

# **JEITA**

Standard of Japan Electronics and Information Technology Industries Association

***EIAJ ED-7311-23***

**Standard of integrated circuits package  
(PGA)**

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Standard of Japan Electronics and Information Technology Industries Association

## Standard of integrated circuits package (PGA)

### 1. Scope of Application

This standard regulated which among the packages classified as form D in the **EIAJ ED-7300** [Recommended practice on Standard for the preparation of outline drawings of semiconductor packages]. Pin Grid Array (hereinafter referred to as PGA) which is applied terminal pitch  $\square = 2.54\text{mm}$  and Shrink pitch Pin Grid Array (hereinafter referred to as SPGA) which is applied 1.27mm, and the ceramic and plastic are main constituent in the package body material which excludes a terminal part. This standard provides about those outline drawings and dimensions.

**Note:** This standard is correspond to **EIAJ EDR-7323A** (Design guideline of integrated circuits for Shrink pitch Pin Grid Array) established in May 1999, revised in June 2002.

### 2. Definition of the Technical Terms

The definition of the technical terms used in this standard is in conformity with **EIAJ ED-7300**, and the definition of technical terms appearing a new are given within the text of this standard.

### 3. BACKGROUND

In recent years, it corresponds to the multifunction of the electronic equipment; the demand to the numerous pin package is increasing rapidly. It answers the demand, at first, PGA appeared that of terminal pitch  $\square = 2.54\text{mm}$  (100mil), and which the pin insertion type to into the printed circuit board through hall. And it is possible to make more numerous pins, SPGA appeared that of terminal pitch  $\square = 1.27\text{mm}$  (50mil), and which the surface mount type of the printed circuit board in the same way Quad Flat I – lead package (QFI). This standard intended to standardize the outer dimensions of PGA and ensure compatibility between products as far as possible for standardization.

### 4. Definition of PGA, SPGA

It calls with "PGA" in case of terminal pitch  $\square = 2.54\text{mm}$  (100mil), and "SPGA" in case of terminal pitch  $\square = 1.27\text{mm}$  (50mil). Form D with pin terminal in the item 7, "Outline classification of shapes of semiconductor package " at the **EIAJ ED-7300**. The package pin terminal which was arranged in pin grid array format, and it heads for the seating plane from the base plane of the package body, it be possible to mount to the printed circuit board.

**C - (S)PGA** The main constituent of the package body material which excludes a terminal part is a ceramic.

**P - (S)PGA** The main constituent of the package body material which excludes a terminal part is plastic.

**IPGA** Interstitial PGA, terminal arranges zigzag.

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### **5. Numbering of Terminals**

According to **EIAJ ED-7300** rules, Index is positioned at the lower left corner of the package body when it is viewed from the seating plane. A row that is the closest to the index corner is named, A, and as the row moves further away from the index the rows are named, B, C, ..... AA, AB, ..... Also, a column that is the closest to the index corner is numbered 1, and as the column moves further away to the right, they are numbered 2, 3,.....The numbering of terminals are named by these combinations A1, B1,..... In naming the rows, the letters I, O, Q, S, X, and Z should not be used.

### **6. Nominal Dimensions**

The number of the matrix (Symbol : M) is applied to Nominal Dimensions. "M<sub>E</sub> " is the number of the matrix which the direction of the package width (E) , "M<sub>D</sub> " is the number of the matrix which the direction of the package length (D).

7. 照合文字と図面

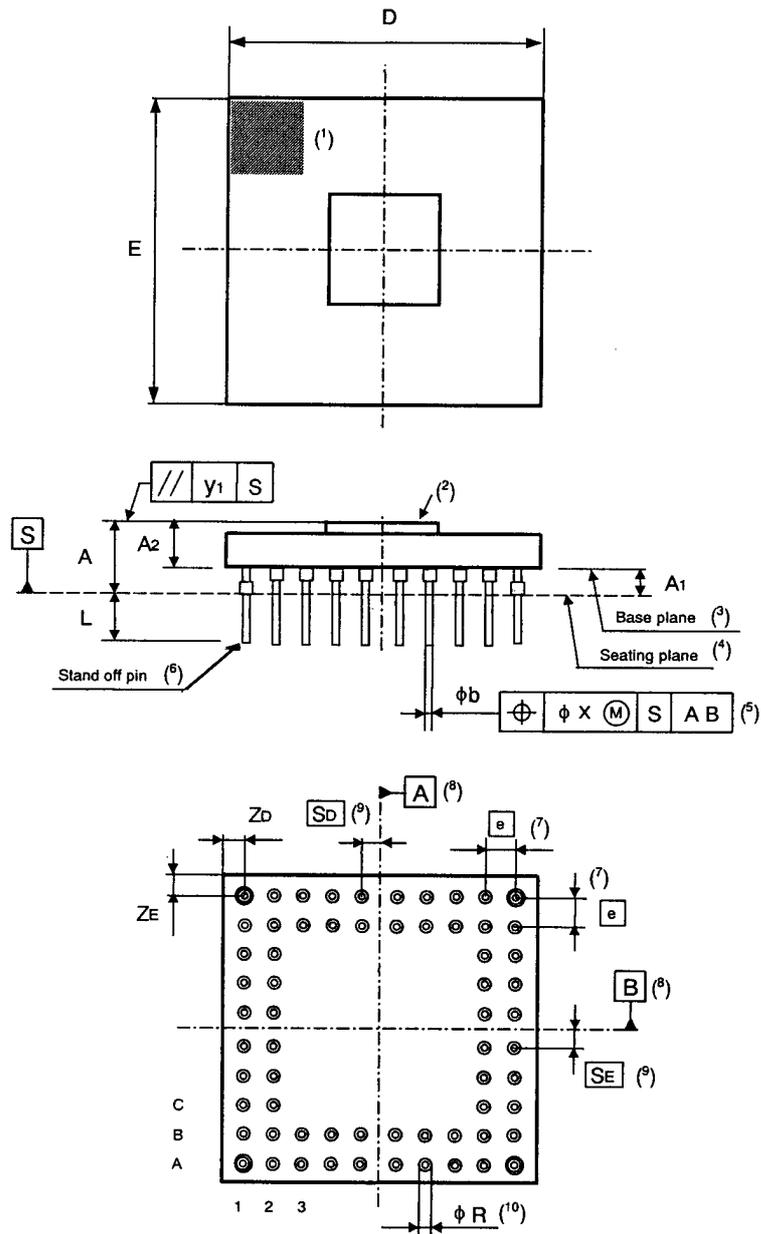
7. REFERENCE CHARACTERS AND DRAWING

7.1 外形図

7.1 Outline Drawing

図1 (PGA, キャビティアップ)

Figure 1 (PGA, Cavity up)



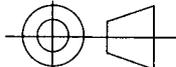
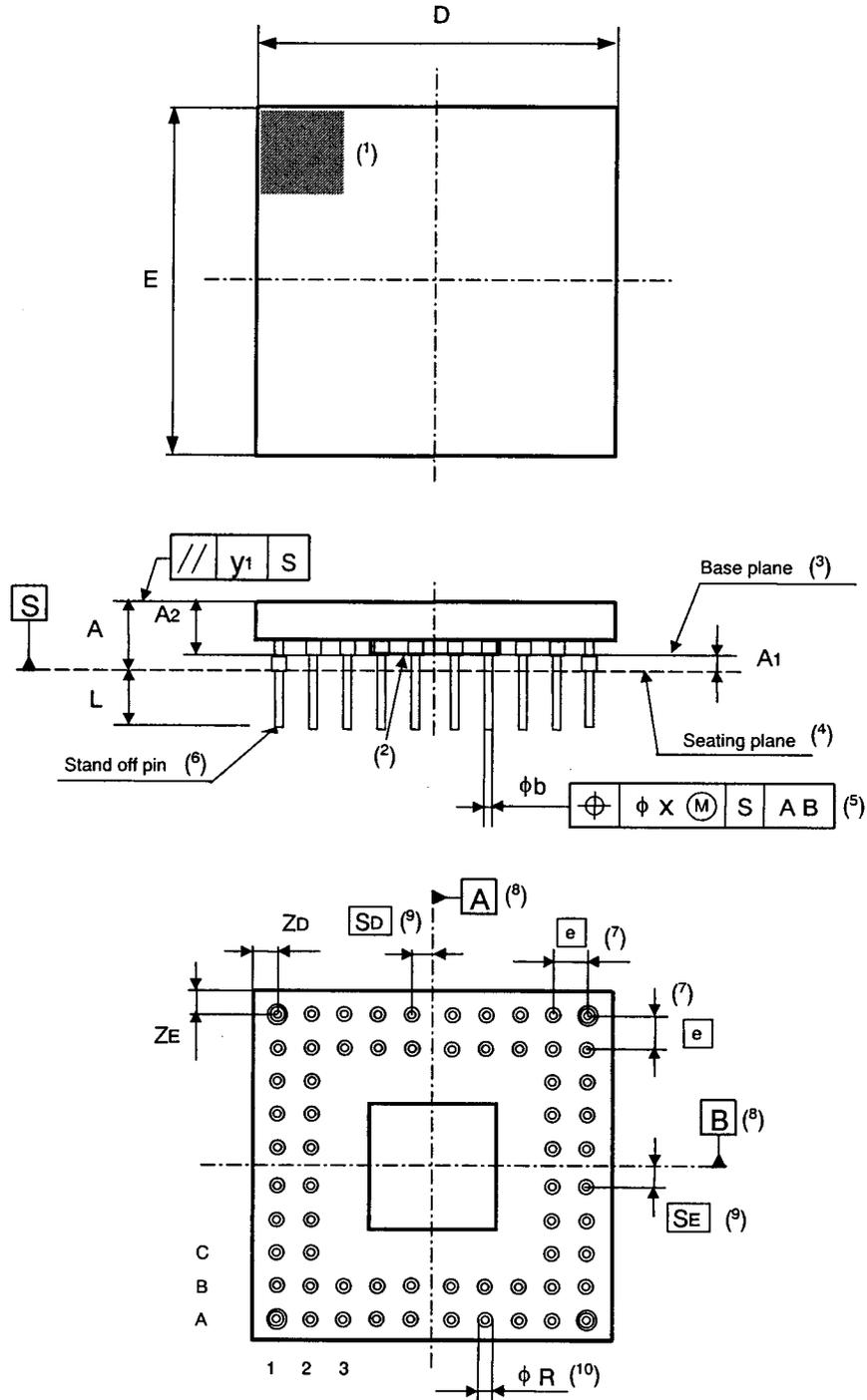
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図 2 (PGA, キャビティダウン)  
 Figure 2 (PGA, Cavity down)



