

688396.SH

IDM

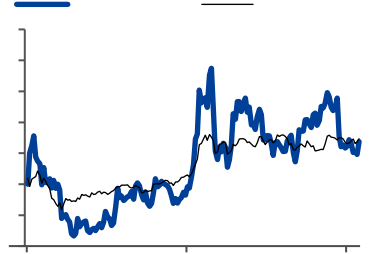
5G

MOSFET

12

8

12



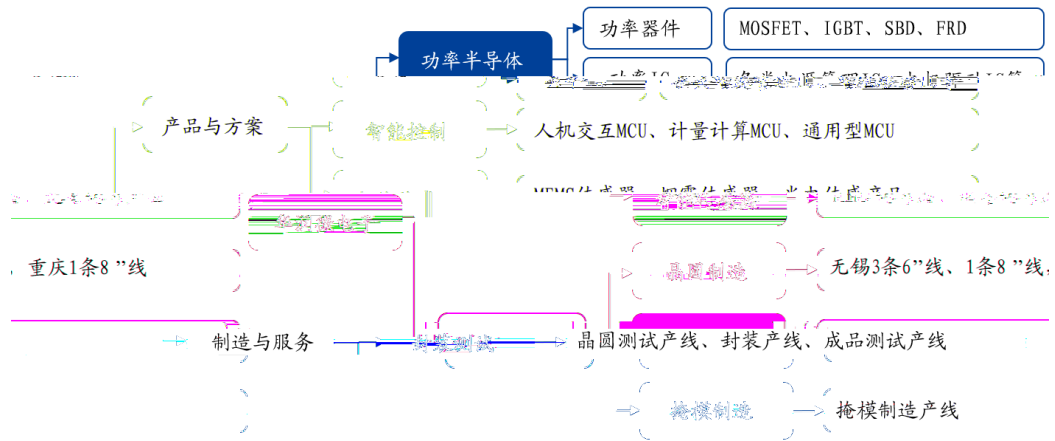
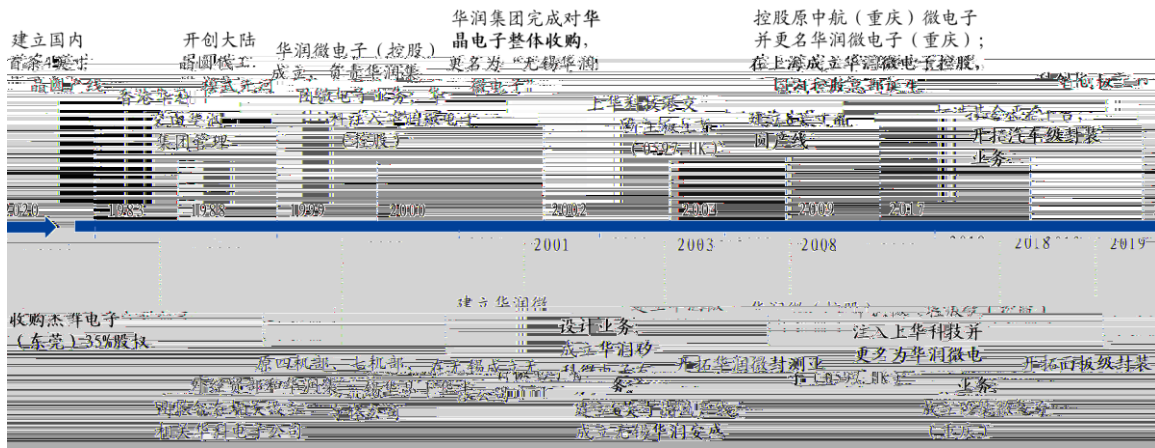
2018A 2019A 2020E 2021E 2022E





IDM

1.1



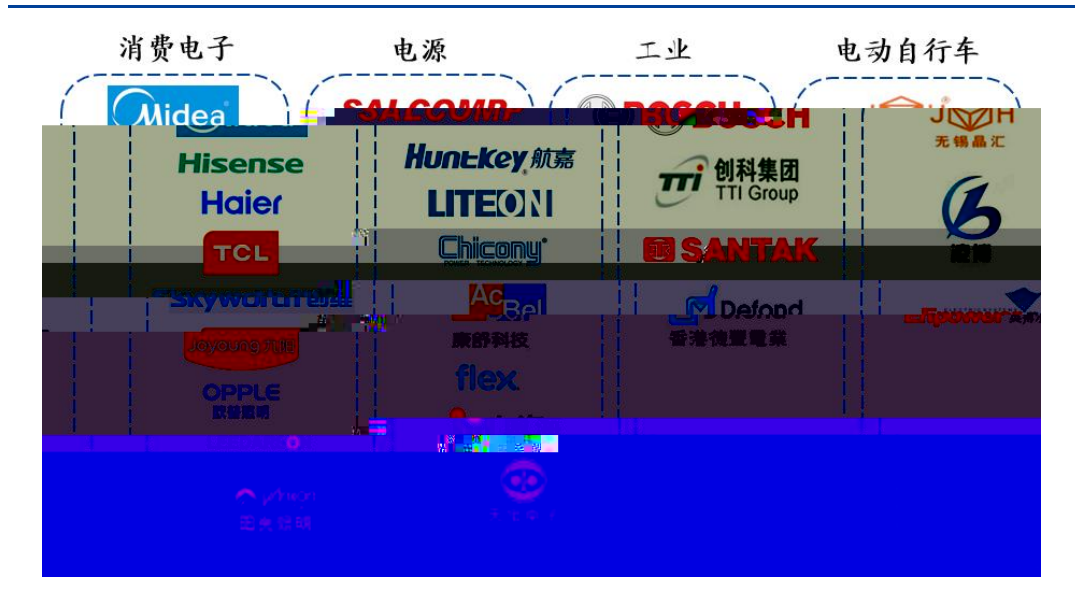
2019	MOS
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16

