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87.41

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61,039

	2018A	2019A	2020E	2021E	2022E
	6,271	**5,743**	**6,719**	**8,197**	**10,083**
	4,690	4,431	4,752	5,574	6,639
	85	66	77	94	116
	126	112	131	172	219
	374	377	336	410	504
EBIT	**546**	**274**	**926**	**1,209**	**1,646**
	0	0	0	0	0
	11	0	0	0	0
	0	31	47	-52	-78
	586	**478**	**1,120**	**1,564**	**2,106**
	53	-6	116	160	215
	108	112	104	144	193
	429	**401**	**940**	**1,299**	**1,738**
	1,538	2,438	7,500	8,639	10,176
	27	44	44	44	44
	0	82	82	82	82
	3,898	3,816	3,806	3,796	3,746
	571	557	557	557	557
	9,992	**10,095**	**15,600**	**17,446**	**19,834**
	4,654	1,979	2,127	2,480	2,936
	318	1,726	1,726	1,726	1,726
	5,020	6,391	11,748	13,241	15,173
(IC)	**7,471**	**7,897**	**13,254**	**14,747**	**16,679**
NOPLAT	497	277	833	1,088	1,482
	953	709	510	410	350
	133	-1,192	105	115	144
	-533	-611	-658	-607	-557
	1,050	**-816**	**791**	**1,006**	**1,419**
	1,482	576	1,497	1,802	2,200
	-575	-41	-658	-607	-557
	-627	-180	4,223	-56	-105 6.
	281	**356**	**5,062**	**1,139**	**1,538**
	6.7%	-8.4%	17.0%	22.0%	23.0%
EBIT	8150.3%	-49.9%	238.0%	30.6%	36.2%
	511.0%	-6.7%	134.5%	38.3%	33.8%
	25.2%	22.8%	29.3%	32.0%	34.8%
EBIT	8.7%	4.8%	13.8%	14.7%	16.3%
	6.8%	7.0%	14.0%	15.9% 6.	17.7%
(ROE)	10.4%	7.4%	8.8%	10.8%	12.6%
(ROA)	5.4%	5.1%	6.7%	8.3%	9.7%
(ROIC)					

6.

1.

MOSFET IGBT

1

1

(GaAs) **(InP)**

(InSb) **(GaN)** **(SiC)** **(CdS)** 20 90

(GaAs) (InP)

1

2.2. SiC

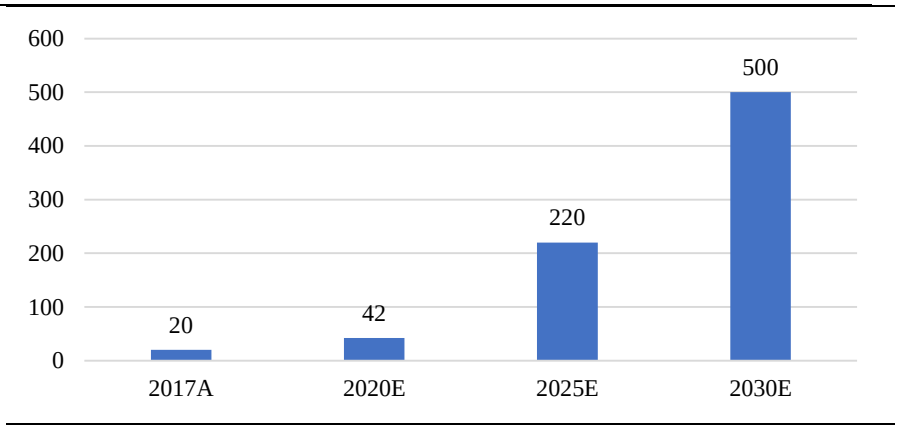
4H SiC(4H-SiC)

1 /

2010 Cree 6
2015 2015 Cree II-VI
8

6 **2030 6** **SiC**
40 Yole 2017 4
10 6 1.5 2020 4
10 6
8

			SBD
SiC		PiN	PiN
			JBS



Yole

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3

4

99 %

50 %

5

2001 600 V

SiC MOSFET JBS

SiC MOSFET

SiC JBS

7 4 SiC

SiC

5G 2020 5G

SiC

SiC

10 SiC

12 GaN 600V



SiC GaN

GaN

GaN

Si SiC

GaN-on-Si GaN-on-SiC

GaN-on-SiC GaN SiC

GaN SiC

GaN

GaN-on-Si GaN-on-SiC

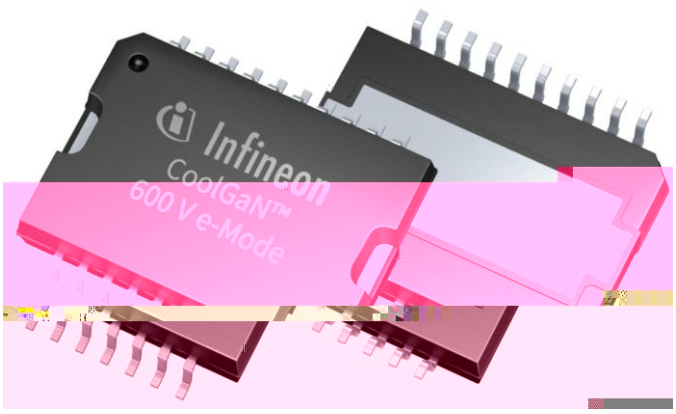
Macom GaN-on-Si

GaN-on-SiC GaN-

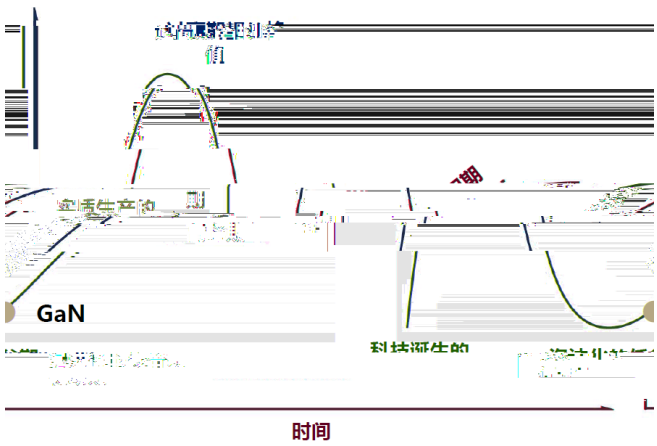
on-Si SiC

GaN-on-Si

13 CoolGaN™



14 GaN



15 GaN-on-Si

GaN

16.94%

7.46% 5.14%

3.24%

19	20	3.24%

3

2020 10 10

41 2013 9