

(688396)

2020.07.08

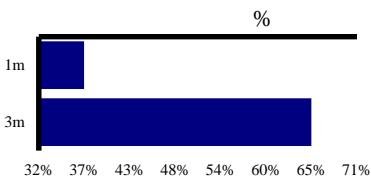
(688396)

74.80

62.55

57.81

www.crmicro.com



52

32.38-59.45

70,293

EBIT

| | 2018A | 2019A | 2020E | 2021E | 2022E |
|--|-------|-------|-------|-------|-------|
| | 6,271 | 5,743 | 6,440 | 7,406 | 8,888 |
| | 4,690 | 4,431 | 4,755 | 5,378 | 6,320 |
| | 85 | 66 | 74 | 85 | 102 |
| | 126 | 112 | 126 | 144 | 173 |
| | 374 | 377 | 423 | 486 | 583 |
| | 546 | 274 | 502 | 645 | 865 |
| | 0 | 0 | 0 | 0 | 0 |
| | 11 | 0 | 0 | 0 | 0 |
| | 0 | 31 | 47 | -40 | -48 |
| | 586 | 478 | 685 | 956 | 1,244 |
| | 53 | -6 | 72 | 100 | 128 |
| | 108 | 112 | 130 | 179 | 231 |
| | 429 | 401 | 522 | 717 | 925 |

| | | | | | |
|--|-------|--------|--------|--------|--------|
| | 1,538 | 2,438 | 6,984 | 7,310 | 7,760 |
| | 27 | 44 | 44 | 44 | 44 |
| | 0 | 82 | 82 | 82 | 82 |
| | 3,898 | 3,816 | 3,966 | 4,266 | 4,566 |
| | 571 | 557 | 557 | 557 | 557 |
| | 9,992 | 10,095 | 15,203 | 16,412 | 17,966 |
| | 4,654 | 1,979 | 2,121 | 2,384 | 2,783 |
| | 318 | 1,726 | 1,726 | 1,726 | 1,726 |
| | 5,020 | 6,391 | 11,356 | 12,302 | 13,458 |
| | 7,471 | 7,897 | 12,862 | 13,808 | 14,964 |

(IC)

NOPLAT

| | | | | | |
|--|-------|--------|-------|------|-------|
| | 497 | 277 | 452 | 581 | 778 |
| | 953 | 709 | -7 | -7 | -7 |
| | 133 | -1,192 | 63 | 64 | 99 |
| | -533 | -611 | -308 | -508 | -557 |
| | 1,050 | -816 | 200 | 130 | 314 |
| | 1,482 | 576 | 631 | 889 | 1,113 |
| | -575 | -41 | -308 | -508 | -557 |
| | -627 | -180 | 4,223 | -56 | -105 |
| | 281 | 356 | 4,546 | 325 | 450 |

EBIT

| | | | | | |
|--|---------|--------|-------|-------|-------|
| | 6.7% | -8.4% | 12.1% | 15.0% | 20.0% |
| | 8150.3% | -49.9% | 83.3% | 28.6% | 33.9% |
| | 511.0% | -6.7% | 30.2% | 37.4% | 29.0% |

EBIT

| | | | | | |
|--|-------|-------|-------|-------|-------|
| | 25.2% | 22.8% | 26.2% | 27.4% | 28.9% |
| | 8.7% | 4.8% | 7.8% | 8.7% | 9.7% |
| | 6.8% | 7.0% | 8.1% | 9.7% | 10.4% |

(ROE)
(ROA)
(ROIC)

| | | | | | |
|--|-------|------|------|------|------|
| | 10.4% | 7.4% | 5.1% | 6.5% | 7.7% |
| | 5.4% | 5.1% | 4.3% | 5.5% | 6.4% |
| | 6.7% | 3.5% | 3.5% | 4.2% | 5.2% |