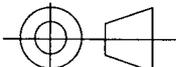
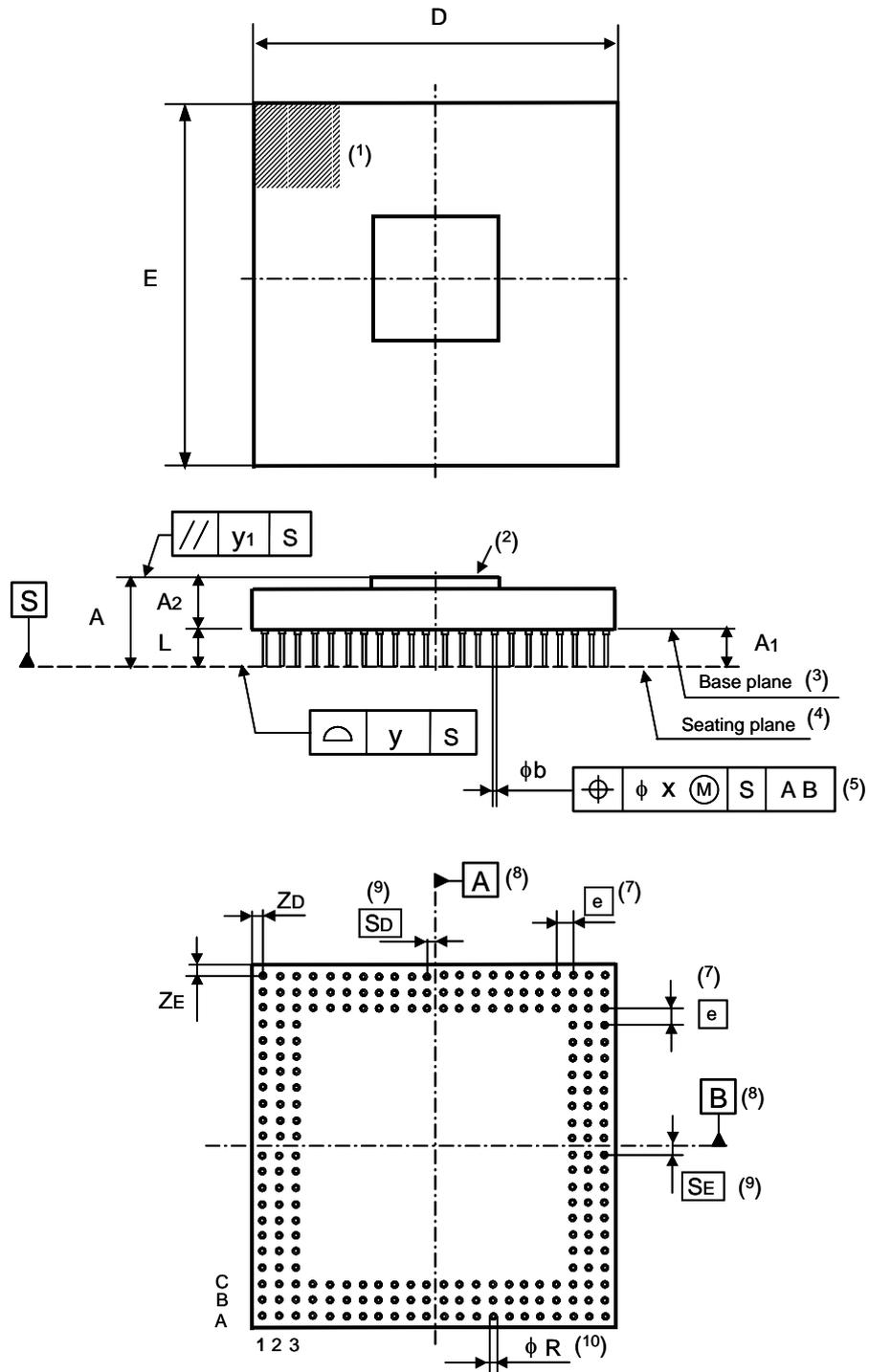
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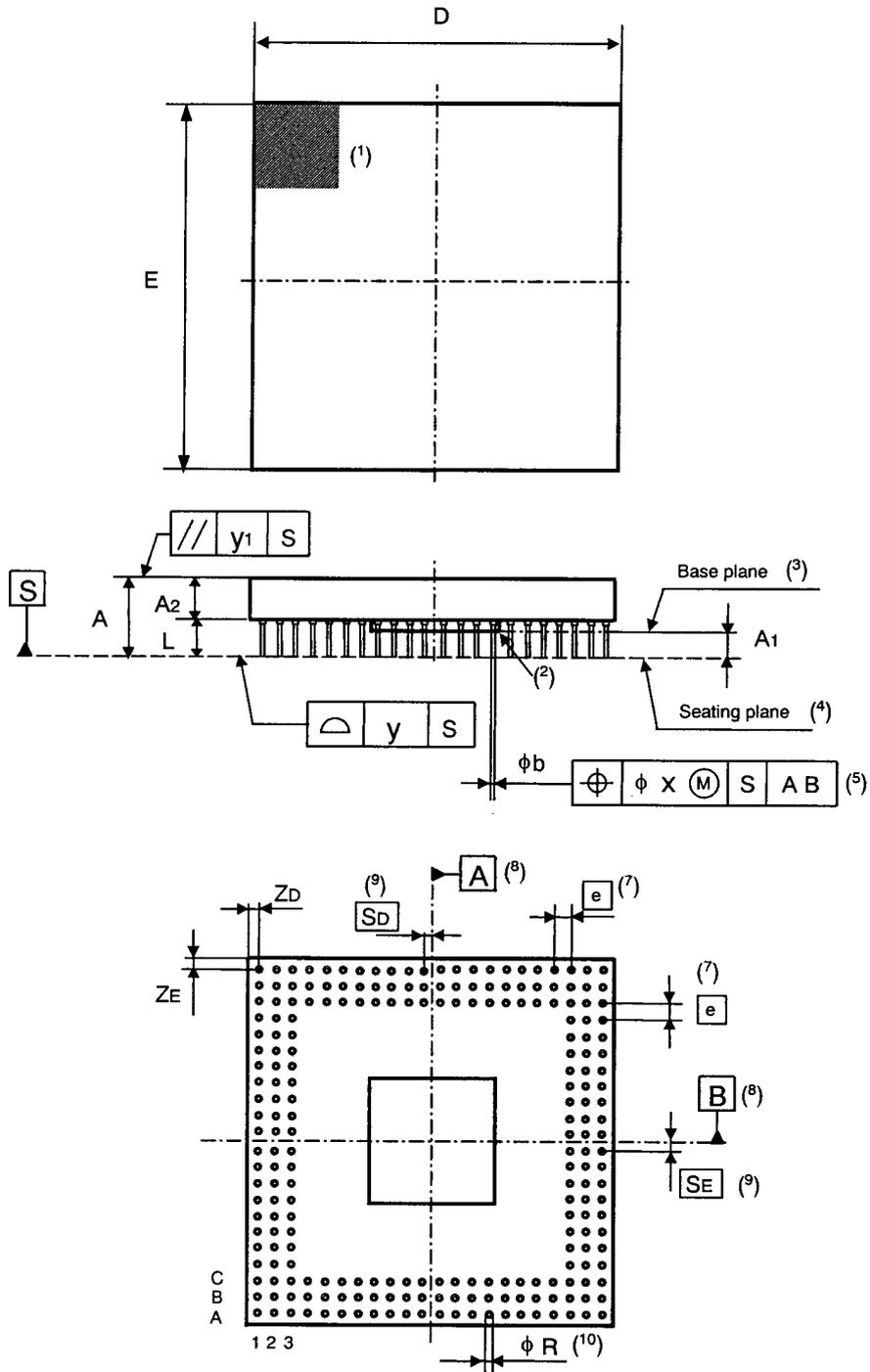
Figure.3 (SPGA, Cavity up)



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図4 (SPGA, キャビティダウン)

Figure.4 (SPGA, Cavity down)



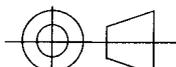
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図5 端子断面

Figure 5 Terminal cross section

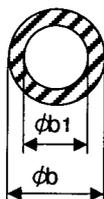


図6 データム A, B ターゲット詳細図

Figure 6 The detailed figure (target of datum A, B)

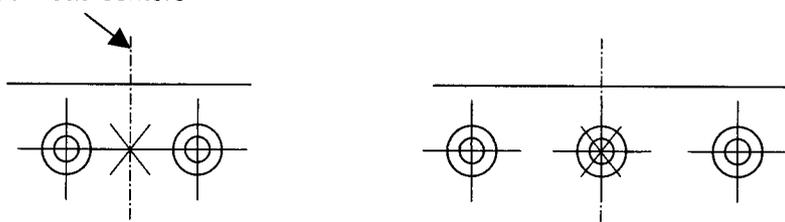
一辺の端子が偶数の場合

一辺の端子が奇数の場合

For even number of terminals on a package side

For odd number of terminals on a package side

端子センター間のセンター  
Center between lead centers



備考 端子存在範囲

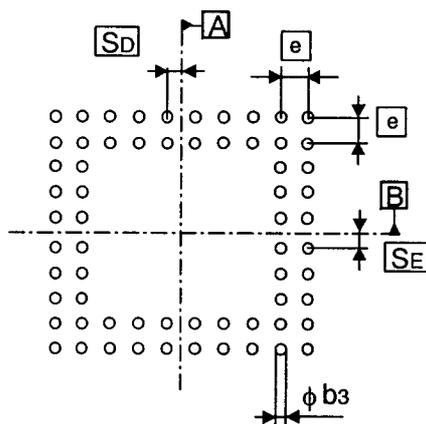
REMARKS: Range where pattern of terminal position areas exist

フットパターン設計の参考資料となるよう、端子の存在範囲を図6に示す。

Range where pattern of terminal position areas exist is shown in Figure 6 as reference for foot pattern design.

