

600584



A

1
 2017
 2
 1
 3
 20
 90% 20 20
 ÷ 20
 4
 20% 271,968,800
 271,968,800

1
 38,827,559
 6.50
 2 29 29
 19%

3

5

5

4

1

3

3

5

36

6

435,000

20	173,492	162,000
	235,000	150,000
	134,750	123,000
	543,242	435,000

7

19%

14.28%

8

		2017 A
		A
		Semiconductor Manufacturing International Corporation
		5%
1		1
		1
HoldCo A		

HoldCo B		
JCET-SC		JCET-SC SINGAPORE PTE. LTD.
ChipPAC	STATS SCL	STATS CHIPPAC PTE. LTD.
SCS		
SCK		STATS ChipPAC Korea Ltd.
SCC		
JSCC		
JSCK		JCET STATS CHIPPAC KOREA LIMITED
		Integrated Circuit, IC
		IC IC
OSAT		

IC		Integrated Circuit, IC
TR		
IDM		
FC		Flip Chip
Flip Chip on L/F		Flip Chip on Lead/Fram
BGA		Ball Grid Array
FBGA		Fine-Pitch Ball Grid Array
PBGA		Plastic Ball Grid Array
FCBGA		Flip Chip Ball Grid Array
LGA		Land Grid Array
FCLGA		Flip Chip Land Grid Array
SIP		Single In-line Package
QFN		Quad Flat No-lead
Bumping Bump		
MEMS		Micro Electro Mechanical systems
WLP		Wafer Level Packaging
CSP		Chip Scale Package
WLCSP		Wafer Level Chip Scale Packaging CSP
TSV		Through-Silicon Via
SiP		System in Package
eWLB		Embedded Wafer Level Ball Grid Array
FO-WLP Fan-Out WLP		Fan-Out Wafer Level Package

FCOL		FlipChip on Leadframe
------	--	-----------------------

.....	1
.....	2
.....	5
.....	9
.....	11
.....	11
.....	11
.....	13
.....	13
.....	15
.....	16
.....	16
.....	17
.....	18
.....	18
.....	20
.....	22
1 	25
.....	27
.....	27
.....	29
.....	32
1 	34
.....	38
.....	38
.....	38
.....	40

.....	46
.....	46

Jiangsu Changjiang Electronics Technology Co.,Ltd.

78

1,359,844,003

600584.SH

" "

OSAT

2014 6
 " "

