ñIDM+ ò
2017-2018

ñIDM+ ò
IDM

MOS

2017-2018

目 录

IDM+ 7
..... 7
IDM

图表目录

1 7
2 8
3 8
4 8
5 2017-2020H1 9
6 2018 Top10 10
7 10
8 11
9 11
10 turn-key 12
11 12
12 13
13 2016-2020H1 13
14 2019H1 Top5 13
15 2016 14
16 2016 14
17 2014-2024 14
18 2015-2021 14
19 2020H1 15
20 2020H1 15
21 15
22 2017-2019 2018 16
23 2016-2020H1 16
24 2016-2020H1 16
25 8 17
26 2016-2019H1 ASP 17
27 2016-2019H1 18
28 18

IDM+

3

IC MOSFET IGBT

IC AC-DC LED

MEMS

MCU

2

Wind

6 2018 Top10

		2018
1		21.7
2		18.5
3		17.1
4		8.1
5		7.7
6		7.2
7		6.9
8		6.0
9		5.4
10		4.9

MOSFET **6** **MOSFET** 2018 MOSFET 16 8.7% MOSFET 2018 24.19 MOSFET 66%

IC

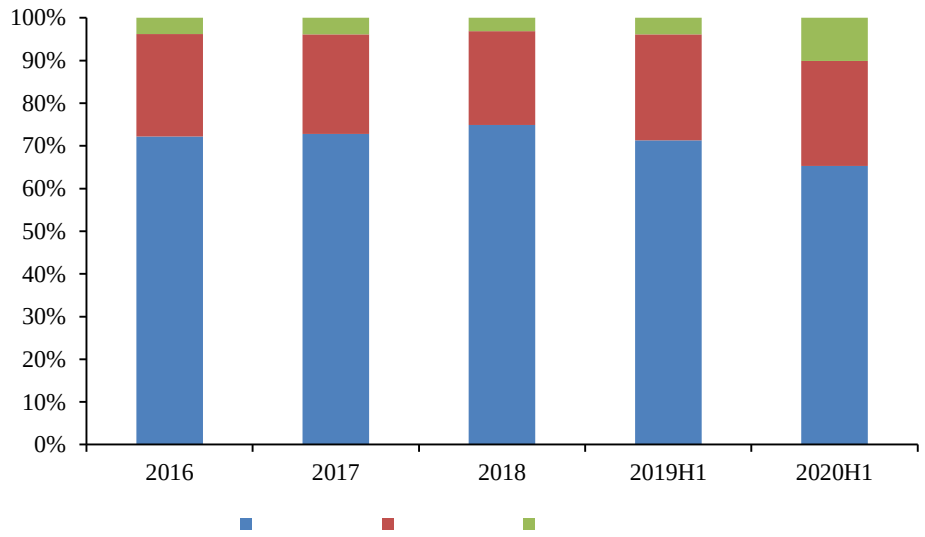
IC

7

Si

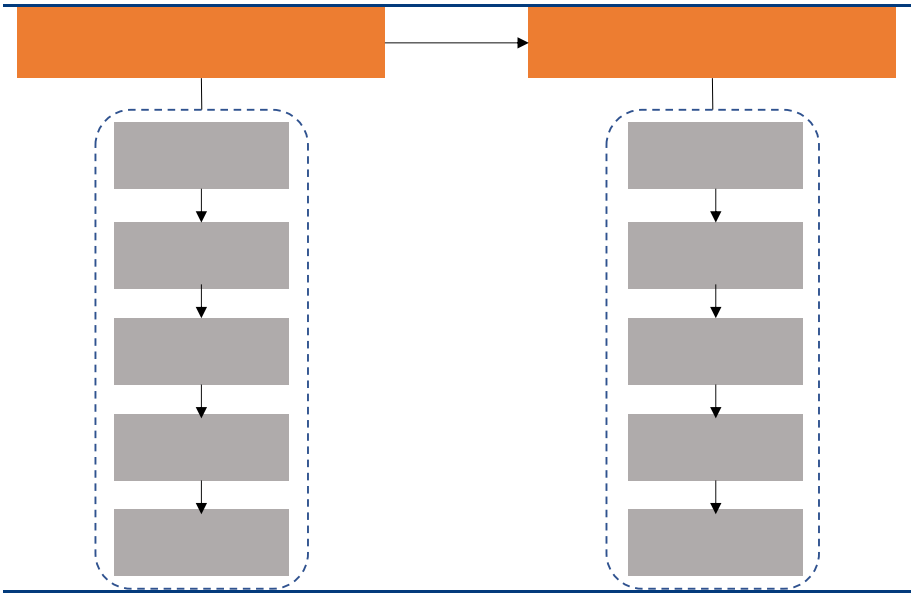
20H1 22% MOSFET 21% IGBT UPS 50% SiC 2020 7 6