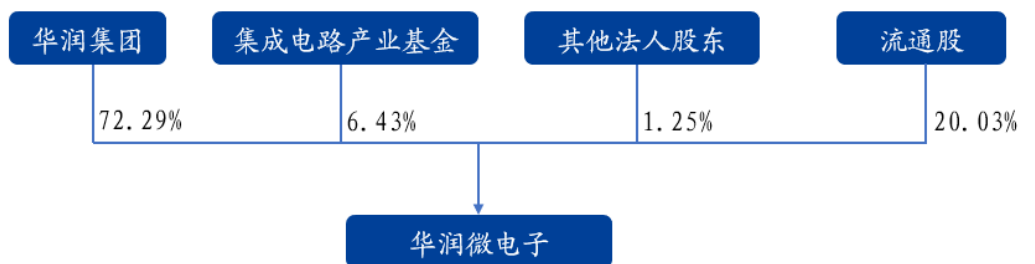
7.5%

IC

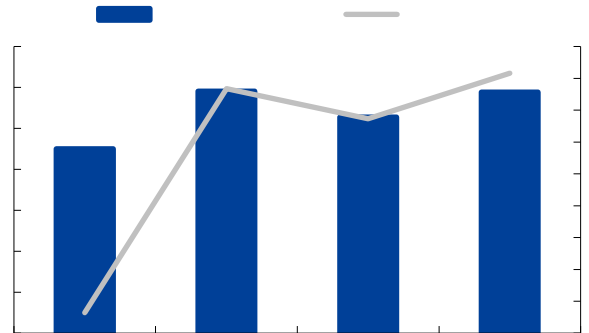
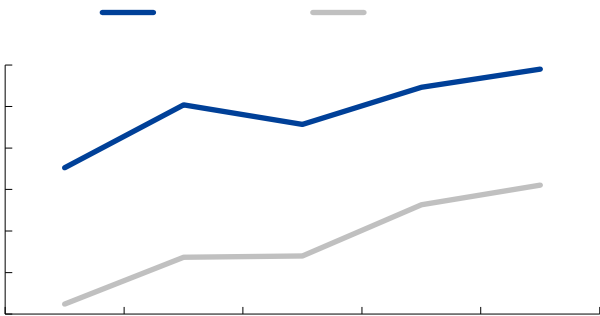
2018

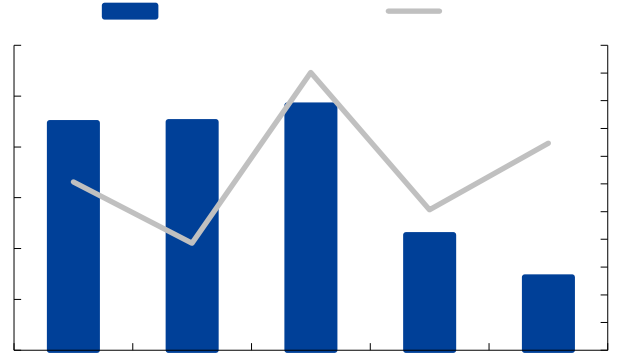
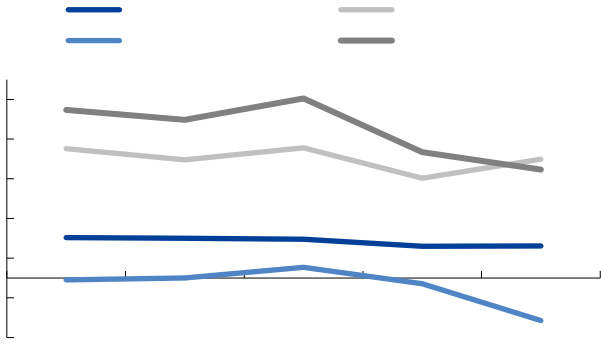


1.3



2019	2018	2017	2019	2018	2017	2019	2018	2017
25.2	26.8	23.4	44.1%	42.9%	39.9%	29.5%	34.0%	19.6%
31.8	35.7	35.2	55.9%	57.1%	60.1%	17.8%	18.6%	16.3%
57.0	62.6	58.6	100.0%	100.0%	100.0%	22.9%	25.2%	17.6%

