

688396 \

IDM

IDM /

		2020	MOSFET	Top10
74%		14%		
	IGBT	SiC		Yole
	IGBT	2020-2026	CAGR	22.26%
2021-2027	CAGR	39.21%		SiC
		12		

1.	IDM	2
1.1	+	6
1.2		6
1.3		7
2.		8
2.1		8
2.2		18
3.		20
3.1.		20
3.2.	IDM	25
3.3.		28
3.4.		30
4.		32
4.1.		32
4.2.		33
5.		35

1		6
2	2022 Q1	7
3		7
4	&	8
5		8
6		8
7		8
8		9
9		9
10		9
11	2019	10
12	MOSFET	10
13	P N MOSFET	10
14	MOSFET	11
15	MOSFET	11
16	MOSFET /	11
17	MOSFET	11
18	MOSFET 2020	12
19	MOSFET 2020	12
20	2021	12
21	2021	12
22	MOSFET	13

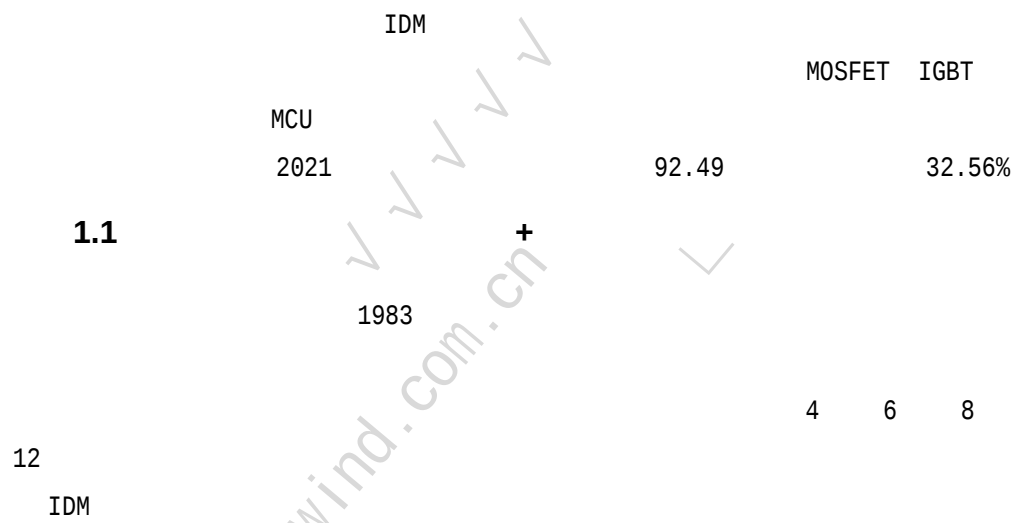


23	60V	MOSFET	.....	13
24		IGBT	.....	13
25		MOSFET	2020-2026	14
26	2020-2026	MOSFET	.....	14
27	Si	MOSFET/IGBT/SiC MOSFET	.....	15
28		IGBT	.....	15
29		IGBT	.....	15
30	2020	IGBT	.....	16
31	2020-2026	IGBT	.....	16
32	Si	SiC GaN	.....	17
33	Si	SiC	.....	17
34		SiC	.....	17
35	2027	SiC	.....	17
36	2021-2027	SiC	.....	17
37		+IDM	.....	18
38			.....	18
39			.....	18
40			.....	19
41			.....	19
42			.....	19
43	2020		.....	19
44			.....	20
45			.....	21
46			.....	21
47		6 8	.....	22
48			.....	22
49			.....	22
50			.....	23
51			.....	23
52			.....	23
53			.....	24
54			.....	24
55			.....	24
56		IPM	.....	25
57		Copper Clip	.....	25
58			.....	25
59			.....	25
60			.....	25
61			.....	26
62			.....	26
63			.....	26
64		MOSFET	.....	





1. IDM



1

1.2





”

2009

2

2022

Q1

1.3

					2008		MOSFET	
MOS	IGBT	SiC	SBD	SiC	MOSFET	MEMS	MCU	
					4	6	8	12
IDM								

3

		2021		92.49
32.56%	2018			
	2019			
		2021		35.33%
2016				



8

		2019	464	2024	522
	2019-2024	2.38%			2019
177	2024	206	2019-2024		

11 2019

			MOSFET			MOSFET		MOSFET		MOSFET
			MOSFET			MOSFET		MOSFET		5G
			MOSFET			2020		MOSFET		MOSFET
			71%	29%	2024	64%		36%		MOSFET
			MOSFET			MOSFET				MOSFET
2020	23.8	/	2025			35.1	/	8.1%		MOSFET