PE

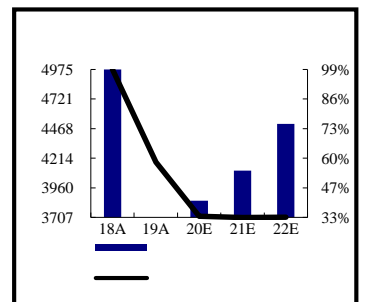
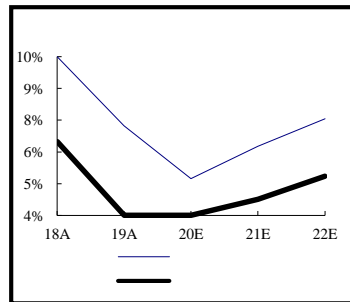
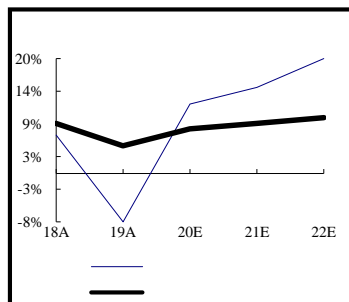
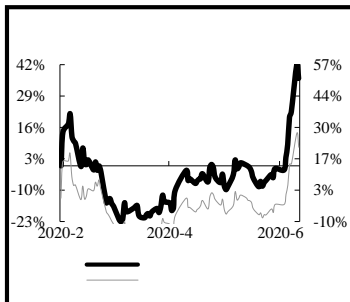
| | | | | | |
|--|-------|-------|-------|-------|-------|
| | 91.9 | 86.9 | 86.9 | 86.9 | 86.9 |
| | 35.0 | 51.8 | 51.8 | 51.8 | 51.8 |
| | 581.6 | 641.6 | 861.6 | 808.8 | 737.9 |
| | 3.5 | 1.4 | 1.2 | 1.2 | 1.2 |
| | 8.5% | 10.6% | 4.8% | 6.9% | 6.3% |

PB

| | | | | | |
|--|-------|-------|-------|-------|-------|
| | 49.8% | 36.7% | 25.3% | 25.0% | 25.1% |
| | 99.1% | 58.0% | 33.9% | 33.4% | 33.5% |

EV/EBITDA
P/S

| | | | | | |
|--|--------|--------|--------|--------|-------|
| | 161.59 | 173.16 | 132.95 | 96.76 | 75.03 |
| | 0.00 | 0.00 | 6.76 | 6.29 | 5.81 |
| | 0.61 | | 124.38 | 100.34 | 74.20 |
| | 7.55 | 8.25 | 10.34 | 9.37 | 7.81 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |



| | | | | |
|-----------|-------|------------|-------|----------|
| 1. | | | | |
| 40%+ | | | | 4 |
| 1.1. | | | | 4 |
| 1.2. | | | | 6 |
| 1.3. IDM | | | | |
| 40%+7 | | | | |
| 2. | | | | 9 |
| 2.1. IGBT | | | | 10 |
| 2.2. SiC | | SiC MOSFET | GaN | .. 12 |
| 2.3. | | | IOT | 15 |
| 3. 12 | | | | 18 |
| 4. | | | | 19 |
| 5. | | | | 20 |
| 6. | | | | 20 |

1.

40%+

1

2

3

IDM

IDM

IDM

IDM

100%

40%+

1.1.

1: 8

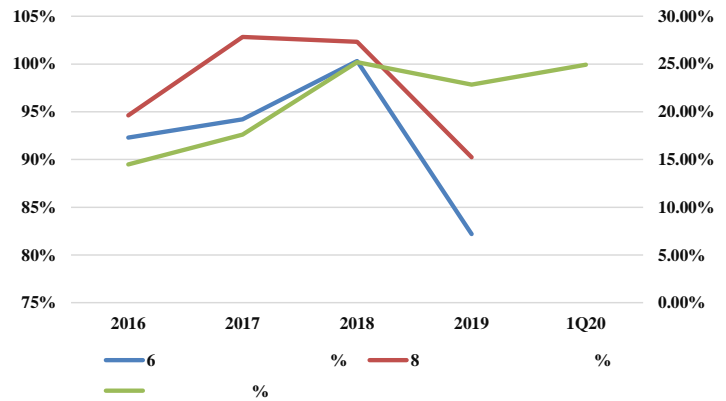
| | | | | | | |
|--|--|----|---|-------|-------|---------------|
| | | | | | | |
| | | 25 | | 5.00% | | 3.80% |
| | | 8 | | 2.00% | | 12.25% |
| | | 5 | | 0.00% | | 20.00% |
| | | 3 | 5 | 0.00% | 2.00% | 19.60% 33.33% |
| | | 8 | | 0.00% | | 12.50% |
| | | 5 | | 0.00% | | 20.00% |