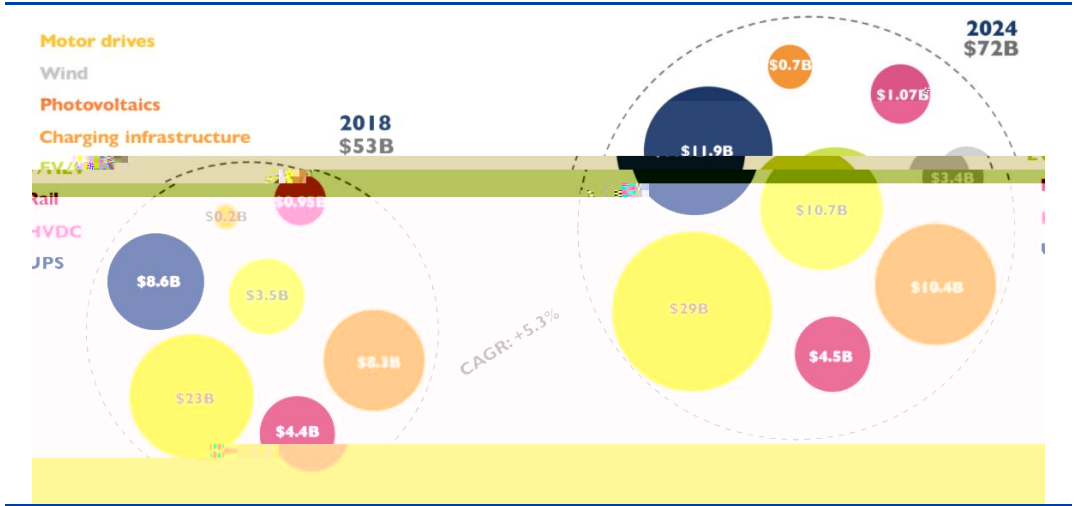




Yole 2018

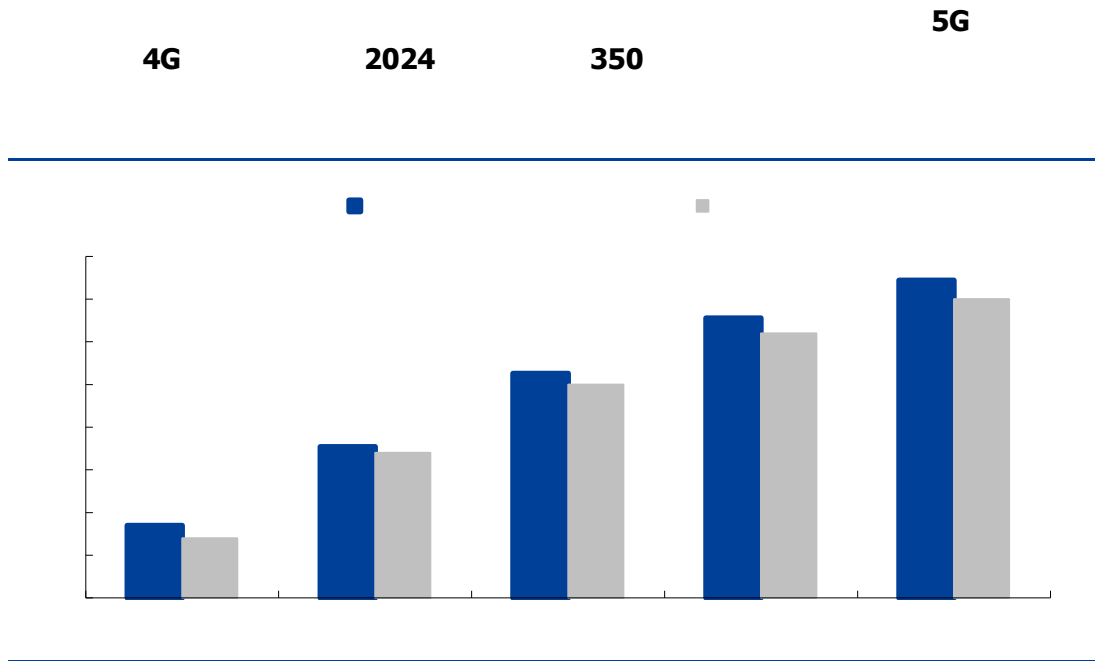
2.1 5G

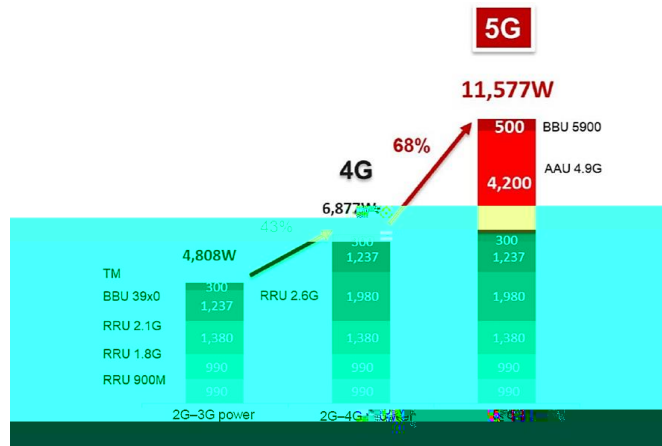




2.1.2 5G

5G			5G	
2.3GHz	3.5GHz	4.9GHz	26GHz	29GHz



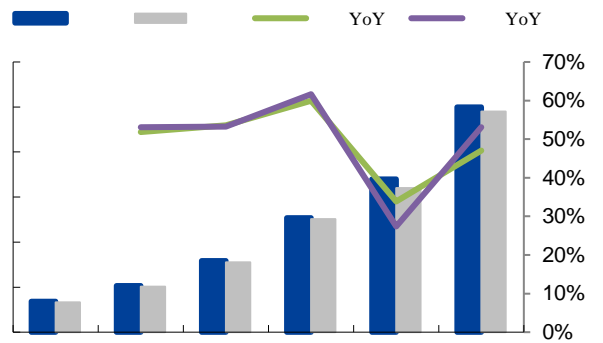
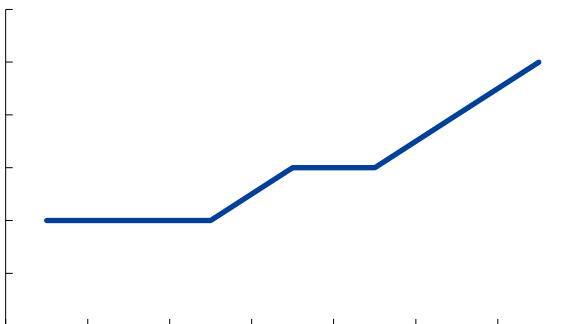


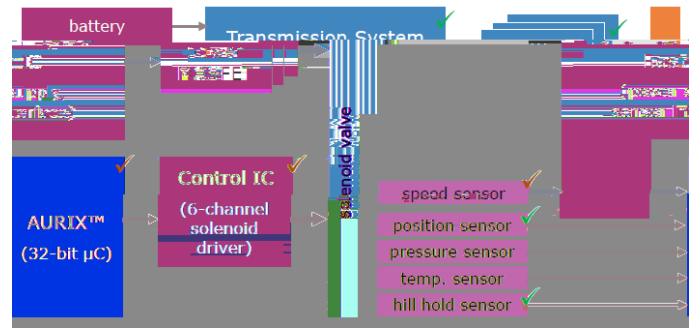
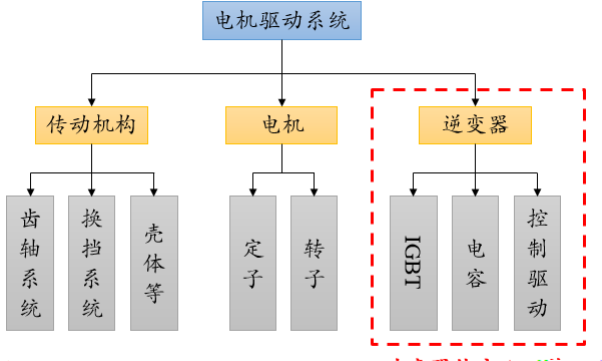
2.2

