

2024 112

2024

一、 式

1 6G

9

3-5

1

1-2

3-5

2

1

3.

4

2

2

5

50%

30%

2000

二、

1

2

3

3

4

5

40

1984 1 1

40%

6

7

4

8

2020 135

9

10

2019 39

2019 336

2020 319

Už

2021 44

其他事

1

<https://kjyh.kxjst.jiangsu.gov.cn/>

U' ol μ λ U' ol

U' ol

U' ol

3

U' ol

U' ol

3
17:30

2024 8 5
2024 8 6 17:30

2024 8 7 17:30

4

025-86631760

025-85485966

025-85485920

1 2024

2 2024

3 2024

2024 7 3

8

件1

2024

一、 三代半导体专

GaN

SiC

2024

GaN

SiC MOSFET

2

1001 GaN

GaN

Si GaN

200V

700-900V GaN

GaN

8

Si

GaN

<1.5%

<50 μ m 200V

<0.6m \cdot cm² 80V

<20%

>20A 700-900V

8m \cdot cm²

>5A

>10 μ s

<1 10⁶cm⁻²

>1700V

<2m \cdot cm²

>18000A/cm²

>1200V

>1000A/cm²

Si

GaN

JEDEC

2000

3

1002

SiC MOSFET

SiC

SiC

SiC

SiC
 2000V SiC MOSFET

6 SiC 20 μ m
 5% 2%

<0.3cm⁻² SiC MOSFET 2000V
 100A 2.5V 6.0m²·cm²

SiC 2000V 400A
 4000V 20nH

1000

3
 二、6G 专

6G
 6G

ITU 6G

6G

6G

6G

2024

7

2001 6G

6G

MIMO

6G

32

@100MHz

MIMO

256

0.3Kbps/Hz

1

2

2000

3

12

2002 6G

NLOS

30 90%

30 90%

1 1Hz

100 1

2

1500 3

2003 6G /

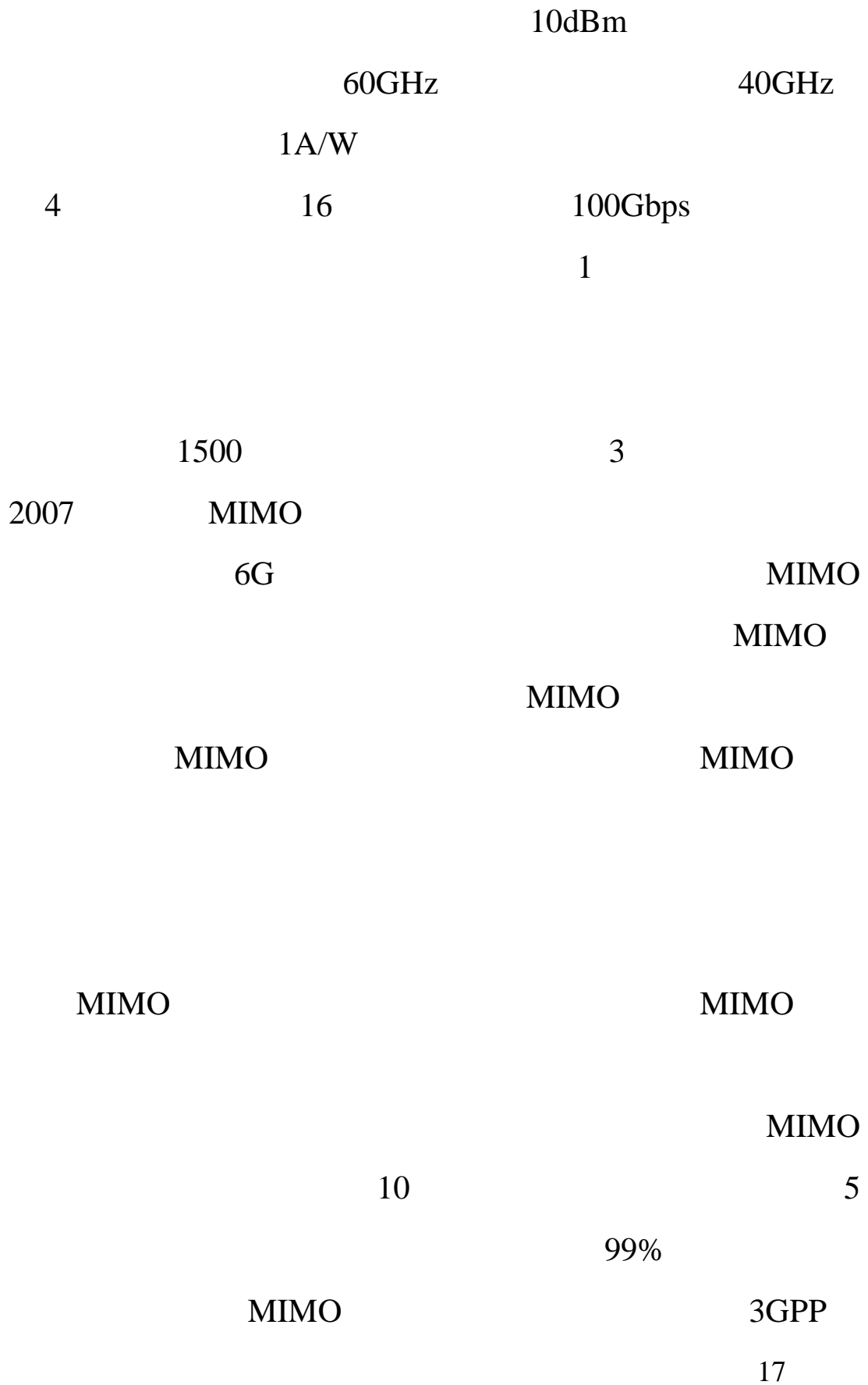
6G 6G

RTL

VLSI

					CMOS
					CMOS
		94GHz	8		
				SPI	31.5dB
	0.5dB		365		5.625
					5dBm
		256 EIRP	50dBm		10
	1			1Gbps	
CMOS		1			1
					6G
		2000			3
2005					/
					100-300GHz

/
 GaN /
 Gbps
 200GHz
 15dBm 10%
 200GHz 12dBm
 200GHz 27dBm
 4 64
 64
 300Gbps 1
 1
 1500 3
 2006
 6G
 :