図6

Figure 6



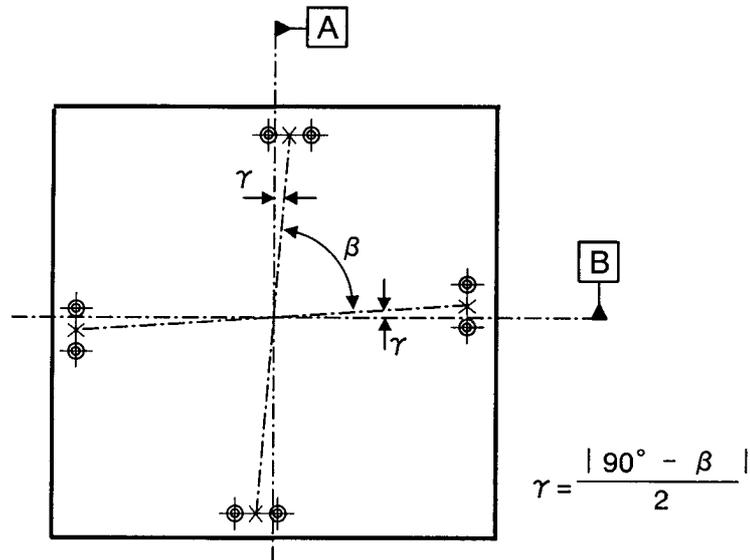
$$\phi b_3 = \phi b_{max} + X$$

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7.2 端子位置の係わるデータム 端子位置の係わるデータムについては、下記の定義とする。

7.2 Datum of lead position

The datum of the lead position accuracy shall be defined as follow.



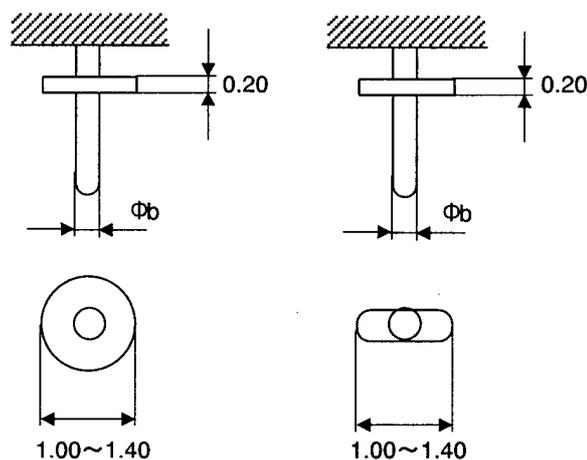
各辺に対向する端子のセンターをそれぞれ結び、その交錯してなす角度  $\beta$  をもとめる。その  $\beta$  と  $90^\circ$  の差  $|90^\circ - \beta|$  を各辺に均等に振り分けるような直交軸を求める。それをパッケージのデータムライン  $\boxed{A}$  ,  $\boxed{B}$  とする。

It connects respectively the terminal of center which is opposite to each side of package, it finds the angle  $\beta$  to accomplish, mixing. It looks for as it divides  $|90^\circ - \beta|$  which difference between the  $\beta$  and  $90^\circ$  , to each side equally a orthogonal axis. It defined datum lines  $\boxed{A}$  ,  $\boxed{B}$  of package.

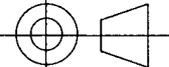
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**Note:**

- (<sup>1</sup>) Shows the allowable position of the Index mark area, which is basically 1/16 with package body size, however in case of small package body size, it is less than 1/4 with package body size, It must be included in the shaded area entirely.
- (<sup>2</sup>) Indicates Lid (cap). Lid (cap) may consist material of metal, epoxy resin, ceramic. It is called "Lid" which flat to the package surface. And it is called "Cap" which □ shape or ▢ shape to the package surface.
- (<sup>3</sup>) The base plane, which is in parallel with the seating plane and links the lowest point, except the stand off.
- (<sup>4</sup>) The seating plane, with which a package is in contact.
- (<sup>5</sup>) The maximum material requirements apply to the positional tolerance of the terminals.  
(Refer to ISO 2692/ JIS B 0023.)
- (<sup>6</sup>) The recommendation shape and the recommendation size of the standoff pin are shown. It applies a standoff pin to PGA ( $\square = 2.54\text{mm}$ ) as the option. (It doesn't apply to SPGA ( $\square = 1.27\text{mm}$ )). The standoff pin must exist in the position of the object in the diagonal line of the terminal grid arrangement.



- (<sup>7</sup>) Terminal pitch ( $\square$ ) specifies the true geometric position of the terminal axis.
- (<sup>8</sup>) Refer to 7.2 Datum of lead position.
- (<sup>9</sup>) The center terminal position to the direction of the package width, length ( $\square$ ,  $\square$ ) are stipulated the position of the closest terminal with respect to the package center which the datum line  $\square$ ,  $\square$ .
- (<sup>10</sup>) Indicates the diameter of the metal zed pad ( $\phi R$ ).

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**8. 登録一覧表, Registration table**

パッケージ名称(Package name):PGA,SPGA

**8.1 登録番号(Registration number): IC-7323A-001**

登録番号は, [(実端子数” n” ) - 001 - (整理番号 5 桁)] を示す。

It indicate registration number, [ (Number of existing terminals ”n”)-001-(serial number, 5 cords) ]

整理番号表, serial number table

登録番号は, (整理番号)の1~5桁目を示す。5桁目は4桁まで同一のパッケージをアルファベット順に附番。

Registration Numbers in the table indicate, (serial number) of 1<sup>st</sup> cord and 5th cord. The 5th cord is an alphabetical order, which the same until 4th cord of package.

CODE		1st	2nd	3rd		4th	5th
symbol	e		M		Cavity		
	2.54	A	0	8	Up	U	A
	1.27	B	0	9	Down	D	B
			1	0			C
			1	1			.
			1	2			.
			.	.			
			.	.			
			4	4			
			4	5			
			4	6			

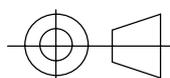
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## 8.2 List of Registration table

It indicate registration number, [ (Number of existing terminals "n")-001-(serial number, 5 cords) ]

**Table 1 PGA (  $\square$  =2.54) List of Registration table**

M	Serial Number	M	Serial Number	M	Serial Number
8		14	124-001-A14UA 132-001-A14UA 133-001-A14UA 135-001-A14UA 135-001-A14UB 135-001-A14UC 135-001-A14UD 135-001-A14UE	20	257-001-A20UA 299-001-A20UA 299-001-A20DA 299-001-A20DB
9		15	144-001-A15UA 145-001-A15UA 145-001-A15UB 149-001-A15DA 177-001-A15UA 177-001-A15UB 179-001-A15UA 179-001-A15UB 179-001-A15UC	21	361-001-A21UA
10	064-001-A10UA 064-001-A10UB 064-001-A10UC 068-001-A10UA 068-001-A10UB	16	155-001-A10UA	22	340-001-A22UA
11	068-001-A11UA 069-001-A11UA 069-001-A11UB 073-001-A11UA 085-001-A11UA 085-001-A11UB	17	208-001-A17UA 209-001-A17UA 209-001-A17UB 225-001-A17UA 225-001-A17UB 240-001-A17UA	23	
12	084-001-A12UA 088-001-A12UA 107-001-A12UA 107-001-A12UB	18	223-001-A18UA 223-001-A18DA 224-001-A18UA	24	
13	088-001-A13UA 101-001-A13UA 120-001-A13UA 121-001-A13UA	19	256-001-A19UA 257-001-A19UA 281-001-A19UA 281-001-A19UB	25	
				26	



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PACKAGE NAME  
PGA

JEITA REGISTRATION NO.  
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Table 2 SPGA (e=1.27) List of Registration table

M	Serial Number	M	Serial Number
15		31	
16		32	
17		33	
18		34	
19	256-001-B19UA 256-001-B19UB	35	600-001-B35UA
20		36	
21		37	
22		38	
23		39	
24		40	
25		41	
26		42	
27	273-001-B27DA	43	
28		44	
29		45	
30	401-001-B30DA	46	

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## 8.2 登録一覧, Registration list

パッケージ名称(Package name):PGA ( $\square$  =2.54)

呼び寸法(Nominal dimension): M=10

Unit :mm

整理番号 Serial Number	064-001-A10UA			064-001-A10UB			
外形タイプ External Type	C-PGA064-S10U-2.54 (C-PGA064-26.15×26.15-2.54)			C-PGA064-S10U-2.54 (C-PGA064-26.20×26.20-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	10	—	—	10	—
	M <sub>D</sub>	—	10	—	—	10	—
	E	24.40	26.15	27.90	25.89	26.20	26.66
	D	24.40	26.15	27.90	25.89	26.20	26.66
	A	2.45	—	6.05	—	—	5.07
	A <sub>1</sub>	0.65	—	—	0.89	—	1.52
	A <sub>2</sub>	1.78	—	4.55	3.05	—	3.55
	φ b	0.40	(0.46)	0.60	0.41	(0.46)	0.64
	φ b <sub>1</sub>		0.46			0.46	
	$\square$	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.04	3.40	3.81
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
	n	—	64	—	—	64	—
Group2	Z <sub>E</sub>	—	1.65	—	—	1.67	—
	Z <sub>D</sub>	—	1.65	—	—	1.67	—
	φ R	—	—	2.03	1.60	—	2.00
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.1 IEC60191-2/A2 (E1)						