IBGT

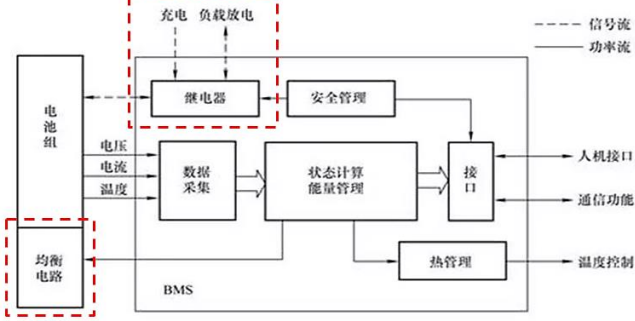
MOS

2011	8000	2017	79.4
2.7%		2012-2020	2020
500	200		

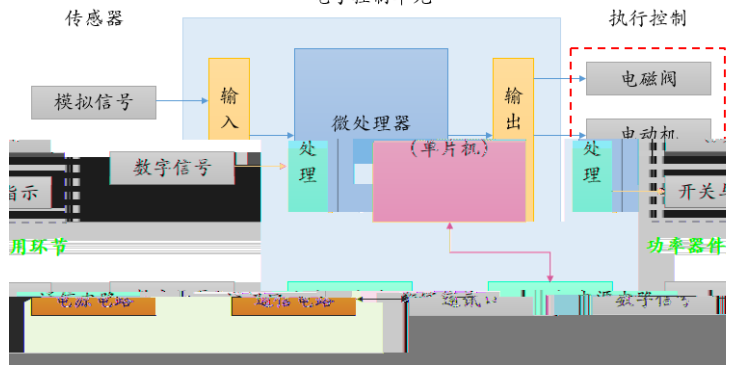




功率器件应用环节

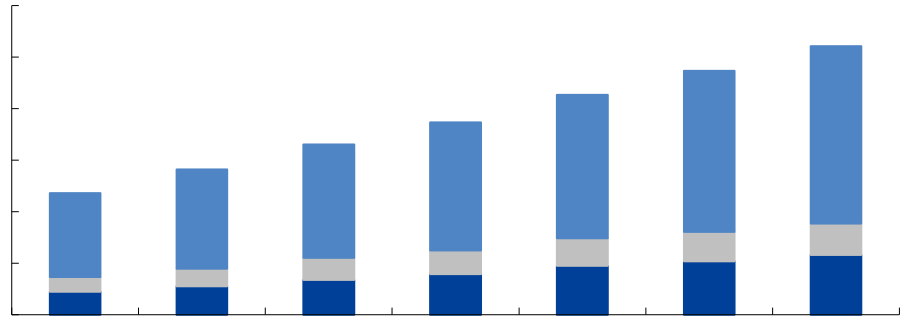


电子控制单元



EV/HEV

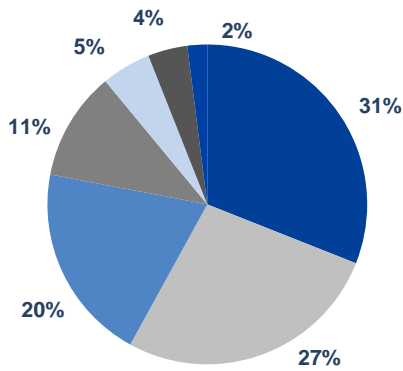
Yole		BEV		EV/HEV		HEV	
2017	8.1	2017	22%	2023	5.8	2023	2.2
				CAGR		43.4%	



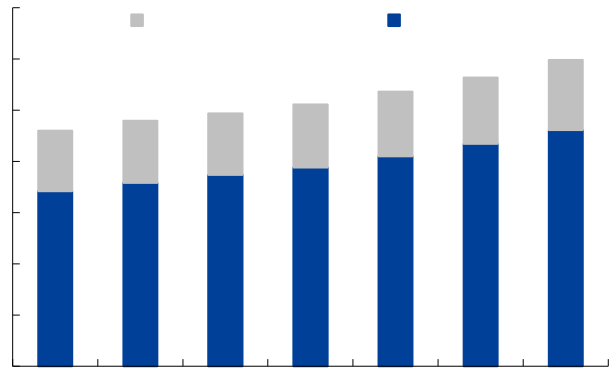
IGBT

IGBT
 31% HIS Markit 2018 IGBT
 IGBT 2017 50 IGBT 2020-2025 47.9 Yole 2019
 CAGR 5%

2018 IGBT



IGBT



Yole

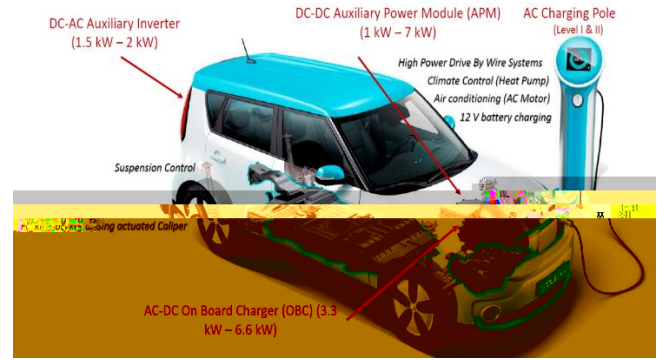
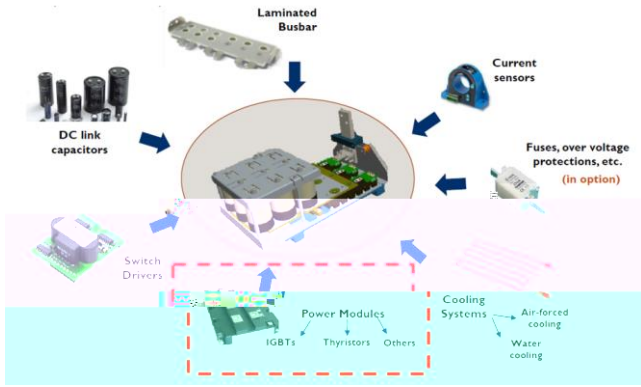
IGBT

50%

IGBT IGBT

IGBT

IGBT
/ (DC/AC)



IGBT

IGBT

36

96

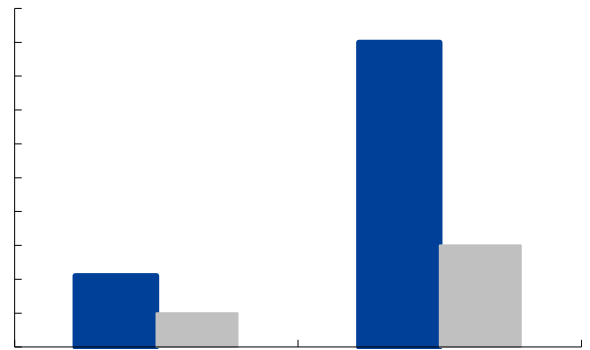
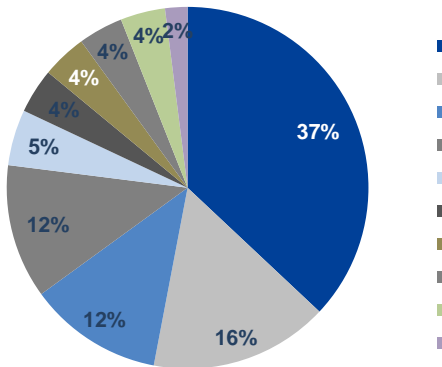
15~20%