8



Wind

9



/ /

CMOS/ANALOG BICMOS RF/Mixed-Signal CMOS BCD MEMS

0.11εm 0.18εm 0.25εm 0.35εm 0.5εm 0.5εm

BCD BCD CMOS CMOS DMOS

BCD 0.18εm BCD

MOSFET IGBT

8 6.5 6 20
2018

10 turn-key

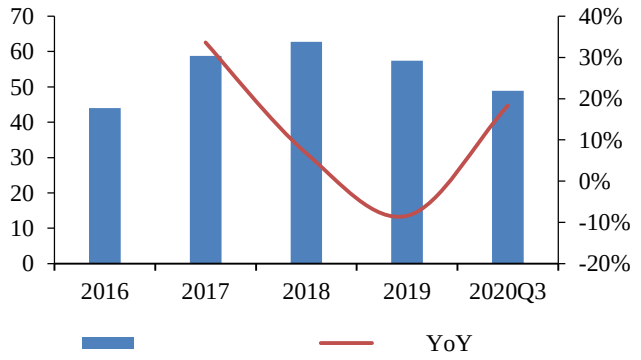
12

TCL

9.3% CAGR 6.5% 8.7% 2019
8% ð ð 2019 2018 12.16%
2019H1 2020 49
18%

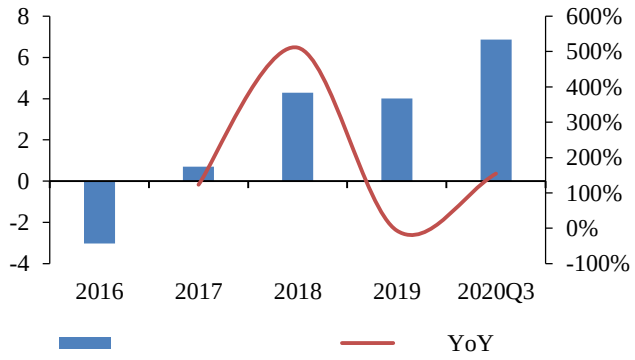
2017 宝 2016 -3.03
2016 9 10
2015-2016 2017
0.7 2018 500% 4 2020
6.87 155%