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PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $\square = 2.54$ )

呼び寸法(Nominal dimension): M=10

Unit :mm

整理番号 Serial Number	064-001-A10UC					
外形タイプ External Type	C-PGA064-S10U-2.54 (C-PGA064-25.40×25.40-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	$M_E$	—	10	—		
	$M_D$	—	10	—		
	E	24.89	25.40	25.91		
	D	24.89	25.40	25.91		
	A	3.70	4.00	4.30		
	$A_1$	1.07	1.27	1.47		
	$A_2$	—	2.73	—		
	$\phi b$	0.41	(0.46)	0.56		
	$\phi b_1$		0.46			
	$\square$	—	2.54	—		
	L	3.00	3.30	3.60		
	x	—	—	0.25		
	y	—	—	—		
	$y_1$	—	—	0.35		
n	—	64	—			
Group2	$Z_E$	—	1.27	—		
	$Z_D$	—	1.27	—		
	$\phi R$	—	—	2.03		
Cavity	Up					
備考(Remarks)						

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PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

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パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=10

Unit :mm

整理番号 Serial Number	068-001-A10UA			068-001-A10UB			
外形タイプ External Type	C-PGA068-S10U-2.54 (C-PGA068-26.15×26.15-2.54)			C-PGA068-S10U-2.54 (C-PGA068-26.24×26.24-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	10	—	10	—	
	M <sub>D</sub>	—	10	—	10	—	
	E	24.40	26.15	27.90	26.02	26.42	27.02
	D	24.40	26.15	27.90	26.02	26.42	27.02
	A	2.45	—	6.05	—	—	5.10
	A <sub>1</sub>	0.65	—	—	—	1.27	—
	A <sub>2</sub>	1.78	—	4.55	—	—	3.56
	φb	0.40	(0.46)	0.60	0.36	0.48	0.58
	φb <sub>1</sub>	—	0.46	—	—	(0.46)	—
	$e$	—	2.54	—	—	2.54	—
	L	2.54	—	5.08	2.70	3.30	4.00
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
n	—	68	—	—	68	—	
Group2	Z <sub>E</sub>	—	1.65	—	—	2.54	
	Z <sub>D</sub>	—	1.65	—	—	2.54	
	φR	—	—	2.03	—	1.78	—
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.2 IEC60191-2/A2 (E2)						

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パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=11

Unit :mm

整理番号 Serial Number		068-001-A11UA					
外形タイプ External Type		C-PGA068-S11U-2.54 (C-PGA068-28.70×28.70-2.54)					
照合文字 Reference Symbol		min	nom	max	min	nom	max
Group1	$M_E$	—	11	—			
	$M_D$	—	11	—			
	E	26.95	28.70	30.45			
	D	26.95	28.70	30.45			
	A	2.45	—	6.05			
	$A_1$	0.65	—	—			
	$A_2$	1.78	—	4.55			
	$\phi b$	0.40	(0.46)	0.60			
	$\phi b_1$		0.46				
	$e$	—	2.54	—			
	L	2.54		5.08			
	x	—	—	0.25			
	y	—	—	—			
	$y_1$	—	—	0.35			
n	—	68	—				
Group2	$Z_E$	—	1.65	2.54			
	$Z_D$	—	1.65	2.54			
	$\phi R$	—	—	2.03			
Cavity		Up					
備考(Remarks)		参考端子配置図(The reference of terminal layout figure) Fig.3 IEC60191-2/A2 (E3)					

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パッケージ名称(Package name):PGA ( $e = 2.54$ )

呼び寸法(Nominal dimension): M=11

Unit :mm

整理番号 Serial Number	069-001-A11UA			069-001-A11UB			
外形タイプ External Type	C-PGA069-S11U-2.54 (C-PGA069-28.70×28.70-2.54)			C-PGA069-S11U-2.54 (C-PGA069-27.89×27.89-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	11	—	—	11	—
	$M_D$	—	11	—	—	11	—
	E	26.95	28.70	30.45	27.38	27.89	28.40
	D	26.95	28.70	30.45	27.38	27.89	28.40
	A	2.45	—	6.05	3.60	3.90	4.20
	$A_1$	0.65	—	—	1.07	1.27	1.47
	$A_2$	1.78	—	4.55	—	2.63	—
	$\phi b$	0.40	(0.46)	0.60	0.41	(0.46)	0.56
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.00	3.30	3.60
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	69	—	—	69	—	
Group2	$Z_E$	—	1.65	2.54	—	1.24	—
	$Z_D$	—	1.65	2.54	—	1.24	—
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.4 IEC60191-2/A2 (E4)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 16/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=11

Unit :mm

整理番号 Serial Number	073-001-A11UA					
外形タイプ External Type	C-PGA073-S11U-2.54 (C-PGA073-28.70×28.70-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	11	—		
	M <sub>D</sub>	—	11	—		
	E	26.95	28.70	30.45		
	D	26.95	28.70	30.45		
	A	2.45	—	6.05		
	A <sub>1</sub>	0.65	—	—		
	A <sub>2</sub>	1.78	—	4.55		
	φ b	0.40	(0.46)	0.60		
	φ b <sub>1</sub>		0.46			
	$e$	—	2.54	—		
	L	2.54		5.08		
	x	—	—	0.25		
	y	—	—	—		
	y <sub>1</sub>	—	—	0.35		
n	—	73	—			
Group2	Z <sub>E</sub>	—	1.65	2.54		
	Z <sub>D</sub>	—	1.65	2.54		
	φ R	—	—	2.03		
Cavity	Up					
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.5 IEC60191-2/A2 (E5)					

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 17/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):PGA (e=2.54)

呼び寸法(Nominal dimension): M=11

Unit :mm

整理番号 Serial Number	085-001-A11UA			085-001-A11UB			
外形タイプ External Type	C-PGA085-S11U-2.54 (C-PGA085-28.88×28.88-2.54)			C-PGA085-S11U-2.54 (C-PGA085-27.94×27.94-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	11	—	—	11	—
	M <sub>D</sub>	—	11	—	—	11	—
	E	26.95	28.88	30.80	27.43	27.94	28.45
	D	26.95	28.88	30.80	27.43	27.94	28.45
	A	2.45	—	6.05	3.70	4.00	4.30
	A <sub>1</sub>	0.65	—	—	1.07	1.27	1.47
	A <sub>2</sub>	1.78	—	4.55	—	(2.73)	—
	φ b	0.40	(0.46)	0.60	0.41	(0.46)	0.56
	φ b <sub>1</sub>		0.46			0.46	
	e	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.00	3.30	3.60
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
	n	—	85	—	—	85	—
Group2	Z <sub>E</sub>	—	1.74	—	—	1.27	—
	Z <sub>D</sub>	—	1.74	—	—	1.27	—
	φ R	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.6 IEC60191-2/A2 (E6)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 18/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=12

Unit :mm

整理番号 Serial Number	084-001-A12UA			088-001-A12UA			
外形タイプ External Type	C-PGA084-S12U-2.54 (C-PGA084-30.50×30.50-2.54)			C-PGA088-S12U-2.54 (C-PGA088-30.48×30.48-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	12	—	—	12	—
	$M_D$	—	12	—	—	12	—
	E	30.20	30.50	30.80	30.10	30.48	30.86
	D	30.20	30.50	30.80	30.10	30.48	30.86
	A	2.45	—	6.05	—	—	5.75
	$A_1$	0.65	—	—	0.89	—	1.52
	$A_2$	1.78	—	4.55	3.54	—	4.23
	$\phi b$	0.40	(0.46)	0.60	0.41	(0.46)	0.64
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.04	3.40	3.81
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	84	—	—	88	—	
Group2	$Z_E$	—	1.28	—	—	1.27	—
	$Z_D$	—	1.28	—	—	1.27	—
	$\phi R$	—	—	2.03	1.60	—	2.00
Cavity	Up						
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.7 IEC60191-2/A2 (E7)			Up			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 19/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):PGA (e=2.54)

呼び寸法(Nominal dimension): M=12

Unit :mm

整理番号 Serial Number		107-001-A12UA			107-001-A12UB		
外形タイプ External Type		C-PGA107-S12U-2.54 (C-PGA107-31.25×31.25-2.54)			C-PGA107-S12U-2.54 (C-PGA107-30.48×30.48-2.54)		
照合文字 Reference Symbol		min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	12	—	—	12	—
	M <sub>D</sub>	—	12	—	—	12	—
	E	29.50	31.25	33.00	30.10	30.48	30.86
	D	29.50	31.25	33.00	30.10	30.48	30.86
	A	2.45	—	6.05	—	—	5.75
	A <sub>1</sub>	0.65	—	—	0.89	—	1.52
	A <sub>2</sub>	1.78	—	4.55	3.54	—	4.23
	φb	0.40	(0.46)	0.60	0.41	(0.46)	0.64
	φb <sub>1</sub>		0.46			0.46	
	e	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.04	3.40	3.81
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
n	—	107	—	—	88	—	
Group2	Z <sub>E</sub>	—	1.66	—	—	1.27	—
	Z <sub>D</sub>	—	1.66	—	—	1.27	—
	φR	—	—	2.03	1.60	—	2.00
Cavity		Up			Up		
備考(Remarks)		参考端子配置図(The reference of terminal layout figure) Fig.8 IEC60191-2/A2 (E8)					

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 20/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=13