2020Q1

20Q1

IDM

4 20Q1



1.3. IDM

40%+

IDM

IDM

IDM

40%+

1 IDM

IDM

IDM

2019

IDM

29.48%

17.76%

IDM

IDM

IDM

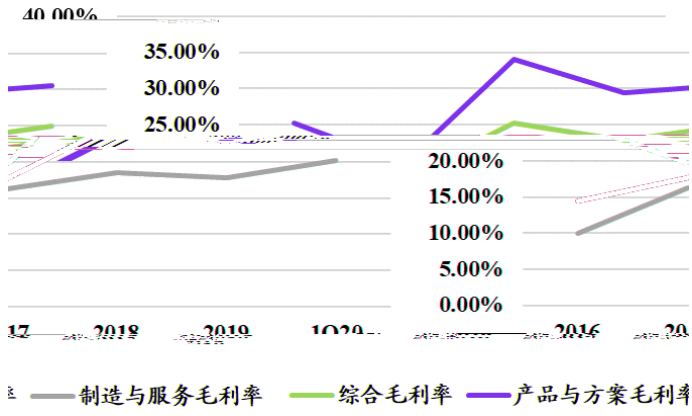
IDM

5

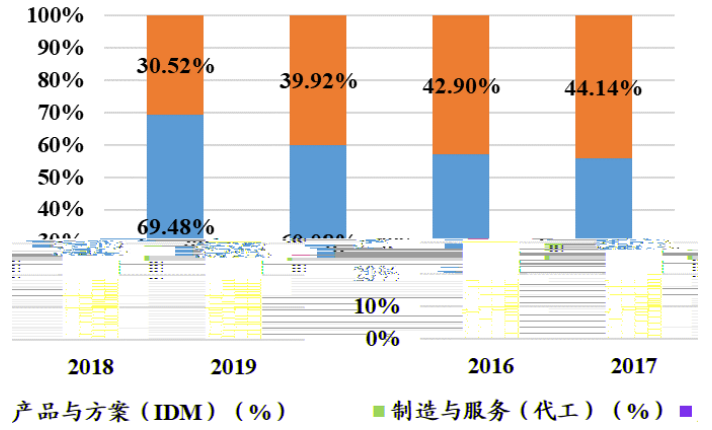
IDM

6 2016-2019

IDM



Wind



Wind

2

IDM
40%+

a

IDM

IDM

IDM

IDM

IDM

IDM

b

IDM

MOSFET

IGBT

IDM

1 2

IDM

2019

IDM

2016-

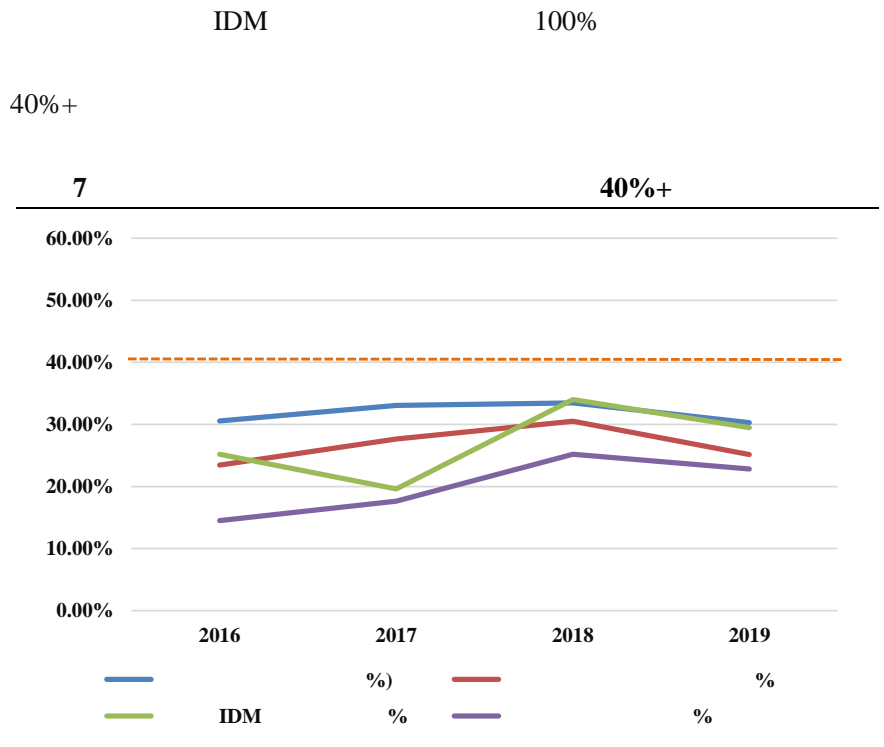
IGBT

MOSFET+IGBT