6G 1 256
L 20Mbps 20bps/Hz

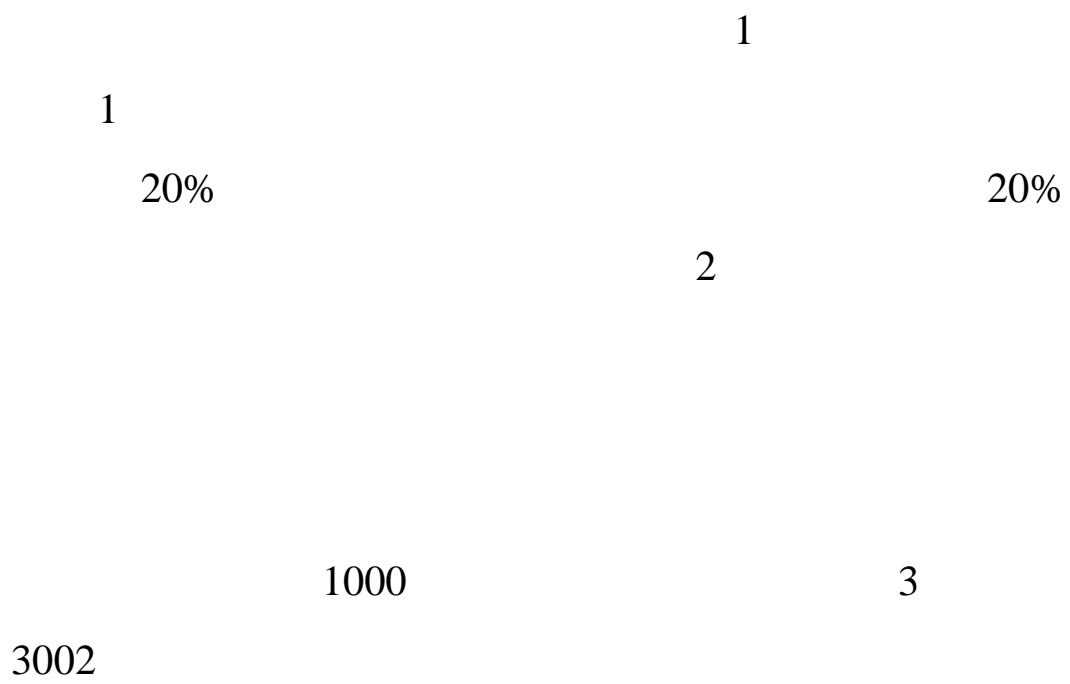
2000 3
三、人工 专

AI

2024

3001 6

+



80%

50%

2

1500

3

3003

,

20

15		2			
	VoxCeleb1		Vox1-O		0.5%
3%				8%	
	libri2mix		PESQ	2.8	
			VoxConverse		DER 4%
	VoxCeleb1	libri2mix	VoxConverse		

1500
3004

3

	FID	7	85%
70%			70%
80%			2%
	95%		97%
5			20%
		85%	5
1500		3	
3005			

FPGA

4

6

4/8/16

2

1500

3

3006

AI

PageAttention Continue batching

AI

2 AI 1 Llama
3 6
vllm 20% 3

1500

3

四、 专

2024

CO₂

4

4001

6
>99% <0.3nm 6
>99%
5V 5%
>0.5 4
25

400-2500nm
0.28Vcm
50Gbit/s 100fJ/bit 40GHz 100mA/W
1cm²
5nm
1500 3
4002

AlScN AlBN Si Ge ZnSe

0.292-0.428 μm 0.342-0.538 μm
0.461-0.639 μm 0.48-0.92 μm 2.0-2.03 μm
2.45-2.56 μm 2.9-3.2 μm 4.9-5.2 μm

400-700nm 30
700-1100nm 20
100

2Mbps

1500 3
4003

CO₂

CO₂

CO₂

CO

CO₂

CO₂

CO₂

CO

CO₂

5-6

1-2

2-3

CO₂

1

CO₂

30%

2

1500

3

4004

p

>20 μ m

<2E15/cm³

2E15/cm³-5E19/cm³

2E15/cm³

>170cm²/Vs

>3300V

3V

>15A

>50A

>2000V

<10m .cm²

4

1 \times 10⁸/cm² 2

5 \times 10⁵/cm²

0.5nm /

1E5

1E10

5

50

1500

3

五、成 专

EDA

				2024
				/
5001	DSP		4	
	RTL			
	RISC-V			
	RTL	VCS/Verilator		30%
		RTL		
	GPT4/Claude3		30%	
				3
30				

IP

1000

3

5002

KLA-2367

RCWA

GDS

HOT SPOT

DEMO

90nm

1GB/s

ADC

95%

5%

KLARF

2x2

70

HOT SPOT

65

90nm

1000			3		
5003					/
			10nm		
					/ /
			300mm		
10E-8mbar			700		
40ms	=0.01°	d=0.1 Å	300mm		5nm
Ru	<1nm				3nmTiN
60μ ·cm	Cu			30min@750	
500nm	100	1		95%	
>95%					