Unit :mm

整理番号 Serial Number	088-001-A13UA			101-001-A13UA			
外形タイプ External Type	C-PGA088-S13U-2.54 (C-PGA088-33.78×33.78-2.54)			C-PGA101-S13U-2.54 (C-PGA101-33.78×33.78-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	13	—	—	13	—
	$M_D$	—	13	—	—	13	—
	E	32.00	33.78	35.55	32.00	33.78	35.55
	D	32.00	33.78	35.55	32.00	33.78	35.55
	A	2.45	—	6.05	2.45	—	6.05
	$A_1$	0.65	—	—	0.65	—	—
	$A_2$	1.78	—	4.55	1.78	—	4.55
	$\phi b$	0.41	(0.46)	0.64	0.40	(0.46)	0.60
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	2.54		5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	88	—	—	101	—	
Group2	$Z_E$	—	1.65	—	—	1.65	—
	$Z_D$	—	1.65	—	—	1.65	—
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.9 IEC60191-2/A2 (E9)			参考端子配置図(The reference of terminal layout figure) Fig.10 IEC60191-2/A2 (E10)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 21/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=13

Unit :mm

整理番号 Serial Number	120-001-A13UA			121-001-A13UA			
外形タイプ External Type	C-PGA120-S13U-2.54 (C-PGA120-33.78×33.78-2.54)			C-PGA121-S13U-2.54 (C-PGA121-33.78×33.78-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	13	—	13	—	
	$M_D$	—	13	—	13	—	
	E	32.00	33.78	35.55	32.00	33.78	35.55
	D	32.00	33.78	35.55	32.00	33.78	35.55
	A	2.45	—	6.05	2.45	—	6.05
	$A_1$	0.65	—	—	0.65	—	—
	$A_2$	1.78	—	4.55	1.78	—	4.55
	$\phi b$	0.40	(0.46)	0.60	0.40	(0.46)	0.60
	$\phi b_1$	—	0.46	—	—	0.46	—
	$e$	—	2.54	—	—	2.54	—
	L	2.54	—	5.08	2.54	—	5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	120	—	—	121	—	
Group2	$Z_E$	—	1.65	—	1.65	—	
	$Z_D$	—	1.65	—	1.65	—	
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.11 IEC60191-2/A2 (E11)			参考端子配置図(The reference of terminal layout figure) Fig.12 IEC60191-2/A2 (E12)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 22/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=14

Unit :mm

整理番号 Serial Number	124-001-A14UA			132-001-A14UA			
外形タイプ External Type	C-PGA124-S14U-2.54 (C-PGA124-37.60×37.60-2.54)			C-PGA132-S14U-2.54 (C-PGA132-36.33×36.33-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	14	—	—	14	—
	M <sub>D</sub>	—	14	—	—	14	—
	E	37.20	37.60	38.00	34.55	36.33	38.10
	D	37.20	37.60	38.00	34.55	36.33	38.10
	A	—	—	4.10	2.45	—	6.05
	A <sub>1</sub>	1.00	—	—	0.65	—	—
	A <sub>2</sub>	—	—	(3.10)	1.78	—	4.55
	φb	0.41	(0.46)	0.51	0.40	(0.46)	0.60
	φb <sub>1</sub>		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	3.30	3.80	4.30	2.54		5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
	n	—	124	—	—	132	—
Group2	Z <sub>E</sub>	—	2.29	—	—	1.65	—
	Z <sub>D</sub>	—	2.29	—	—	1.65	—
	φR	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)				参考端子配置図(The reference of terminal layout figure) Fig.13 IEC60191-2/A2 (E13)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 23/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=14

Unit :mm

整理番号 Serial Number	133-001-A14UA			135-001-A14UA			
外形タイプ External Type	C-PGA133-S14U-2.54 (C-PGA133-36.33×36.33-2.54)			C-PGA135-S14U-2.54 (C-PGA135-36.33×36.33-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	14	—	—	14	—
	$M_D$	—	14	—	—	14	—
	E	34.55	36.33	38.10	34.55	36.33	38.10
	D	34.55	36.33	38.10	34.55	36.33	38.10
	A	2.45	—	6.05	2.45	—	6.05
	$A_1$	0.65	—	—	0.65	—	—
	$A_2$	1.78	—	4.55	1.78	—	4.55
	$\phi b$	0.40	(0.46)	0.60	0.40	(0.46)	0.60
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	2.54		5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	133	—	—	135	—	
Group2	$Z_E$	—	1.65	—	—	1.65	—
	$Z_D$	—	1.65	—	—	1.65	—
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.14 IEC60191-2/A2 (E14)			参考端子配置図(The reference of terminal layout figure) Fig.15 IEC60191-2/A2 (E15)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 24/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=14

Unit :mm

整理番号 Serial Number		135-001-A14UB			135-001-A14UC		
外形タイプ External Type		C-PGA135-S14U-2.54 (C-PGA135-35.56×35.56-2.54)			C-PGA135-S14U-2.54 (C-PGA135-37.08×37.08-2.54)		
照合文字 Reference Symbol		min	nom	max	min	nom	max
Group1	$M_E$	—	14	—	—	14	—
	$M_D$	—	14	—	—	14	—
	E	35.05	35.56	36.07	36.58	37.08	37.59
	D	35.05	35.56	36.07	36.58	37.08	37.59
	A	—	—	5.75	—	—	4.95
	$A_1$	0.89	—	1.52	—	1.27	—
	$A_2$	3.54	—	4.23	2.03	2.70	3.56
	$\phi b$	0.41	(0.46)	0.64	0.38	0.48	0.58
	$\phi b_1$		0.46			(0.46)	
	$e$	—	2.54	—	—	2.54	—
	L	3.04	3.40	3.81	2.54	3.30	4.00
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	135	—	—	135	—	
Group2	$Z_E$	—	1.27	—	1.52	2.03	2.54
	$Z_D$	—	1.27	—	1.52	2.03	2.54
	$\phi R$	1.60	—	2.00	—	1.78	—
Cavity		Up			Up		
備考(Remarks)							

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 25/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=14

Unit :mm

整理番号 Serial Number	135-001-A14UD			135-001-A14UE			
外形タイプ External Type	C-PGA135-S14U-2.54 (C-PGA135-37.08×37.08-2.54)			C-PGA135-S14U-2.54 (C-PGA135-35.56×35.56-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	14	—	—	14	—
	$M_D$	—	14	—	—	14	—
	E	36.68	37.08	37.48	35.05	35.56	36.07
	D	36.68	37.08	37.48	35.05	35.56	36.07
	A	—	—	4.49	3.70	4.00	4.30
	$A_1$	1.07	—	—	1.07	1.27	1.47
	$A_2$	—	—	(3.42)	—	(2.73)	—
	$\phi b$	0.41	(0.46)	0.51	0.41	(0.46)	0.56
	$\phi b_1$	—	0.46	—	—	0.46	—
	$e$	—	2.54	—	—	2.54	—
	L	3.00	3.30	3.60	3.00	3.30	3.60
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
Group2	n	—	135	—	—	135	—
	$Z_E$	—	2.03	—	—	1.27	—
	$Z_D$	—	2.03	—	—	1.27	—
$\phi R$	—	—	2.03	—	—	2.03	
Cavity	Up			Up			
備考(Remarks)							

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 26/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=15

Unit :mm

整理番号 Serial Number	144-001-A15UA			145-001-A15UA			
外形タイプ External Type	C-PGA144-S15U-2.54 (C-PGA144-38.15×38.15-2.54)			C-PGA145-S15U-2.54 (C-PGA145-40.00×40.00-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	15	—	—	15	—
	$M_D$	—	15	—	—	15	—
	E	37.80	38.15	38.50	39.60	40.00	40.40
	D	37.80	38.15	38.50	39.60	40.00	40.40
	A	2.45	—	6.05	2.45	—	6.05
	$A_1$	0.65	—	—	0.65	—	—
	$A_2$	1.78	—	4.55	1.78	—	4.55
	$\phi b$	0.40	(0.46)	0.60	0.40	(0.46)	0.60
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	2.54		5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	144	—	—	145	—	
Group2	$Z_E$	—	1.30	—	—	2.22	—
	$Z_D$	—	1.30	—	—	2.22	—
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.16 IEC60191-2/A2 (E16)			参考端子配置図(The reference of terminal layout figure) Fig.17 IEC60191-2/A2 (E17)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 27/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e = 2.54$ )

呼び寸法(Nominal dimension): M=15

Unit :mm

整理番号 Serial Number	145-001-A15UB			149-001-A15DA			
外形タイプ External Type	C-PGA145-S15U-2.54 (C-PGA145-39.00×39.00-2.54)			C-PGA149-S15D-2.54 (C-PGA149-39.00×39.00-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	15	—	—	15	—
	$M_D$	—	15	—	—	15	—
	E	38.60	39.00	39.40	38.60	39.00	39.40
	D	38.60	39.00	39.40	38.60	39.00	39.40
	A	—	—	4.35	—	—	4.50
	$A_1$	1.07	—	—	1.00	—	—
	$A_2$	—	—	(3.28)	—	—	(3.50)
	$\phi b$	0.41	(0.46)	0.51	0.41	(0.46)	0.51
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	3.00	3.30	3.60	3.50	3.80	4.10
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	145	—	—	149	—	
Group2	$Z_E$	—	1.72	—	—	1.72	—
	$Z_D$	—	1.72	—	—	1.72	—
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Down			
備考(Remarks)							

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 28/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=15

Unit :mm

整理番号 Serial Number	177-001-A15UA			177-001-A15UB			
外形タイプ External Type	C-PGA177-S15U-2.54 (C-PGA177-38.85×38.85-2.54)			C-PGA177-S15U-2.54 (C-PGA177-40.00×40.00-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	15	—	15	—	
	$M_D$	—	15	—	15	—	
	E	37.10	38.85	40.60	39.60	40.00	40.40
	D	37.10	38.85	40.60	39.60	40.00	40.40
	A	2.45	—	6.05	—	—	3.82
	$A_1$	0.65	—	—	1.00	—	—
	$A_2$	1.78	—	4.55	—	—	(2.82)
	$\phi b$	0.40	(0.46)	0.60	0.41	(0.46)	0.51
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.30	3.80	4.30
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	177	—	—	177	—	
Group2	$Z_E$	—	1.65	—	2.22	—	
	$Z_D$	—	1.65	—	2.22	—	
	$\phi R$	—	—	2.03	—	2.03	
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.18 IEC60191-2/A2 (E18)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 29/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):PGA (e=2.54)