WLP TSV CSP

2015 5 2025

3D 2016

3

2009 2016 1,109

4,335.5 21.50%

2016

1,644.3 24.1%

2016 25.1%

1

9.54%

14.28%

A

1.00

/

A

A

20

90%

20

20

÷

20

$$P1 = \frac{P0}{1+N} - \frac{D}{1+N}$$

20%

271,968,800

271,968,800

1

38,827,559

6.50

29

29

19%

5

5

1

3

3

1

36

12

435,000

15

20	173,492	162,000
	235,000	150,000
	134,750	123,000
	543,242	435,000

9.54%

14.28%

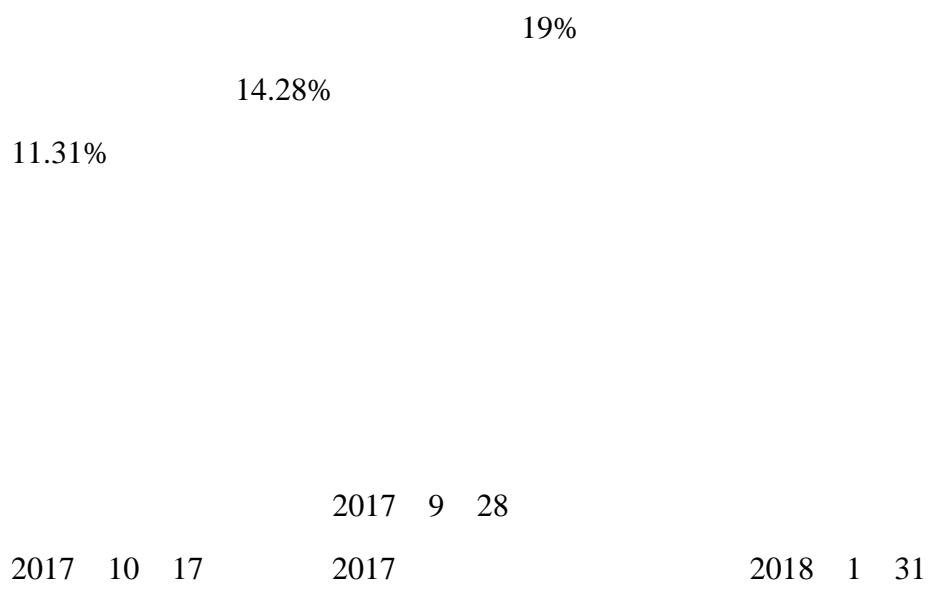
2017 12 31

1,359,844,003

14.28%

13.57%

9.54%



	9,872,000
	2014 9 26
	2 52 7 718

2014 4

2017 12 31

5%

	/		
1		360.00	36.47%
2		220.00	22.29%
3		110.00	11.14%
4		100.00	10.13%
5		50.00	5.06%
6		50.00	5.06%
7		50.00	5.06%
8		47.20	4.78%
		987.20	100.00%

2014 9

1

	2016 12 31
	6,500,202.98
	21.92
	6,500,224.90
	4,322.49
	24,657.91
	28,980.40
	6,471,244.50
	2016
	20,488.70
	195,254.05
	214,839.82
	213,085.33

2017

5

9.54%

24

	1,200.00
	2009 3 3
	18 2 1 -1



981

SMI

0.35

28

2017 12 31

5%

1	16.24%
2	15.06%
3	7.48%

1
2 3
51%

14.28%

24

24

	500,100
	2016 9 20
	1-1803

		100	0.02%
		500,000	99.98%
		500,100	100%

		1,000	0.10%
		133,000	13.29%
		267,000	26.67%
		600,000	59.94%
		1,001,00	100%

2015 9

50

2015

"

"

"

"

2013 11

"

"

2017 9 30

13

5%

	/	
1		
2		

	/	
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

2016 9

1

	2016 12 31
	24,862.79
	24,862.79
	0
	24,862.79
	2016
	0
	-137.21
	-137.21
	-137.21

24

24

1

	1,000
	2017 8 29
	777 19 608

1

1

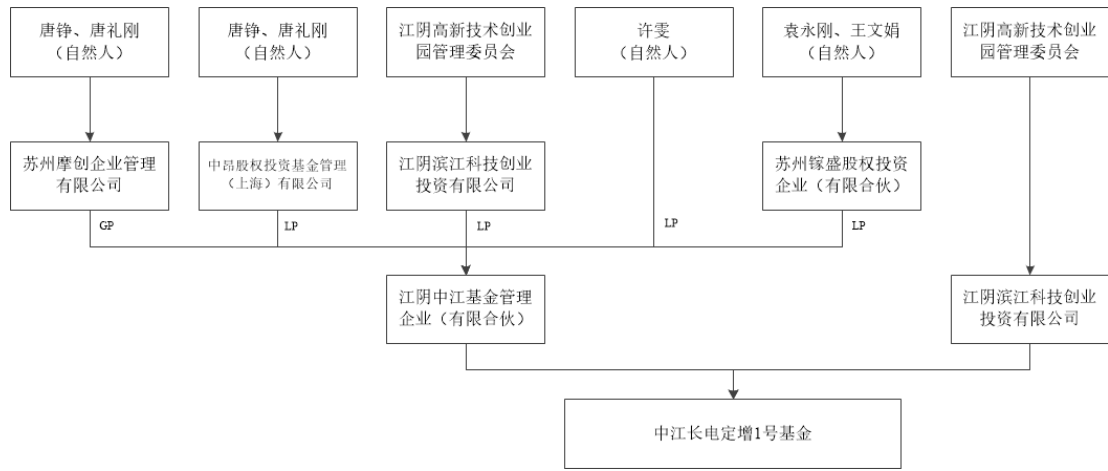
1

3

2

2017 12 31

1



3

1

1

4

1

2017 9 28

2018 1 31

1

90% / 20 / 20 = 20

$$P_1 = \frac{P_0 - D}{1 + N}$$

2

29

29

"