15 2016



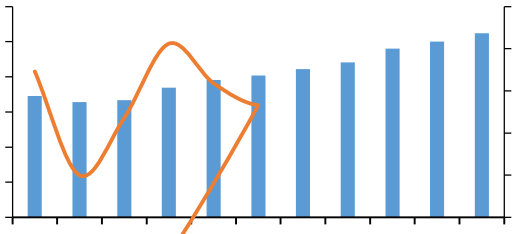
Wind

16 2016



Wind

17 2014-2024



IHS Markit

18 2015-2021

IDM
20H1 78.5%
97.5%

19 2020H1

Wind

		2003
		2000
		1990

2020

2017 8
2009 8 2017 2016-2020H1
9.06 13.09 9.15 6.62 3.18 2017 2017 22.3% 2020H1
10.4% 17.6% 27.3% 2017 4
52.41% 3.8 0.7

22 2017-2019 2018

2019

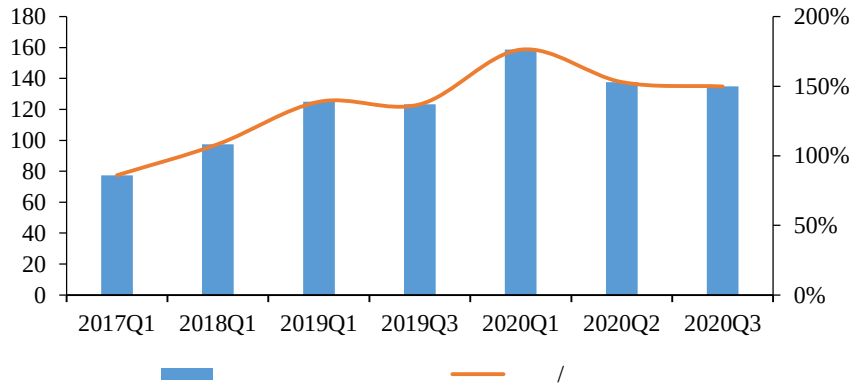
2019

23 2016-2020H1

24 2016-2020H1

Wind

27 2016-2019H1



Wind

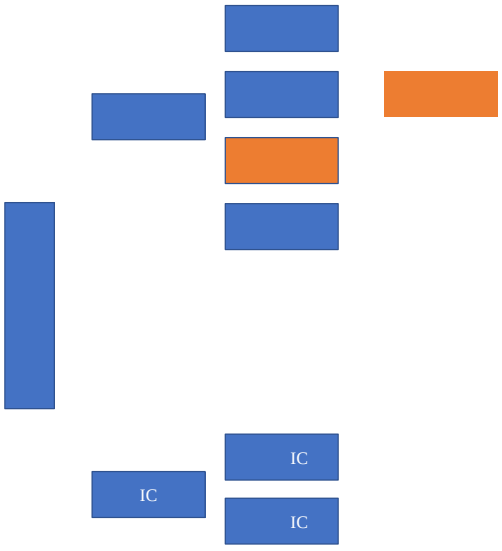
2020

IC

P/N

IC IC IC AC/DC DC/DC IC

28



MOSFET IGBT

SBD FRD SBD FRD

UPS

MOSFET MOS MOS MOS MOS
IHS 40%

IGBT MOSFET IGBT 1700V

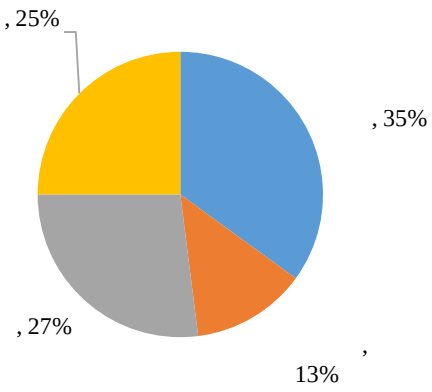
SiC GaN SiC
GaN
5G SiC

1. 500

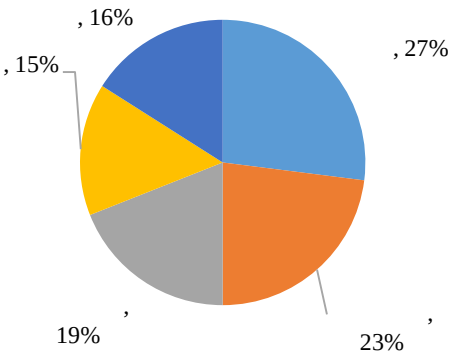
5G

35% 27% 13% 75%
27% 23% 19% 15% 16%

29 2019

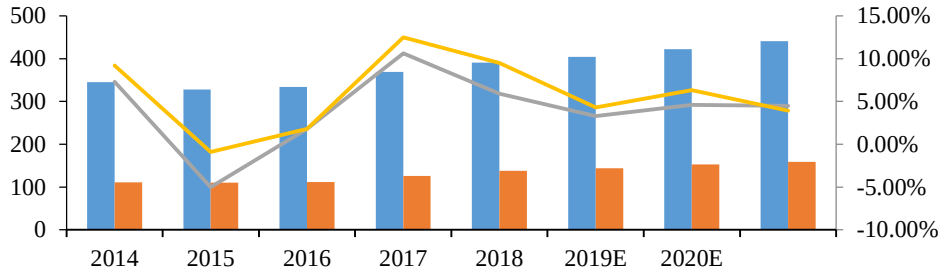


30 2019



500 IHS Markit 2019
404 Omida 2024 524 5.3%
2018 138 9.5% 35%
2021 159 4.8%

31 2014-2021



IHS Markit

MOSFET IGBT 60

IC Insights

MOSFET IGBT MOSFET 2019 68 2022 75 IGBT2020 58 2022 67

32 2017-2022 MOSFET IGBT

2.