呼び寸法(Nominal dimension): M=15

Unit :mm

整理番号 Serial Number	179-001-A15UA			179-001-A15UB			
外形タイプ External Type	C-PGA179-S15U-2.54 (C-PGA179-38.85×38.85-2.54)			C-PGA179-S15U-2.54 (C-PGA179-38.10×38.10-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	15	—	15	—	
	M <sub>D</sub>	—	15	—	15	—	
	E	37.10	38.85	40.60	37.59	38.10	38.61
	D	37.10	38.85	40.60	37.59	38.10	38.61
	A	2.45	—	6.05	—	—	5.75
	A <sub>1</sub>	0.65	—	—	1.02	—	1.52
	A <sub>2</sub>	1.78	—	4.55	3.54	—	4.23
	φ b	0.40	(0.46)	0.60	0.41	(0.46)	0.64
	φ b <sub>1</sub>		0.46			0.46	
	e	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.04	3.40	3.81
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
n	—	179	—	—	179	—	
Group2	Z <sub>E</sub>	—	1.65	—	1.27	—	
	Z <sub>D</sub>	—	1.65	—	1.27	—	
	φ R	—	—	2.03	1.60	—	2.00
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.19 IEC60191-2/A2 (E19)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 30/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e = 2.54$ )

呼び寸法(Nominal dimension): M=15

Unit :mm

整理番号 Serial Number		179-001-A15UC					
外形タイプ External Type		C-PGA179-S15U-2.54 (C-PGA179-39.62×39.62-2.54)					
照合文字 Reference Symbol		min	nom	max	min	nom	max
Group1	$M_E$	—	15	—			
	$M_D$	—	15	—			
	E	39.22	39.62	40.02			
	D	39.22	39.62	40.02			
	A	—	—	4.90			
	$A_1$	1.07	—	—			
	$A_2$	—	—	(3.83)			
	$\phi b$	0.41	(0.46)	0.51			
	$\phi b_1$		0.46				
	$e$	—	2.54	—			
	L	3.00	3.30	3.60			
	x	—	—	0.25			
	y	—	—	—			
	$y_1$	—	—	0.35			
n	—	179	—				
Group2	$Z_E$	—	2.03	—			
	$Z_D$	—	2.03	—			
	$\phi R$	—	—	2.03			
Cavity		Up					
備考(Remarks)							

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 31/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):PGA (e=2.54)

呼び寸法(Nominal dimension): M=16

Unit :mm

整理番号 Serial Number	155-001-A16UC					
外形タイプ External Type	C-PGA155-S16U-2.54 (C-PGA155-42.16×42.16-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	16	—		
	M <sub>D</sub>	—	16	—		
	E	41.65	42.16	42.67		
	D	41.65	42.16	42.67		
	A	4.05	4.35	4.65		
	A <sub>1</sub>	1.20	1.40	1.60		
	A <sub>2</sub>	—	(1.95)	—		
	φb	0.41	(0.46)	0.56		
	φb <sub>1</sub>		0.46			
	e	—	2.54	—		
	L	2.75	3.05	3.35		
	x	—	—	0.25		
	y	—	—	—		
	y <sub>1</sub>	—	—	0.35		
n	—	155	—			
Group2	Z <sub>E</sub>	—	2.03	—		
	Z <sub>D</sub>	—	2.03	—		
	φR	—	—	2.03		
Cavity	Up					
備考(Remarks)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 32/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=17

Unit :mm

整理番号 Serial Number	208-001-A17UA					
外形タイプ External Type	C-PGA208-S17U-2.54 (C-PGA208-43.00×43.00-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	$M_E$	—	17	—		
	$M_D$	—	17	—		
	E	42.49	43.18	43.51		
	D	42.49	43.18	43.51		
	A	—	—	5.75		
	$A_1$	1.02	—	1.52		
	$A_2$	3.54	—	4.23		
	$\phi b$	0.41	(0.46)	0.51		
	$\phi b_1$		0.46			
	$e$	—	2.54	—		
	L	3.04	3.40	3.81		
	x	—	—	0.25		
	y	—	—	—		
	$y_1$	—	—	0.35		
	n	—	208	—		
Group2	$Z_E$	—	1.27	—		
	$Z_D$	—	1.27	—		
	$\phi R$	—	—	2.03		
Cavity	Up					
備考(Remarks)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 33/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=17

Unit :mm

整理番号 Serial Number	209-001-A17UA			209-001-A17UB			
外形タイプ External Type	C-PGA209-S17U-2.54 (C-PGA209-43.95×43.95-2.54)			C-PGA209-S17U-2.54 (C-PGA209-44.45×44.45-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	17	—	—	17	—
	M <sub>D</sub>	—	17	—	—	17	—
	E	42.20	43.95	45.70	44.05	44.45	44.85
	D	42.20	43.95	45.70	44.05	44.45	44.85
	A	2.45	—	6.05	—	—	4.55
	A <sub>1</sub>	0.65	—	—	1.00	—	—
	A <sub>2</sub>	1.78	—	4.55	—	—	(3.55)
	φb	0.40	(0.46)	0.60	0.41	(0.46)	0.51
	φb <sub>1</sub>		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	3.30	3.80	4.30
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
n	—	209	—	—	209	—	
Group2	Z <sub>E</sub>	—	1.65	—	—	1.90	—
	Z <sub>D</sub>	—	1.65	—	—	1.90	—
	φR	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.20 IEC60191-2/A2 (E20)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 34/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=17

Unit :mm

整理番号 Serial Number	225-001-A17UA			225-001-A17UB			
外形タイプ External Type	C-PGA225-S17U-2.54 (C-PGA225-43.95×43.95-2.54)			C-PGA225-S17U-2.54 (C-PGA225-43.95×43.95-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	17	—	—	17	—
	M <sub>D</sub>	—	17	—	—	17	—
	E	42.20	43.95	45.70	42.20	43.95	45.70
	D	42.20	43.95	45.70	42.20	43.95	45.70
	A	2.45	—	6.05	2.45	—	6.05
	A <sub>1</sub>	0.65	—	—	0.65	—	—
	A <sub>2</sub>	1.78	—	4.55	1.78	—	4.55
	φb	0.40	(0.46)	0.60	0.40	(0.46)	0.60
	φb <sub>1</sub>		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	2.54		5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	y <sub>1</sub>	—	—	0.35	—	—	0.35
n	—	225	—	—	225	—	
Group2	Z <sub>E</sub>	—	1.65	—	—	1.65	—
	Z <sub>D</sub>	—	1.65	—	—	1.65	—
	φR	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.21 IEC60191-2/A2 (E21)			参考端子配置図(The reference of terminal layout figure) Fig.22 IEC60191-2/A2 (E22)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 35/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=17

Unit :mm

整理番号 Serial Number	240-001-A17UA					
外形タイプ External Type	C-PGA240-S17U-2.54 (C-PGA240-43.95×43.95-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	17	—		
	M <sub>D</sub>	—	17	—		
	E	42.20	43.95	45.70		
	D	42.20	43.95	45.70		
	A	2.45	—	6.05		
	A <sub>1</sub>	0.65	—	—		
	A <sub>2</sub>	1.78	—	4.55		
	φb	0.40	(0.46)	0.60		
	φb <sub>1</sub>		0.46			
	$e$	—	2.54	—		
	L	2.54		5.08		
	x	—	—	0.25		
	y	—	—	—		
	y <sub>1</sub>	—	—	0.35		
	n	—	240	—		
Group2	Z <sub>E</sub>	—	1.65	—		
	Z <sub>D</sub>	—	1.65	—		
	φR	—	—	2.03		
Cavity	Up					
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.23 IEC60191-2/A2 (E23)					

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 36/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=18

Unit :mm

整理番号 Serial Number	223-001-A18UA			223-001-A18DA			
外形タイプ External Type	C-PGA223-S18U-2.54 (C-PGA223-47.25×47.25-2.54)			C-PGA223-S18D-2.54 (C-PGA223-47.24×47.24-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	18	—	—	18	—
	$M_D$	—	18	—	—	18	—
	E	46.70	47.25	47.80	46.73	47.24	47.76
	D	46.70	47.25	47.80	46.73	47.24	47.76
	A	2.45	—	6.05	4.05	4.35	4.65
	$A_1$	0.65	—	—	1.20	1.40	1.60
	$A_2$	1.78	—	4.55	—	(2.95)	—
	$\phi b$	0.40	(0.46)	0.60	0.41	(0.46)	0.56
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	2.54		5.08	2.75	3.05	3.35
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	223	—	—	223	—	
Group2	$Z_E$	—	2.04	—	—	2.03	—
	$Z_D$	—	2.04	—	—	2.03	—
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Down			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.24 IEC60191-2/A2 (E24)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 37/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=18

Unit :mm

整理番号 Serial Number	224-001-A18UA					
外形タイプ External Type	C-PGA224-S18U-2.54 (C-PGA224-45.70×45.70-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	18	—		
	M <sub>D</sub>	—	18	—		
	E	45.20	45.70	46.20		
	D	45.20	45.70	46.20		
	A	2.45	—	6.05		
	A <sub>1</sub>	0.65	—	—		
	A <sub>2</sub>	1.78	—	4.55		
	φb	0.40	(0.46)	0.60		
	φb <sub>1</sub>		0.46			
	$e$	—	2.54	—		
	L	2.54		5.08		
	x	—	—	0.25		
	y	—	—	—		
	y <sub>1</sub>	—	—	0.35		
	n	—	224	—		
Group2	Z <sub>E</sub>	—	1.26	—		
	Z <sub>D</sub>	—	1.26	—		
	φR	—	—	2.03		
Cavity	Up					
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.25 IEC60191-2/A2 (E25)					