"

19% "

"

×

43.50

78.3784%

29:37

×

>43.50

2.4

4.2.2

4.2.2

1

2

2

/ 1 / 2

15 15
1%
2017 9 28 2018 1 31

1

$$90\% \frac{20}{20} = \frac{20}{20}$$

N

$$P1 = P0 / (1+N)$$

P0

/

D

P1

/

P1 = P0 - D

$$P1 = (P0 - D) / (1+N)$$

2

38,827,559

"

"

6.5

38,827,559

38,827,559

N

$$1+N \times 38,827,559$$

1

2

2

1

/ 2

/

/

15

15

1%

2017 9 28

2018 1 31

1

90%

20

=

20

/

20

$$\begin{aligned}
 & P_0 / D \\
 N & P_1 / P_1 = P_0 - D \\
 & P_1 = P_0 / (1 + N) \quad P_1 = P_0 - D / (1 + N)
 \end{aligned}$$

2

5 5

5

13.5135%

5:37

1

;

2

2

1

/ 2 /

2017 9 28

1

1

1

90%

20

=

7.6923%

3:39

1

;

2

1

/ 2

/

/

1,000

435,000

20	173,492	162,000
	235,000	150,000
	134,750	123,000
	543,242	435,000

1

2009
21.50%
1,109
4,335.5
2016

2016
1,644.3
24.1%
2016
25.1% 1,126.9 1,564.3 13%

2017	1-6		2,201.3	19.1%
		21.1%	830.1	25.6%
	571.2		800.1	13.2%
		IC		

2

"

CSP

WLP

TSV

"

2025

"

3D

"

"

" "

"

3

40%

2010

6% 2014

10%

2012

1,000

2016

1,564.3

LGA FC/QFN BGA

3D-TSV

TV

4G

" "

20

1

FBGA PBGA SIP P-SIP -LGA

20

3

2

1

Fan-out eWLB WLCSP SiP BUMP PoP

2017 9 30

2,681

1,740

	FBGA	PBGA	P-SiP IC
QFN		FC-BGA	
2			
			MEMS
			FBGA
3			
			IC
3			
	173,492		169,498
			3,994
4			
			24,181
	7.52		10.74%

5

78

6

[2017]69

201732028100415

1

Bumping WLCSP

82 Bumping 47

3

2

1

2003

Bumping

WL-CSP

WLCSP

Bumping

2016

Bumping

136

2

3		90%	
IC		TOP10	
3	235,000	224,414	
10,586			
4		36,587	
	7.25	12.51%	
5		78	
6		3202851600839	
		[2016]71	

1

123,000

2

1

2014 2015 2016 2017 9
 63.12% 73.83% 77.55% 70.12%

2015

2017 9 30 2016 12 31 2015 12 31 2014
 12 31

		2017	2016	2015	2014
		9 30	12 31	12 31	12 31
002185.SZ		33.49%	28.29%	25.22%	39.28%
002156.SZ		46.94%	45.18%	42.56%	40.22%
603005.SH		15.13%	13.47%	17.55%	23.25%
		31.85%	28.98%	28.44%	34.25%
600584.SH		70.12%	77.55%	73.83%	63.12%

2017 9 30 219.06

2017 9 30

108.79

93.02

0.86

		2017	2016	2015	2014
		9 30	12 31	12 31	12 31
002185.SZ		1.36	1.73	3.00	1.26
002156.SZ		1.18	1.19	1.88	1.13
603005.SH		3.96	4.31	2.92	2.88

		2017 9 30	2016 12 31	2015 12 31	2014 12 31
		2.17	2.41	2.60	1.76
600584.SH		0.86	0.68	0.66	0.86

2

2016	2017	1-9	2014	2015
59,085.42	96,429.98	77,651.26	22,398.20	

/

	2016	12	31			77.55%
0.68		0.52		2017	9	30
70.12%		0.86			0.64	
		1				

5G

2015

SIA 2016

3,389

2015

1.1%

2

<

>

1

2

3

1

2

	2017	9	30	
2,550,127,842.18				8.16%

3

2015 12 31

1

2015

2

2015

2016

OSAT

IC Insights

2

1

2017

2

2017 12 31

1,359,844,003

14.28%

13.57%

9.54%

19%

14.28%

3

1

1

1

4

3 —

2013 12 24 2013

"