26%

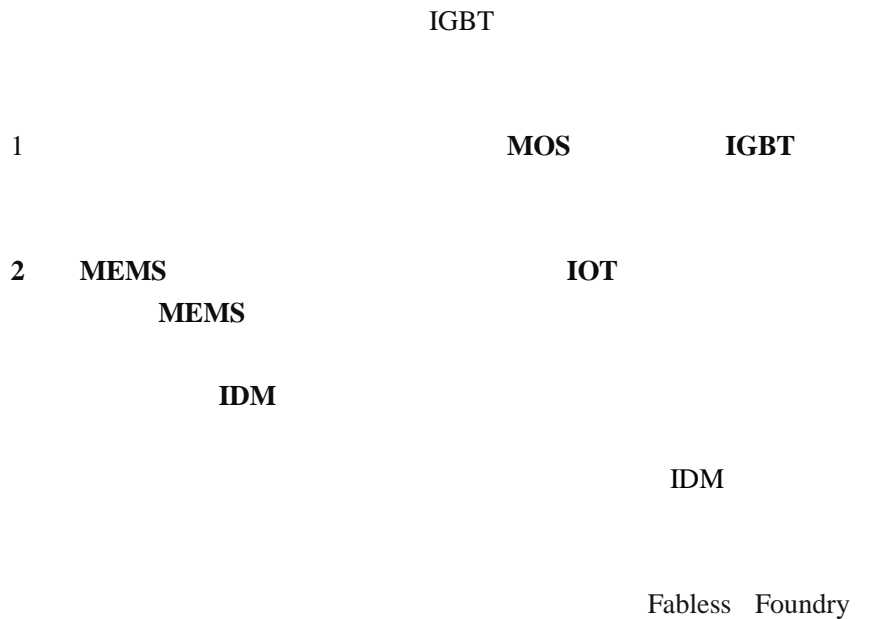
32%

58%



1
2
3
2019
2019H1
2019

2.



IDM

a

b

c

2.1. IGBT

IGBT

IGBT

IGBT

IGBT

Trench-FS

IGBT

IGBT

IGBT

IGBT

8

IGBT

IGBT

6

8

IGBT

IGBT

8 IGBT

IGBT

IGBT
76
IGBT
21
53
2 82
600V-6500V
IGBT

4 IGBT

| | |
|-------|-----------|
| <600V | / |
| 650V | / / |
| 1200V | / / / / / |
| 1700V | / |
| 3300V | / / |
| 4500V | |
| 6500V | / / / |