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 38/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=19

Unit :mm

整理番号 Serial Number	256-001-A19UA			257-001-A19UA			
外形タイプ External Type	C-PGA256-S19U-2.54 (C-PGA256-50.04×50.04-2.54)			C-PGA257-S19U-2.54 (C-PGA257-49.00×49.00-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	M <sub>E</sub>	—	19	—	19	—	
	M <sub>D</sub>	—	19	—	19	—	
	E	49.53	50.04	50.55	47.25	49.00	50.80
	D	49.53	50.04	50.55	47.25	49.00	50.80
	A	—	—	5.99	2.45	—	6.05
	A <sub>1</sub>	1.02	—	1.52	0.65	—	—
	A <sub>2</sub>	3.77	—	4.47	1.78	—	4.55
	φb	0.41	(0.46)	0.64	0.40	(0.46)	0.60
	φb <sub>1</sub>		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	3.04	3.40	3.81	2.54		5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
y <sub>1</sub>	—	—	0.35	—	—	0.35	
n	—	256	—	—	257	—	
Group2	Z <sub>E</sub>	—	2.16	—	1.64	—	
	Z <sub>D</sub>	—	2.16	—	1.64	—	
	φR	1.60	—	2.00	—	2.03	
Cavity	Up			Up			
備考(Remarks)				参考端子配置図(The reference of terminal layout figure) Fig.26 IEC60191-2/A2 (E26)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 39/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=19

Unit :mm

整理番号 Serial Number	281-001-A19UA			281-001-A19UB			
外形タイプ External Type	C-PGA281-S19U-2.54 (C-PGA281-49.00×49.00-2.54)			C-PGA281-S19U-2.54 (C-PGA281-49.53×49.53-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	19	—	19	—	
	$M_D$	—	19	—	19	—	
	E	47.25	49.00	50.80	49.13	49.53	49.93
	D	47.25	49.00	50.80	49.13	49.53	49.93
	A	2.45	—	6.05	—	—	4.81
	$A_1$	0.65	—	—	1.07	—	—
	$A_2$	1.78	—	4.55	—	—	(3.74)
	$\phi b$	0.40	(0.46)	0.60	0.40	(0.46)	0.50
	$\phi b_1$	—	0.46	—	—	0.46	—
	$e$	—	2.54	—	—	2.54	—
	L	2.54	—	5.08	3.10	3.30	3.50
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	281	—	—	281	—	
Group2	$Z_E$	—	1.64	—	1.91	—	
	$Z_D$	—	1.64	—	1.91	—	
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.27 IEC60191-2/A2 (E27)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 40/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=20

Unit :mm

整理番号 Serial Number	257-001-A20UA			299-001-A20UA			
外形タイプ External Type	C-PGA257-S20U-2.54 (C-PGA257-51.55×51.55-2.54)			C-PGA299-S20U-2.54 (C-PGA299-51.55×51.55-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	20	—	20	—	
	$M_D$	—	20	—	20	—	
	E	49.80	51.55	53.30	49.80	51.55	53.30
	D	49.80	51.55	53.30	49.80	51.55	53.30
	A	2.45	—	6.05	2.45	—	6.05
	$A_1$	0.65	—	—	0.65	—	—
	$A_2$	1.78	—	4.55	1.78	—	4.55
	$\phi b$	0.40	(0.46)	0.60	0.40	(0.46)	0.60
	$\phi b_1$	—	0.46	—	—	0.46	—
	$e$	—	2.54	—	—	2.54	—
	L	2.54	—	5.08	2.54	—	5.08
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	257	—	—	299	—	
Group2	$Z_E$	—	1.65	—	1.65	—	
	$Z_D$	—	1.65	—	1.65	—	
	$\phi R$	—	—	2.03	—	—	2.03
Cavity	Up			Up			
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.28 IEC60191-2/A2 (E28)			参考端子配置図(The reference of terminal layout figure) Fig.29 IEC60191-2/A2 (E29)			

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 41/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=20

Unit :mm

整理番号 Serial Number	299-001-A20DA			299-001-A20DB			
外形タイプ External Type	C-PGA299-S20U-2.54 (C-PGA299-52.32×52.32-2.54)			C-PGA299-S20U-2.54 (C-PGA299-52.32×52.32-2.54)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	20	—	—	20	—
	$M_D$	—	20	—	—	20	—
	E	51.76	52.32	52.88	51.81	52.32	52.83
	D	51.76	52.32	52.88	51.81	52.32	52.83
	A	—	—	6.28*	4.05	4.35	4.65
	$A_1$	1.02	—	1.52	1.20	1.40	1.60
	$A_2$	3.77	—	4.47	—	(2.95)	—
	$\phi b$	0.41	(0.46)	0.64	0.41	(0.46)	0.56
	$\phi b_1$		0.46			0.46	
	$e$	—	2.54	—	—	2.54	—
	L	3.04	3.40	3.81	2.75	3.05	3.35
	x	—	—	0.25	—	—	0.25
	y	—	—	—	—	—	—
	$y_1$	—	—	0.35	—	—	0.35
n	—	299	—	—	299	—	
Group2	$Z_E$	—	2.03	—	—	2.03	—
	$Z_D$	—	2.03	—	—	2.03	—
	$\phi R$	1.60	—	2.00	—	—	2.03
Cavity	Down			Down			
備考(Remarks)							

JEITA STANDARD  
PACKAGE OUTLINE DRAWINGSDATE  
2002-06-01SHEET  
42/51PACKAGE NAME  
PGAJEITA REGISTRATION NO.  
IC-7323A-001

EIAJ ED-7311-23

パッケージ名称(Package name):PGA ( $e = 2.54$ )

呼び寸法(Nominal dimension): M=21

Unit :mm

整理番号 Serial Number	361-001-A21UA					
外形タイプ External Type	C-PGA361-S21U-2.54 (C-PGA361-53.34×53.34-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	$M_E$	—	21	—		
	$M_D$	—	21	—		
	E	52.74	53.34	53.94		
	D	52.74	53.34	53.94		
	A	—	—	6.10		
	$A_1$	1.00	—	—		
	$A_2$	—	—	(5.10)		
	$\phi b$	0.40	(0.46)	0.51		
	$\phi b_1$		0.46			
	$e$	—	2.54	—		
	L	2.90	3.30	3.70		
	x	—	—	0.25		
	y	—	—	—		
	$y_1$	—	—	0.35		
n	—	361	—			
Group2	$Z_E$	—	1.27	—		
	$Z_D$	—	1.27	—		
	$\phi R$	—	—	2.03		
Cavity	Up					
備考(Remarks)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 43/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):PGA ( $e=2.54$ )

呼び寸法(Nominal dimension): M=22

Unit :mm

整理番号 Serial Number	340-001-A22UA					
外形タイプ External Type	C-PGA340-S22U-2.54 (C-PGA340-55.85×55.85-2.54)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	22	—		
	M <sub>D</sub>	—	22	—		
	E	55.30	55.85	56.40		
	D	55.30	55.85	56.40		
	A	2.45	—	6.05		
	A <sub>1</sub>	0.65	—	—		
	A <sub>2</sub>	1.78	—	4.55		
	φb	0.40	(0.46)	0.60		
	φb <sub>1</sub>		0.46			
	$e$	—	2.54	—		
	L	2.54		5.08		
	x	—	—	0.25		
	y	—	—	—		
	y <sub>1</sub>	—	—	0.35		
n	—	340	—			
Group2	Z <sub>E</sub>	—	1.26	—		
	Z <sub>D</sub>	—	1.26	—		
	φR	—	—	2.03		
Cavity	Up					
備考(Remarks)	参考端子配置図(The reference of terminal layout figure) Fig.30 IEC60191-2/A2 (E30)					

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 44/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

## EIAJ ED-7311-23

## 8.3 登録一覧, Registration list

パッケージ名称(Package name):SPGA ( $e=1.27$ )

呼び寸法(Nominal dimension): M=19

Unit :mm

整理番号 Serial Number	256-001-B19UA			256-001-B19UB			
外形タイプ External Type	C-SPGA256-S19U-1.27 (C-SPGA256-25.10×25.10-1.27)			C-SPGA256-S19U-1.27 (C-SPGA256-27.00×27.00-1.27)			
照合文字 Reference Symbol	min	nom	max	min	nom	max	
Group1	$M_E$	—	19	—	19	—	
	$M_D$	—	19	—	19	—	
	E	25.10	25.40	25.70	26.75	27.00	27.25
	D	25.10	25.40	25.70	26.75	27.00	27.25
	A	—	—	6.35*	—	—	6.35*
	$A_1$	1.30	—	—	1.30	—	—
	$A_2$	3.75	—	4.55	3.75	—	4.55
	$\phi b$	0.15	(0.20)	0.25	0.15	(0.20)	0.25
	$\phi b_1$	0.15	0.20	0.25	0.15	0.20	0.25
	$e$	—	1.27	—	—	1.27	—
	L	1.30	1.50	1.80	1.30	1.50	1.80
	x	—	—	0.19	—	—	0.19
	y	—	—	0.10	—	—	0.10
	$y_1$	—	—	0.35	—	—	0.35
n	—	256	—	—	256	—	
Group2	$Z_E$	—	1.27	—	2.07	—	
	$Z_D$	—	1.27	—	2.07	—	
	$\phi R$	—	—	1.05	—	1.05	
Cavity	Up			Up			
備考(Remarks)							

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 45/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):SPGA ( $\phi = 1.27$ )