			2019			MOSFET	
			5			/	
25%/12%/9%/6%/5%			3.09%			/	
2020			MOSFET			5%	
			MOSFET				

24.41% 2021 35.33%



2026 7 1.33% 7.45% 38.31%
MOSFET

25	MOSFET	2020-2026
----	--------	-----------

Yole

26	2020-2026	MOSFET

27 Si MOSFET/IGBT/SiC MOSFET

	Si MOSFET	IGBT	SiC MOSFET
	20-650V	>650V	>650V
	(>20kHz)	(5-20kHz)	(>50kHz)
V _{gs} /V _{ge}	0-15V(20V)	-10-15V(10-20V)	-5-20V(25-30V)
	<3kW	>3kW	>4kW
	-	() UPS EV/HEV	PFC- EV/HEV DC/DC EV

IGBT

Omdia

IGBT 2024 66.19 2020-2024
 5.16% IGBT 2024 25.76 2020-2024
 4.34% 40% 2020
 IGBT

IGBT

30% 27% 22%
 OBC IGBT
 IGBT

IGBT

30 2020 IGBT

Yole	2020-2026	IGBT	54	84
7.64%				
IGBT	5.09	17.00		22.26%
IGBT	0.69	2.33		
	IGBT			IGBT 17
23	IGBT	13	20	

31 2020-2026 IGBT

	2020	2026	CAGR	2020	2026
Industrial motor drives	17.00	23.00	5.17%	31.48%	27.38%
Home appliance	13.00	20.00	7.44%	24.07%	23.81%
EV/HEV	5.09	17.00	22.26%	9.43%	20.24%
DC charging infrastructure	0.69	2.33	22.49%	10	239

2.2

2020		2021	+IDM
26%	IC Insights	2	1101

2021



3.

IDM

IGBT SiC/GaN

MCU

44

3.1.