Top10 Yole 2019 & 35 20 12 Top15 4 5 5 1 2019

33 To15 & 34



Yole

Yole

2015

1970 1832 93%

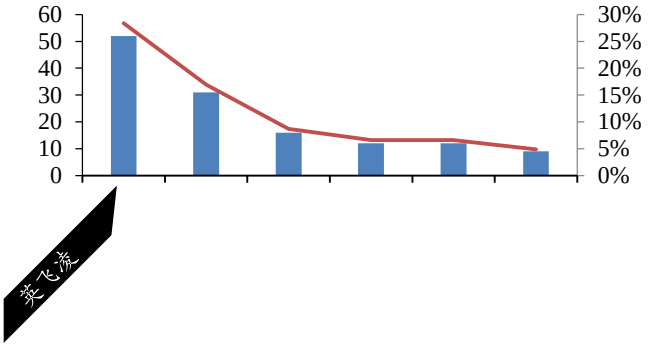
2016-2018 83% 77% 70% 2017

2025 50%

3000 50% 1500

35 2011

37 2018 MOSFET



IHS Markit

38 2018 MOSFET

IHS Markit

IGBT IHS Markit 2018 IGBT 75%

IGBT 90%

39 2017 IGBT

IGBT IDM IDM

40 IGBT

SITRI

5G

5G **900**

Yole 2017 -2023 IGBT MOSFET

300 2025 150

2023 440 2022 900

41 2017-2023 MOSFET IGBT

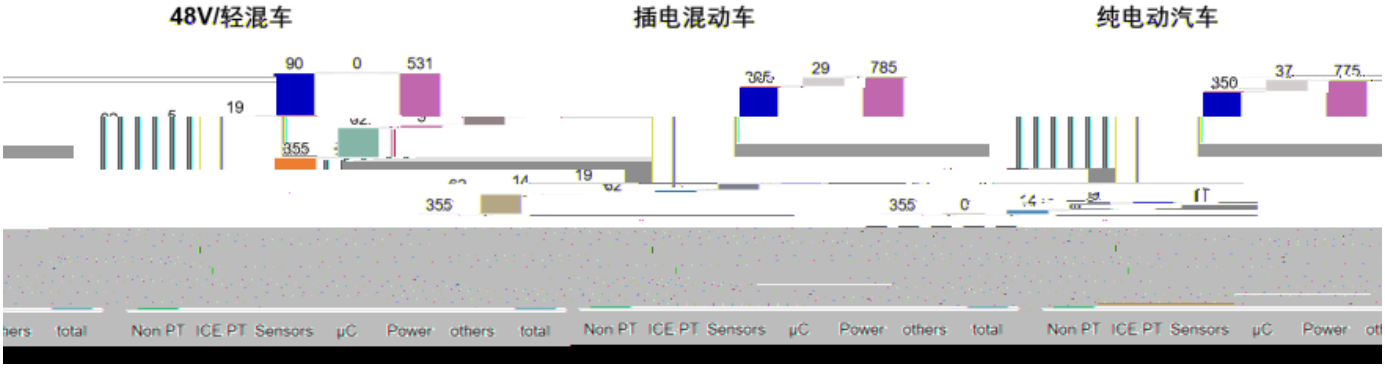
Yole

1. 300

17 90 305

360 /RelativeColorimetric ri 1 i /FX3 gs EMC /P /MCID 78 BDC 36.84 174.26 408.91 0.960022 refq BT/F3 10.56 Tf 0 Tc 0

42 265



MOSFET&IGBT 300

MOSFET&IGBT MOSFET 2022 116
2025 IGBT 210 IGBT 310

43 2017-2021



44 2017-2021

Bloomberg NEF marklines

45 MOSFET

46 2025 IGBT

2. 5G 23

5G 5G Massive MIMO AAU DU CU 5G 100 4

5G **5G** **700** 4G 5G 5G 4G 1.5-2 4G 4G 1.5

1. 2017

2017-2018 8 8
2016 20.6% 14.6% 2017-2018 7.6% 7.1%
5.0% 11.5% 2016-2018 8 CAGR 32% 20%

53 2016-2018 8 **54 2015-2018**
/ /

8

8 8 20 90 2000 2017 12 75% 12 8 VLSI research 2018 12 116 8 9 ð ð 8 8

Surplus Global 2017 8 3 5 2018 2018 8 2000 500 8 8 8

60 2009-2017 12 **61 2018 8**



688396

72 2013-2022 8 /

SEMI

2020

IDM

IDM 7 2020 H1

73

20H1

84 2020H1

			/
	8	20H1	1.6