IGBT

IPM

MOSFET

IGBT

IPM

IPM

IPM

MOSFET

IPM

IGBT

MOSFET

IPM

IGBT

600V

15A

2019

IPM

MOSFET

IPM 500V 5A

IGBT

IPM

600V

15A

1200V

IPM

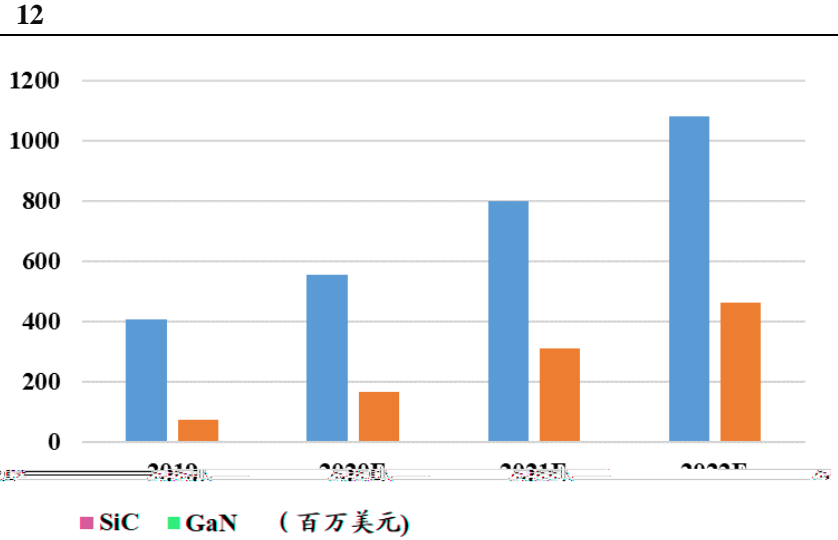
IC

5:

IPM

| | | | |
|----------|-----|----------|--------|
| CS5755MT | IPM | 5A/500V | MOSFET |
| CS5753AT | IPM | 3A/500V | MOSFET |
| DPM31560 | IPM | 15A/600V | IGBT |

Yole Development 11 2022 GaN 4.5
SiC



Yole

6

GaN SiC IDM
650V GaN
SiC JBS SiC MOSFET

6

SiC GaN

GaN

6

SiC

SiC

GaN

GaN

GaN

600V

GaN HEMT

6 GaN MOCVD

650V

SiC

6

SiC

1000

2000

SiC

JBS

)