1983

4

52.41%

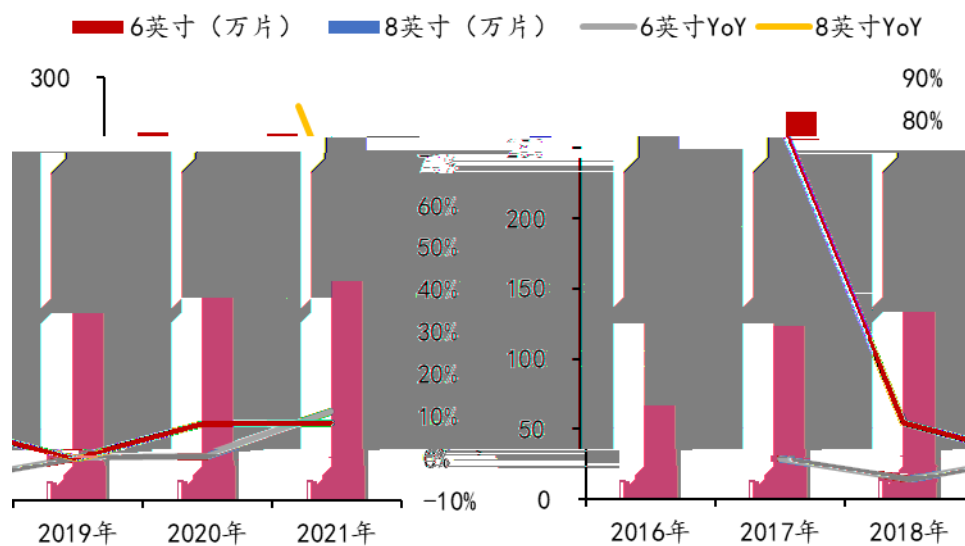
8

12

47

6

8



2021

176.86

2.68%

173.93

1.52%

98.34%

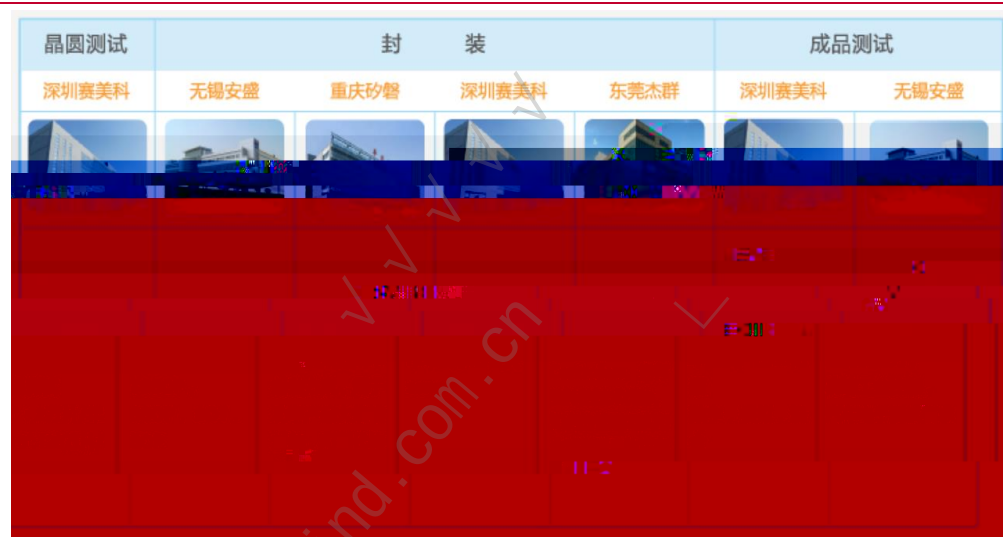
2019

48

49

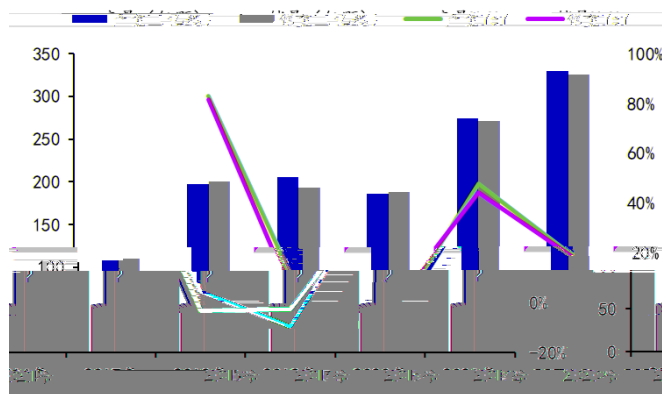
30

53

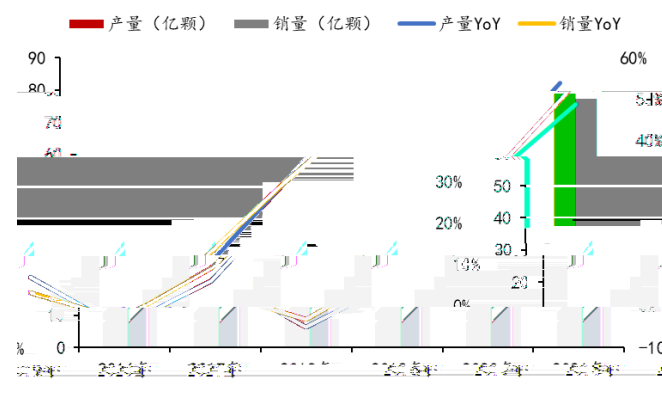


2021	329.99	325.14	20.32%	19.77%
	78.90	77.15	54.01%	48.79%

54



55



IPM
Copper-Clip BOND

MOSFET IPM

60

2021

49

12

8



56 **IPM**

3.2. **IDM**



		90%	2019	90.20%
	2019			22.69
6.19%	90			

	AC-DC	AC-DC	
	LED IC	LED	
	BMS IC		
IC	IC	1117 78 100mA-1A	
	IC	100W	

IDM

64	MOSFET	2021
MOSFET		MOSFET
	IDM	670+
	IDM	370+
	IDM + Fabless	210+
	IDM	240+
	Fabless	1300+
	Fabless +	360+
	Fabless +	60+
	Fabless	500+
	Fabless	190+
	Fabless	490+
	Fabless	250+
	Fabless	230+
	Fabless	120+



67

Wind

IGBT SiC

MOSFET

MOSFET

IGBT

8

1200V 40A FS-IGBT

650V 40A FS

	MOSFET	MOS	
		VDMOS	
		MOS	
	IGBT	IGBT	
	SiC	SiC JBS	
		SiC MOS	
	GaN	GaN D-mode	
		SBD	
		FRD	
	IC	IC	
		MEMS	
	IC	IC	
		IC	
		LED IC	



IGBT IGBT 2019-2021 45% 75% 57%
2022 IGBT

MOSFET

MOSFET

74

20

FCFF		
	6,561.49	7.02%
	18,933.44	20.24%

5.

report@wind.com.cn

12



|



--	--	--	--

12
6 12

6

A

300

500