40%

IGBT
Model X
650

20%
132 IGBT

5%



Trendforce

IGBT
2018-2025 8
IGBT

IGBT
2025 900
100 8

Trendforce
IGBT 210
2025 300

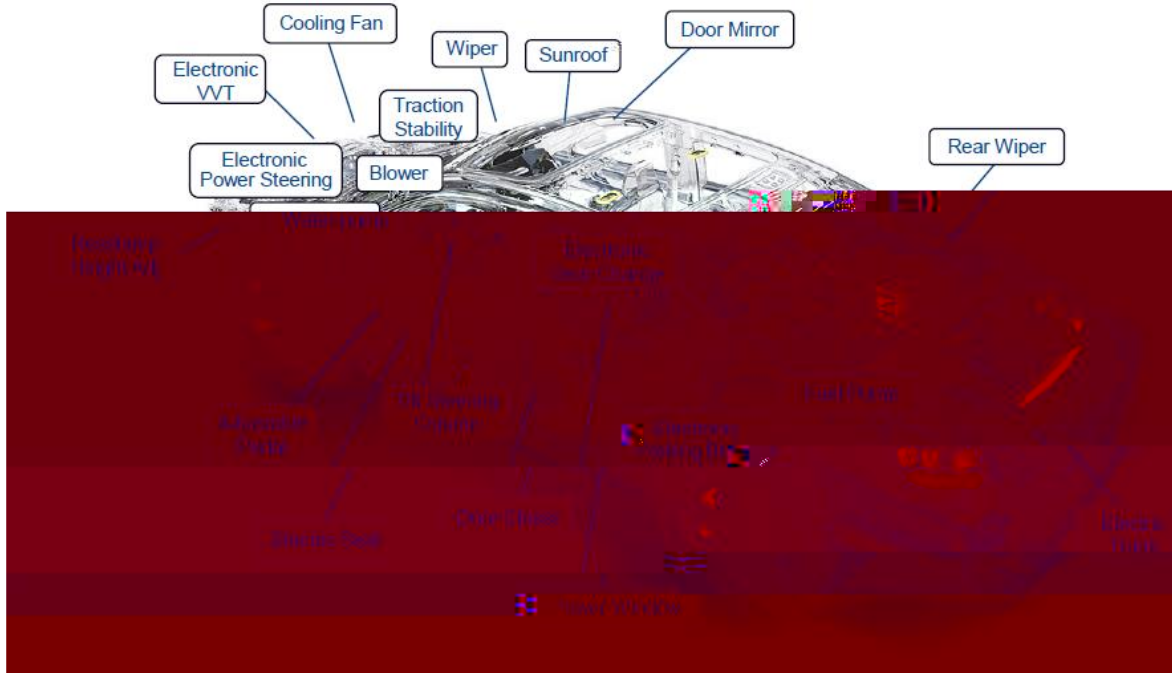
MOSFET

IGBT MOSFET

IGBT
MOSFET

MOSFET

IGBT 1000V 350A

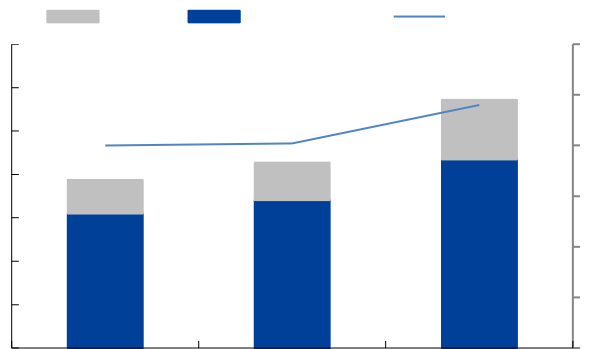
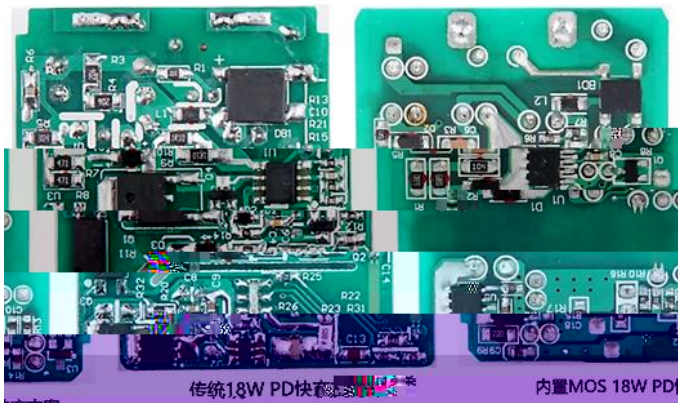


