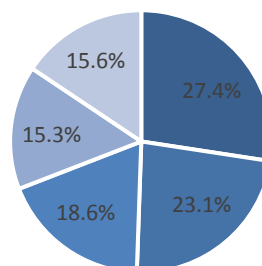


14 2014-2021E

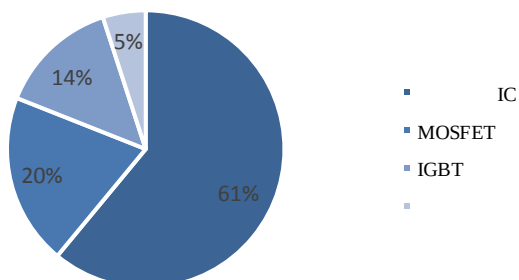
15 2019



IHS Markit



16 2018



IHS Markit

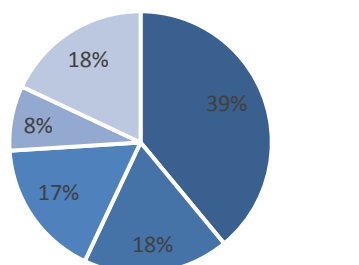
MOSFET IGBT



18

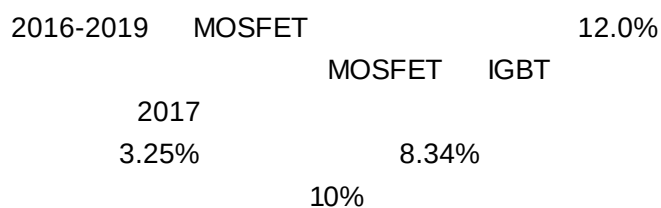
MOSFET

17



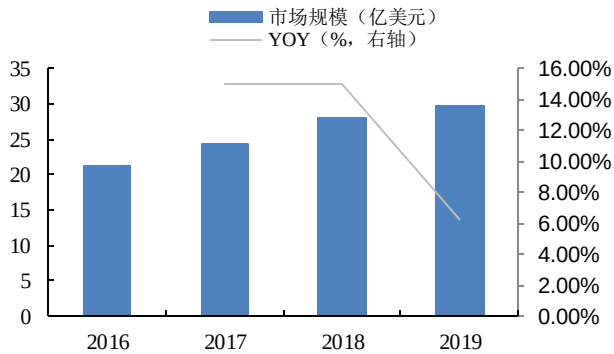
IDC

MOSFET IGBT

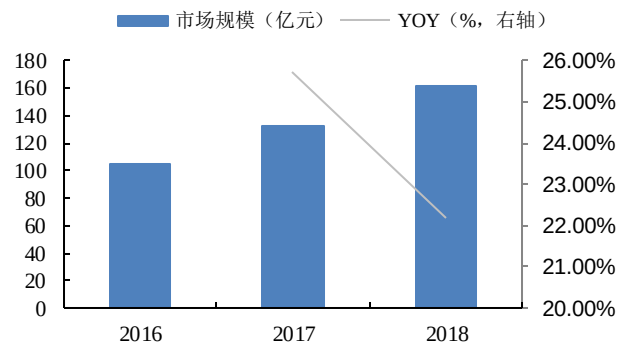


19

IGBT



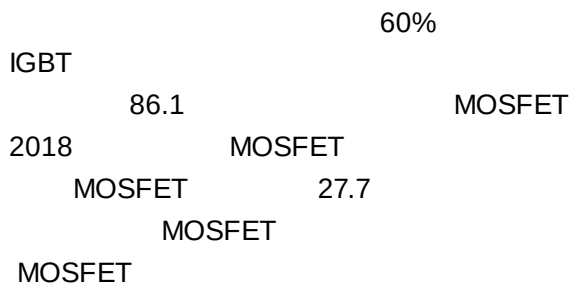
IHS Markit



2.2

MOSFET

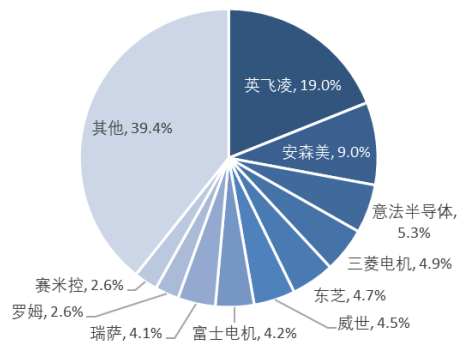
IHS Markit



75.8
62.8

21
81

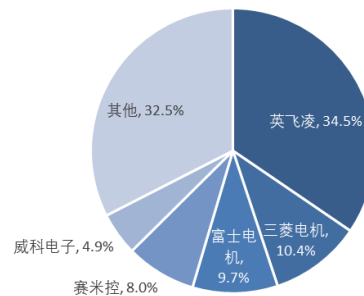
20



IHS Markit

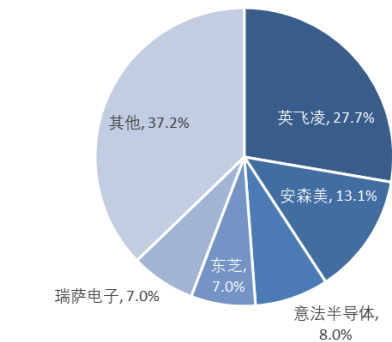
21

IGBT



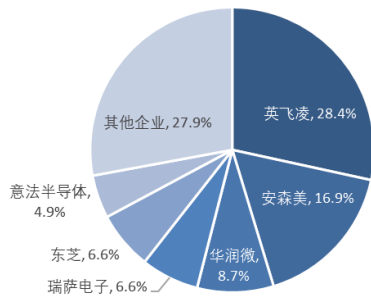