呼び寸法(Nominal dimension): M=27

Unit :mm

整理番号 Serial Number	273-001-B27DA					
外形タイプ External Type	C-SPGA273-S27D-1.27 (C-SPGA273-35.56×35.56-1.27)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	M <sub>E</sub>	—	27	—		
	M <sub>D</sub>	—	27	—		
	E	35.16	35.56	35.96		
	D	35.16	35.56	35.96		
	A	—	—	5.91		
	A <sub>1</sub>	1.20	—	—		
	A <sub>2</sub>	3.51	—	4.11		
	$\phi b$	0.15	(0.20)	0.25		
	$\phi b_1$	0.15	0.20	0.25		
	$\phi$	—	1.27	—		
	L	1.20	1.50	1.80		
	x	—	—	0.19		
	y	—	—	0.10		
	y <sub>1</sub>	—	—	0.35		
n	—	273	—			
Group2	Z <sub>E</sub>	—	1.27	—		
	Z <sub>D</sub>	—	1.27	—		
	$\phi R$	—	—	1.05		
Cavity	Down					
備考(Remarks)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 46/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

EIAJ ED-7311-23

パッケージ名称(Package name):SPGA ( $e = 1.27$ )

呼び寸法(Nominal dimension): M=30

Unit :mm

整理番号 Serial Number	401-001-B30DA					
外形タイプ External Type	C-SPGA401-S30D-1.27 (C-SPGA401-39.37×39.37-1.27)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	$M_E$	—	30	—		
	$M_D$	—	30	—		
	E	38.97	39.37	39.77		
	D	38.97	39.37	39.77		
	A	—	—	5.91		
	$A_1$	1.20	—	—		
	$A_2$	3.51	—	4.11		
	$\phi b$	0.15	(0.20)	0.25		
	$\phi b_1$	0.15	0.20	0.25		
	$e$	—	1.27	—		
	L	1.20	1.50	1.80		
	x	—	—	0.19		
	y	—	—	0.10		
	$y_1$	—	—	0.35		
Group2	n	—	401	—		
	$Z_E$	—	1.27	—		
	$Z_D$	—	1.27	—		
	$\phi R$	—	—	1.05		
Cavity	Down					
備考(Remarks)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 47/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

パッケージ名称(Package name):SPGA ( $e=1.27$ )

呼び寸法(Nominal dimension): M=35

Unit :mm

整理番号 Serial Number	600-001-B35UA					
外形タイプ External Type	C-SPGA600-S35U-1.27 (C-SPGA600-45.72×45.72-1.27)					
照合文字 Reference Symbol	min	nom	max	min	nom	max
Group1	$M_E$	—	35	—		
	$M_D$	—	35	—		
	E	45.22	45.72	46.22		
	D	45.22	45.72	46.22		
	A	—	—	6.10		
	$A_1$	1.36	1.58	1.80		
	$A_2$	2.80	3.40	4.00		
	$\phi b$	0.15	(0.20)	0.25		
	$\phi b_1$	0.15	0.20	0.25		
	$e$	—	1.27	—		
	L	1.80	2.00	2.20		
	x	—	—	0.19		
	y	—	—	0.10		
	$y_1$	—	—	0.35		
	n	—	600	—		
Group2	$Z_E$	—	1.27	—		
	$Z_D$	—	1.27	—		
	$\phi R$	—	—	1.05		
Cavity	Down					
備考(Remarks)						

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 48/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

**The reference of terminal layout figure**

As assistance in the design and development of new package in the future, **The reference of terminal layout figure** shown below.

**The reference of terminal layout figure (1/3)**

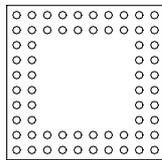


Fig.1

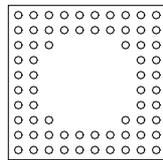


Fig.2

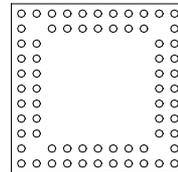


Fig.3

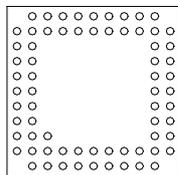


Fig.4

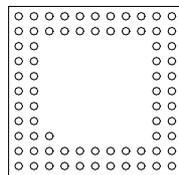


Fig.5

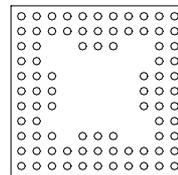


Fig.6

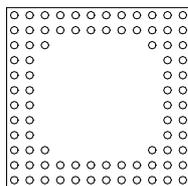


Fig.7

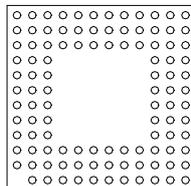


Fig.8

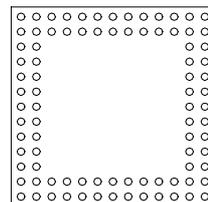


Fig.9

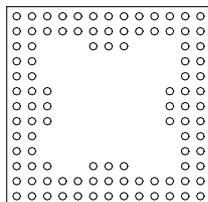


Fig.10

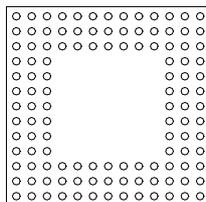


Fig.11

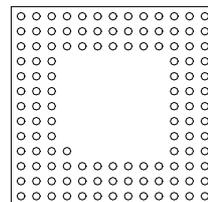


Fig.12

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 49/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

The reference of terminal layout figure (2/3)

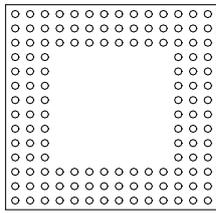


Fig.13

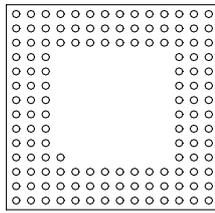


Fig.14

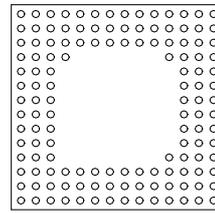


Fig.15

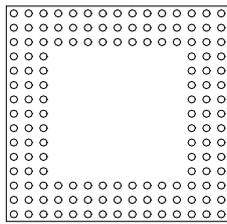


Fig.16

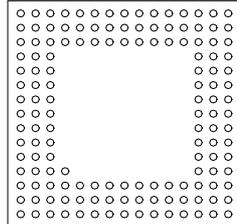


Fig.17

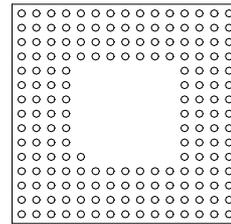


Fig.18

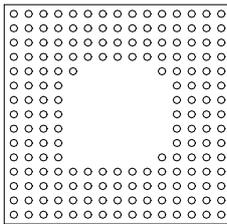


Fig.19

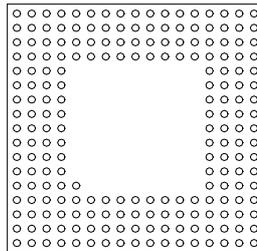


Fig.20

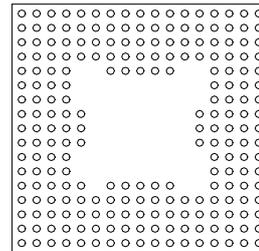


Fig.21

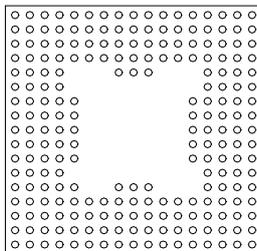


Fig.22

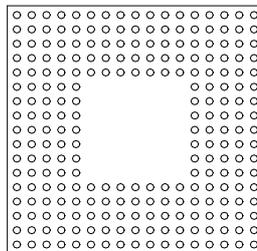


Fig.23

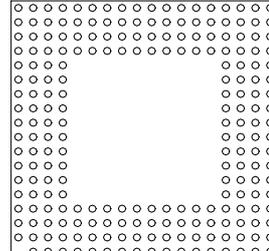


Fig.24

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 50/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

The reference of terminal layout figure (3/3)

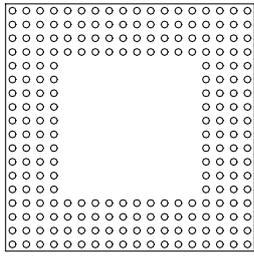


Fig.25

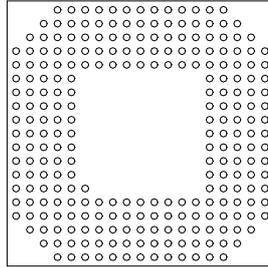


Fig.26

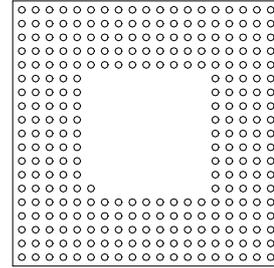


Fig.27

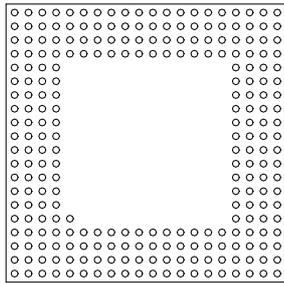


Fig.28

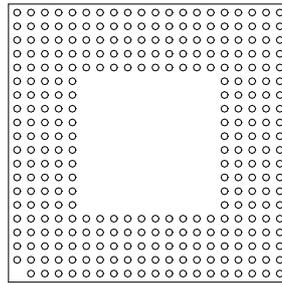


Fig.29

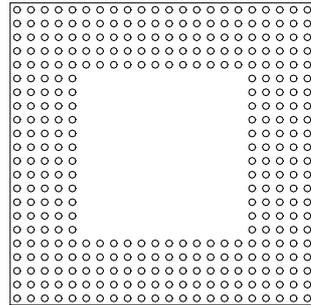


Fig.30

	JEITA STANDARD PACKAGE OUTLINE DRAWINGS	DATE 2002-06-01	SHEET 51/51
PACKAGE NAME PGA		JEITA REGISTRATION NO. IC-7323A-001	

**COMMITTEE MEMBERS**

The IC Package Sub-committee of the Technical Standardization Committee on Semiconductor Device Package has mainly deliberated this standard.

The sub-committee members are shown below.

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