1000

3

5004

DSP

DSP

DSP

DSP

1GHz

1.7DMIPS/MHz

4.5CoreMark/MHz

L1 SRAM

768KB

L2 SRAM

1MB

SPORT

SPDIF

48KHz

8

TDM32

256

FIR/IIR

FIR

IIR

990MHz

SPI

I2C

UART

GPIO

AEC-Q100

16

600Hz

ASIL-D

5

20

1000

3

六、 医 专

2024

5

6001

- 2mm
100Hz
3cm
2mm
3
5
1500 5
6002
AI
/

2

3

2 SCI

4

2

1

1500

5

6003

/

/

2

/

5

200

1500

5

6004

AI

4

37

2
1

1

3

1

1

1000

5

6005

AI

1000
20
2 1
1 1

1000 5
七、 备专

2024

7

39

7001 700kg

		700kg	2800mm
	0.2		0.08mm
	0.8mm		0.1mm
0.3mm		200ms	98%
	80000h		100

1000

3

7002

40

/

70%

0.5°

0.5Nm

12-36

<0.6g

260kW

430kW

1%

92%

1%

0.7g

7004

			850kN		24km/h	
		0.2s		4200rpm		420kNm
	96dB(A)		1			
		1000kWh		800V		
2C	SOC		5%		-20	-55
			20%			1°
		0.25m		25		
		3				

1000

3

7005

				3kW/kg
0.5kg/kW·h		200kW		300kW
	5kW/kg		30000rpm	200kW
	300kW			250Wh/kg
70%	0	-40	4C	SOC
5%				90% TBO 1500

1000

3

7006

OTN

4500m

25

45MPa

5×10^{-9} mbar.L/s

12

/

OTN

200Gbps

200km

100W

20kW

95%

1%

1%

1000

3

7007

SPARC ARM LoongARCH

3

3

8M

45

12M

4

6

6

8

1000

3

八、

专

2024

5

8001

46

32%

1cm²

28%

800cm²

5%

90%

2m/s

30s

150μm

2

ALD

5%

120

15min

47

50%

100MW

24%

0.72m²

22%

IEC61215

1

1500

4

8002

50μm-120μm

26.5% 182×91mm²
20mm 1500W/kg
0.5μm 10000 2%
IEC61215 DH1000H 5% PID96H
5%
1m²
23.5%
1000 3
8003
5MW
Cp 0.51 46%

1000

3

8004

2MW

30kV

5MW

98%

3%

2%

400ms

40ms

5MW

1500

3

8005

50

MMC

6500V IGBT FRD

6500V IGBT

6500V FRD

MMC

MMC

6500V

IGBT

2000A

125

3.5V

96

60kPa

6.5kV

2

MMC

2kA

4kA

16kA

1500

3

九、与储专

2024

6

9001

/

/

180kW

60%

50%

-40

-30

3000m

20%

10000

10%

5.0kW/L

90

52

0.15mg/W 2A/cm² 0.70V
1.8 30% 3.0
80%

1500 4
9002

80-105
120mS/cm 105-120 100mS/cm
1000 10% CO₂ 20%
1mg/cm² 0.65V
100-120 1A/cm² 1000 CO₂

	20%	10%	105	CO ₂
	20%			
2kW		60min		
1000			3	
9003				
				Ir
	OER			
2-3			OER	
	1.33V@100mA/cm ²		1	
			1.5V@100mA/cm ²	
		3.8kWh/Nm ³		
3000h				
54				

1000

3

9004

1mS/cm

5.0V

200

10ohmcm²

4.8V

3

/m²

50Ah

400Wh/kg

800Wh/L

1C

1000

80%

15

1C

/0.1C

80%

200

1.2 /Wh

1000

3

9005

5mS/cm

10 μ m

2000

10Ah

400Wh/kg

800Wh/L

1C

1000

80%

15

1C

/0.1C

80%

200

2.0 /Wh

1000

3

9006

500Wh/kg

300mAh/g

1000Wh/kg

4mAh/cm²

1C

1000

80%

1500mAh/g

4mAh/cm²

0-1.5V

80%

1C

1000

80%

4C/1C

90%

1mS/cm

10ohmcm²

30Ah

500Wh/kg 1C 1000
80% 1C /0.1C 80%
200

BMS

1000

3

件2

件3

2024

/

序号	受号	南号	名	单位	单位 类型	在县 市、区	合 关 单位	字、 、否 件 内容 已审	备

1

2

3