IHS Markit

22 MOSFET



IHS Markit

23 MOSFET



IHS Markit

1999 2000

2020

9 30

85

2020 4 16

2700

2020

Chua Chee Seong

Chua

1999

LED

2.14

LED

(LFM)

230

2019

55.18

2020 12

CMOS

LFM

(ADAS)

AR0231AT

IT

2019

“ ”

IT

|

3.

3.1

IDM

IDM

IDM

IDM

2020

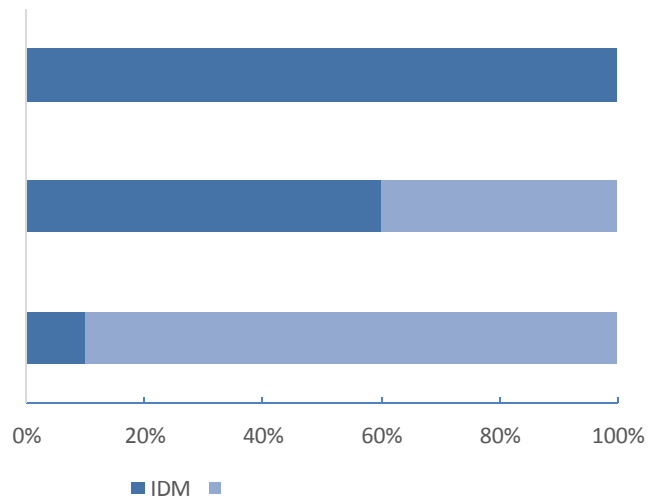
IDM

2018

IDM

IDM

28 IDM



5

Gartner

6

MEMS

+

2020 10

50

54

42

12

5G AIOT

SGTMOS	HVMOS	SBD	IGBT	CLIP	MOS	DBC	IMS		CoolMOS
								PLCSP	RDL
		IC	IC						
			22.5						37.5

3.2

	3.46	4.47	4.50	4.82	3.71				
7.6%		7%						2016-2020Q3	
								7.9%	7.6%
								7.2%	8.4%
			2019	6	30	7937		641	2290
				36.9%					
			5				2		
								2	