Didodes

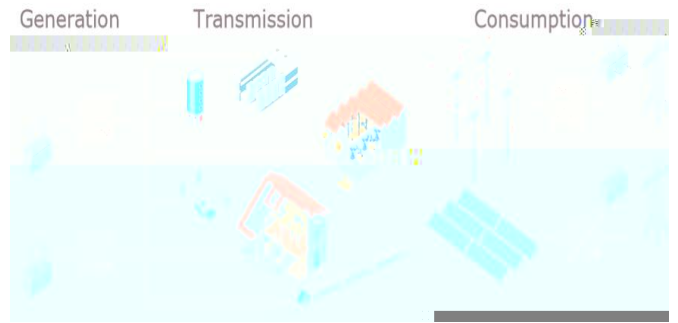
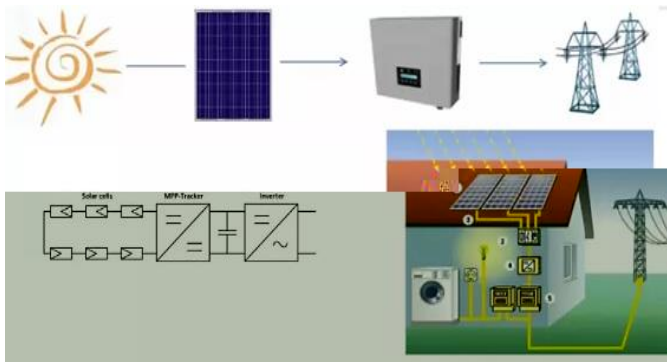
2.3