	12		
	12	2019 9	4
	8	20H1	1.5 2.1
	8	20H1	8

2020H1

SEMI 2019-2022 16 8

86 IDM Fabless

Wind

IDM+ IDM Fabless

know-how

z691 0 0 Tm EMC /TJ9 1 0 0 Tm EMC Tc 1 0 0 1 0 0 Tm EMC /P <MCID 57>BDC 88g 15Y4.9J/F3 10.56 Tf 1 0 0 1 0 0 Tm EMC /620

IDM

87

	/						

	2019A	2020E	2021E	2022E
	1,931	2,169	3,184	4,723
	191	580	628	671
	815	886	1,044	1,211
	52	60	73	85

	2019A	2020E	2021E	2022E
	5,743	**7,083**	**8,637**	**9,995**
	4,431	5,082	6,203	7,282
	66	82	100	100
	112	131	157	172

			010-66500809	zhangyujie@hcyjs.com
			010-66500827	duboya@hcyjs.com
			010-66500817	zhangfeifei@hcyjs.com
			010-63214670	houchunyu@hcyjs.com
			010-63214683	houbin@hcyjs.com
			010-63214683	guoyunlong@hcyjs.com
			010-66500867	liuyi@hcyjs.com
			010-63214683	dana@hcyjs.com
				cheyizhe@hcyjs.com
			0755-82828570	zhangjuan@hcyjs.com
			0755-83715428	wangliyan@hcyjs.com
			0755-82756805	duanjiayin@hcyjs.com
			0755-83024576	zhuyan@hcyjs.com
			0755-82756805	baoqingqing@hcyjs.com
			021-20572536	xucaixia@hcyjs.com
			021-20572555	guanyichao@hcyjs.com
			021-20572257-2552	huangchang@hcyjs.com
			021-20572585	zhangjiani@hcyjs.com
			021-20572506	wujun1@hcyjs.com

021C 318.89 364.01 TD(021)]TJET

(300)

	6	20%
	6	10% 20%
	6	-10% 10%
保	6	10% 20%

	3-6	5%
	3-6	-5% 5%
保	3-6	5%

ñ ò