|

2021 1 18

IGBT MOSFET

IGBT
MOSFET

MOSFET IGBT

100KHZ

IGBT

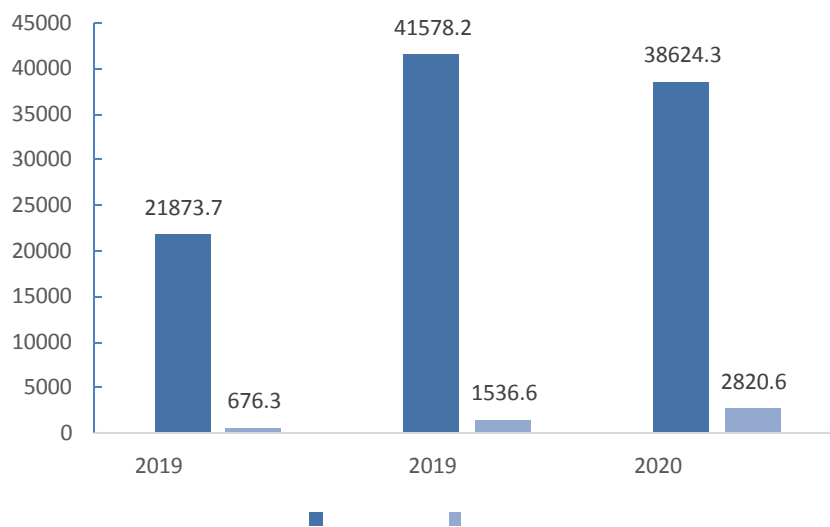
MOSFET

IGBT

KHz MHz

200 “ ” 1800
 2019
 2020 76.6% 317.1%

32



50

12

4.

	2020-2022		9.60	14.75	18.36	EPS	0.79	1.21	1.51
	2020-2022	PE	76	49	40				
“	”								

5.

1.

5G

2.

IPO

3.

5106	5092	10861	12843	15165		6271	5743	6977	8368	9620
1538	1931	7549	9361	11512		4690	4431	4995	5676	6371
602	815	842	858	888		85	66	80	96	111
1184	7	8	10	11		126	112	112	133	151
68	52	34	13	-11		374	377	426	505	575
1181	1055	1165	1298	1427		0	31	-26	-100	-140
27	44	44	44	44		450	483	558	669	770
4886	5003	4489	3946	3385		71.74	-36.57	3.89	4.67	5.36
0	82	82	82	82		0.00	0.04	0.00	0.00	0.00
3898	3816	3824	3298	2751		10.59	-0.03	0.00	0.00	0.00
294	275	245	218	194		91.09	238.78	238.78	262.65	275.79
277	282	282	282	282		586	478	1068	1648	2055
9992	10095	15349	16789	18550		10.99	32.69	18.46	18.46	18.46
4654	1979	1984	2075	2162		6.02	4.50	4.50	4.50	4.50
0	0	0	0	0		591	506	1082	1662	2069
716	749	749	834	918		53	-6	-22	-33	-41
116	112	106	99	91		538	512	1104	1695	2110
2451	0	0	0	0		108	112	144	220	274
318	1726	1676	1676	1676		429	401	960	1475	1836
0	1506	1506	1506	1506						
0	0	0	0	0						
4972	3704	3660	3750	3838						
872	968	1111	1332	1606		6.73%	-8.42%	21.49%	19.93%	14.97%
830	830	1216	1216	1216		-1376.	-18.42%	123.64%	54.23%	24.71%
6021	5450	9476	9476	9476		511.02	-6.68%	139.66%	53.53%	24.51%
-3049	-1225	-505	601	1978						
4148	5423	10578	11707	13106	(%)	25.20%	22.84%	28.40%	32.17%	33.78%
9992	10095	15349	16789	18550	(%)	8.57%	8.92%	15.82%	20.26%	21.94%
					%	4.30%	3.97%	6.26%	8.78%	9.90%
					ROE(%)	10.35%	7.39%	9.08%	12.60%	14.01%
1482	576	1775	2393	2783						
538	512	1104	1695	2110	(%)	50%	37%	24%	22%	21%
953	709	844	872	891		1.10	2.57	5.47	6.19	7.01
0	31	-26	-100	-140		0.84	2.04	4.89	5.57	6.35
91	-213	-27	-16	-30						
-51	-5	-6	-7	-8		0.64	0.57	0.55	0.52	0.54
-575	-41	-305	-312	-313		10	8	8	10	11
0	0	0	0	0		8.29	7.84	9.32	10.57	10.98
0	0	0	0	0						
11	0	0	0	0	()	0.49	0.46	0.79	1.21	1.51
-627	-180	4148	-269	-319	()	0.34	0.43	4.62	1.49	1.77
0	0	0	0	0	()	5.00	6.54	8.70	9.63	10.78
0	1506	0	0	0						
0	0	386	0	0	P/E	122.39	131.17	75.71	49.31	39.60
-1	-571	4026	0	0	P/B	11.96	9.15	6.87	6.21	5.55
281	356	5618	1813	2151	EV/EBITDA	33.11	40.95	35.69	26.86	22.36

2020	Wind	2018/2019	TMT II	2020	/	2018
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2019

2019