MOSFET

			iPhone 12	
20%	BCC Research	2017	85.49	
		2022	27.4	24%
	MOSFET	MOS		
	MOS		MOS	



15%-30%



BP 2018 Energy Outlook

IGBT

	32	IGBT		CRH3		4	
			10	IGBT		128	IGBT
IGBT							3300
				10	20	3300	IGBT
				15			

3.1

/

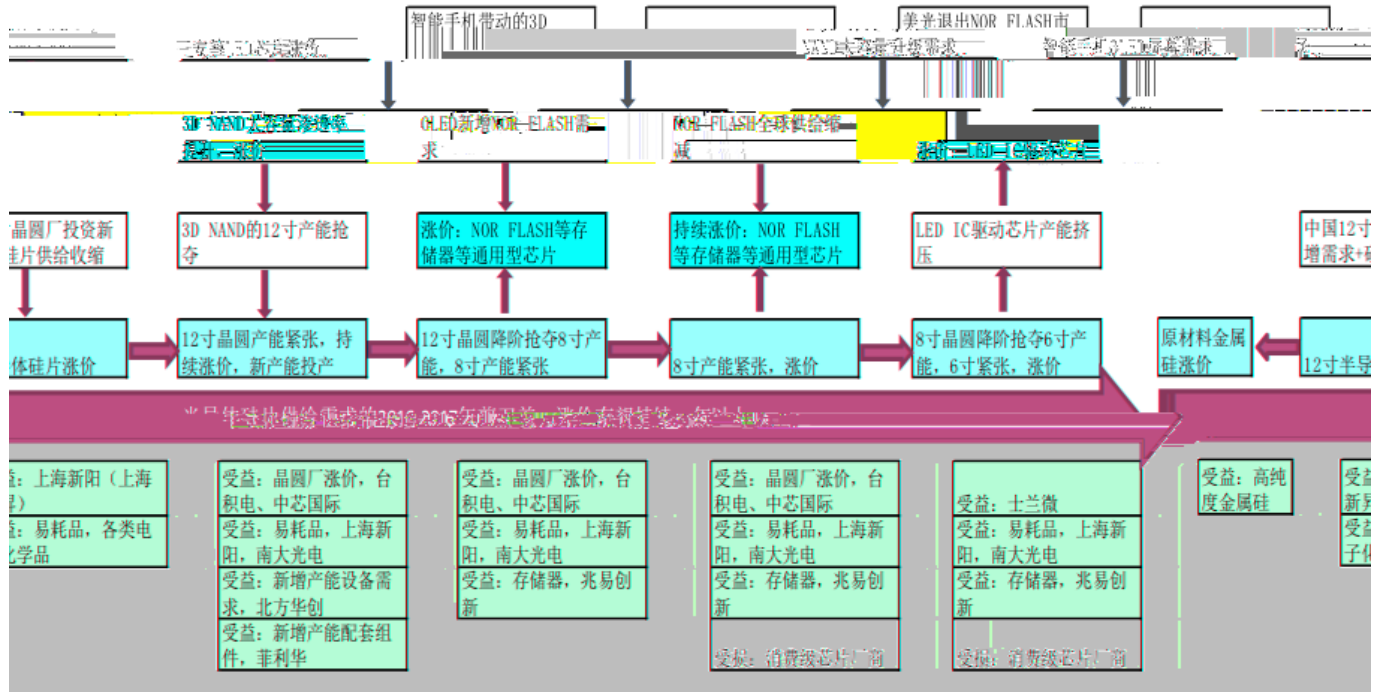
4-6

raw wafer

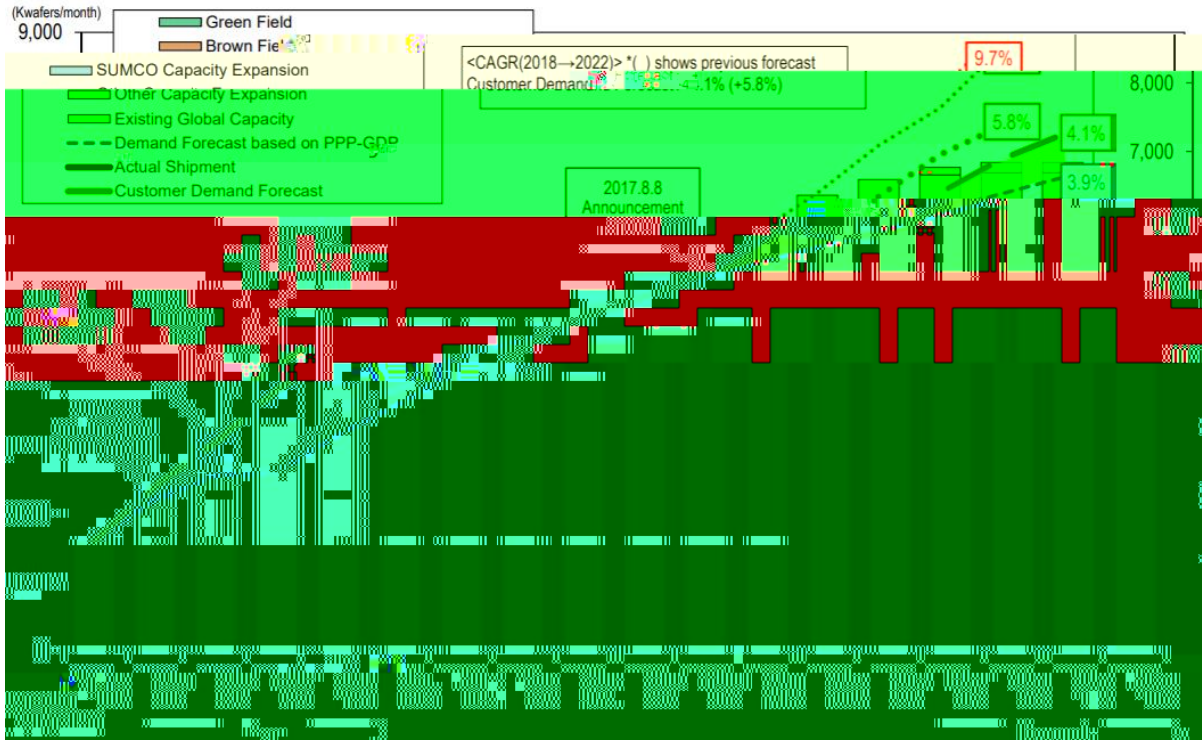
10%

12

8