SiC MOSFET

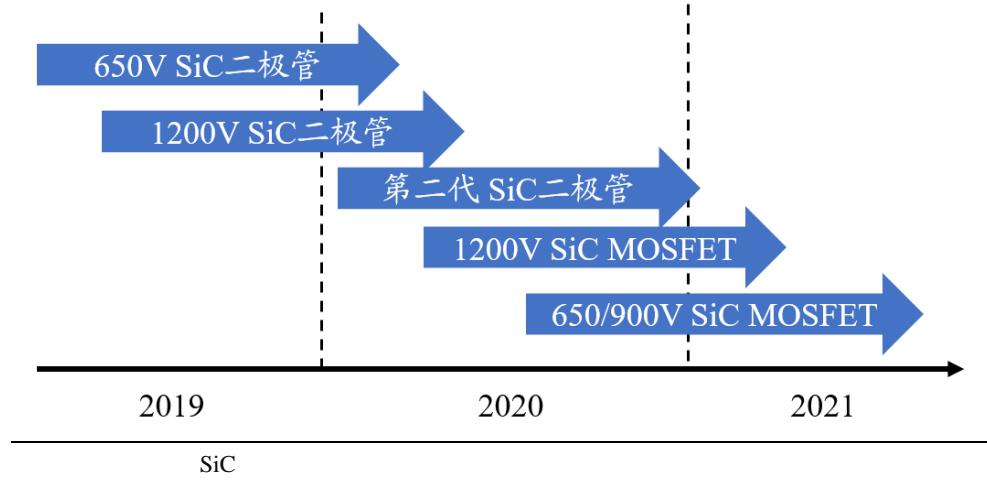
-

1200V 650V SiC JBS

8 SiC MOSFET UPS 650V 1200V 2020 6
2021

6 SiC
650V 4-50A 1200V 2-40A

13

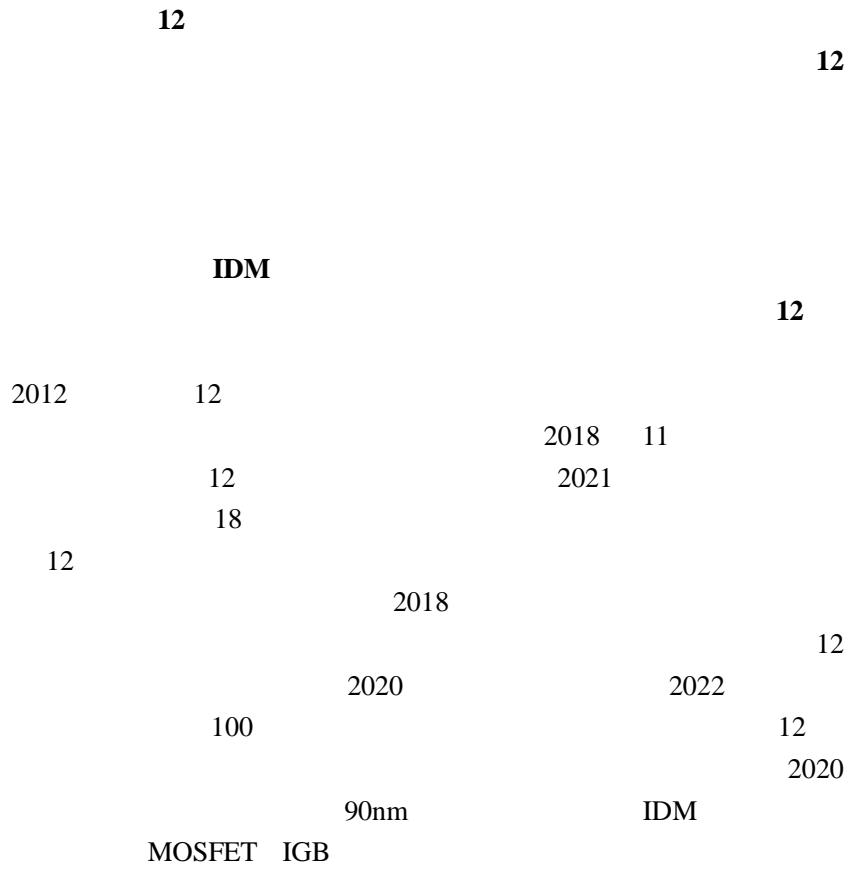


SiC
5G
SiC / OBC
2020
UPS
DC-
PCU
DC

14 SiC

Yole

3. 12



12
1
2.25
8 2.25 2
90nm
8 3 12
8 12 8 12

12
12

12

4.

2020

IDM

2020/2021/2022 22.88%/19.79%/32.00%
2020/2021/2022 5.20%/10.58%/ 8.00%
2020/2021/2022 52%/50%/45%
2020/2021/2022 0
2020/2021/2022 12.14%/15.00%/20.00%
2020/2021/2022 26.16%/27.38%/28.89%

8

| | 2017 | 2018 | 2019 | 2020E | 2021E | 2022E |
|---|---------|---------|---------|---------|---------|---------|
| | 3519.76 | 3571.91 | 3183.52 | 3348.92 | 3703.13 | 3999.38 |
| % | 59.90% | 56.96% | 55.44% | 52.00% | 50.00% | 45.00% |
| % | | 1.48% | -10.87% | 5.20% | 10.58% | 8.00% |
| % | 16.33% | 18.57% | 17.76 % | 18.00% | 17.76% | 17.76% |
| | 2339.06 | 2683.49 | 2515.66 | 3091.31 | | 4888.13 |
| % | 39.81% | 42.79% | 43.81% | 48.00% | 50.00% | 55.00% |

| | | | | | | |
|---|----------------|----------------|----------------|----------------|----------------|----------------|
| % | 14.00% | 28.46% | 10.04% | - | - | - |
| | 5875.59 | 6270.80 | 5742.78 | 6440.23 | 7406.26 | 8887.52 |

%