1

2

3

1

2

3

1

2

3

70%

4

5

6

1

2

2/3

"

56

3

2014 2016

2014	984.57	15,666.65	6.28%
2015	1,035.91	5,199.75	19.92%
2016	1,553.87	10,633.44	14.61%
			10,499.95
			34.04%

30%

2016 -2018

3 — —

2016-2018

" "

2016-2018

1

2

2016-2018

1

2

3

4

2016-2018

2015

		1,359,844,003	
	271,968,800		
	1,631,812,803		
			2017
1			
2		2017	11
3		271,968,800	435,000.00
4			1,359,844,003
5	2016		10,633.44
		2016	10%
			2017
			10%
6			

7

1

	2016 /2016-12-31	2017 /2017-12-31		
1 2017				10.00%
	10,633.44	9,570.10	9,570.10	-
	-20,588.30	-22,647.12	-22,647.12	-
	2.44%	1.32%	1.25%	-0.06%
	0.103	0.063	0.062	-0.001
	0.103	0.063	0.062	-0.001
	-4.73%	-3.12%	-2.97%	0.15%
	-0.199	-0.149	-0.147	0.002
	-0.199	-0.149	-0.147	0.002
2 2017				
	10,633.44	10,633.44	10,633.44	-
	-20,588.30	-20,588.30	-20,588.30	-
	2.44%	1.46%	1.39%	-0.07%
	0.103	0.070	0.069	-0.001
	0.103	0.070	0.069	-0.001
	-4.73%	-2.83%	-2.70%	0.13%
	-0.199	-0.135	-0.133	0.002

	2016 /2016-12-31	2017 /2017-12-31		
	-0.199	-0.135	-0.133	0.002
3 2017	10%			
	10,633.44	11,696.79	11,696.79	-
	-20,588.30	-18,529.46	-18,529.46	-
	2.44%	1.61%	1.53%	-0.08%
	0.103	0.077	0.076	-0.001
	0.103	0.077	0.076	-0.001
	-4.73%	-2.55%	-2.43%	0.12%
	-0.199	-0.122	-0.120	0.002
	-0.199	-0.122	-0.120	0.002

1 = +

2 = +

3 = /

4 $= \frac{P_0 \div S}{S} \times \frac{S - S_0}{S_0} \times \frac{S_1}{S_1} \times \frac{S_i \times M_i \div M_0}{M_0} \times \frac{S_j \times M_j \div M_0 - S_k}{M_0 - S_k} \times \frac{P_0}{S_1}$

Mi Sj Sk M0

Mj

5 $= P_0 / (E_0 \times NP \div 2 \times E_i \times M_i \div M_0 \times E_j \times M_j \div M_0 \pm E_k \times M_k \div NP)$

M0) P0 NP

E0 Ei

M0 Ej Mi

Mj Ek

Mk

"

"

WLCSP Copper Pillar Bumping SiP Fan-out WLB

1 20

FBGA PBGA SIP P-SIP -LGA

20

2

Bumping WLCSP

82

Bumping 47

1

2015

2

2017 9 30

2,681

1,740

Fan-out WLB

SiP

3

90

20

/

1

WLCSP Copper Pillar Bumping SiP Fan-out WLB
2015

2

20

65

2017

BU

1

BU

BU

BU

BU

KPI

CEO

2

BU

BU

BU

BU

FCCSP+POP+SiP

eWLB

Fan-out WLP

JSCC

Bumping

FC

Wirebond

Bumping

WLCSP

Wirebond+SIP

+FC/QFN/RF/COL

/

+FCOL+

IC

3

4

5

2

6

[2012]37

3

[2013]43

2016

2016-2018

7

[2014]17

[2013]110

[2015]31

" 1

2

3

4

5

6

"

2017