	12		2020					
		12	2001			SUMCO	2019	
	12	602	/	12	120	/	NAND	DRAM
EXCHANGE	190	/	12			2023	200	/



SUMCO

8

8

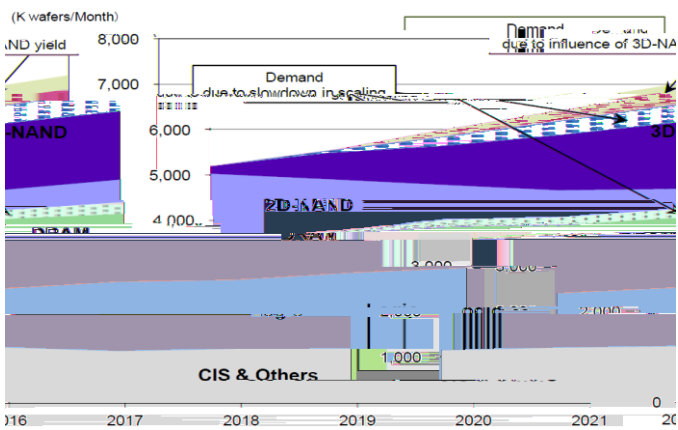
CIS PMIC Nor Flash

IC MEMS

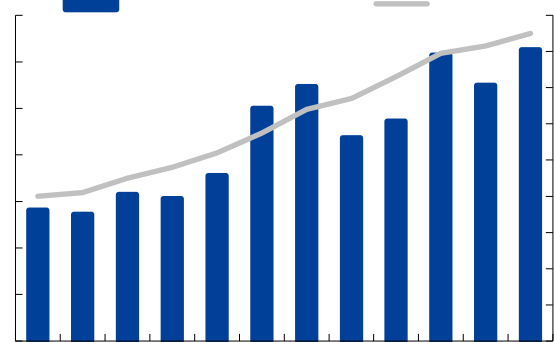
59 12

60 12

2020-2023



Semico



AnySilicon

8

6

12

8

MEMS

1990 2007

8

12

IC Insights

12

8

2009-2017

12

PE-TTM

PB
