



Standard of Electronic Industries Association of Japan

EIAJ ED-7311-6

**Standard of integrated circuits package
[60/90pins Fine-pitch Ball Grid Array (FBGA)]**

Established in April, 1998

Prepared by
Technical Standardization Committee on Semiconductor Device Package

Published by
Electronic Industries Association of Japan

5-13, Nishi-shinbashi 1-chome, Minato-ku, Tokyo 105-0003, Japan
Printed in Japan

登録一覧表 Registration Table

パッケージ名称 : P-TFBGA (0.80mm pitch)

Package Name


登録番号 : IC-0000-002

Registration No.

端子直線間隔 e
Terminal pitch
0.80
60-002-AA
90-002-AB

注 表中の数値は、「(端子数 n) - (連番) - (整理番号)」を示す。

Note: Numerals in the Table indicate "(Terminal number n) - (Consecutive number) - (Serial number)"

	EIAJ STANDARD PACKAGE OUTLINE DRAWINGS	DATE 97-06-25	SHEET 1/4
PACKAGE NAME FBGA		EIAJ REGISTRATION NO. IC-0000-002	

整理番号 Serial Number		A A			A B		
外形タイプ External Type		P-T F B G A-6 0-0. 8 0			P-T F B G A-9 0-0. 8 0		
照合文字 Reference Symbol		min	nom	max	min	nom	max
グループ1 Group1	D		4. 90~14. 00			6. 50~14. 00	
	E		12. 10~22. 00			12. 10~22. 00	
	v			0. 15			0. 15
	w			0. 20			0. 20
	A			1. 20			1. 20
	A 1	0. 35	0. 40	0. 45	0. 35	0. 40	0. 45
	e		0. 80			0. 80	
	b	0. 45	0. 50	0. 55	0. 45	0. 50	0. 55
	x			0. 08			0. 08
	y			0. 10			0. 10
	y 1			0. 20			0. 20
	n		60			90	
	MD		6			8	
	ME		15			15	
グループ2 Group2	SD		1. 2			1. 2	
	SE						
	ZD		0. 45~5. 00			0. 45~3. 80	
	ZE		0. 45~5. 40			0. 45~5. 40	



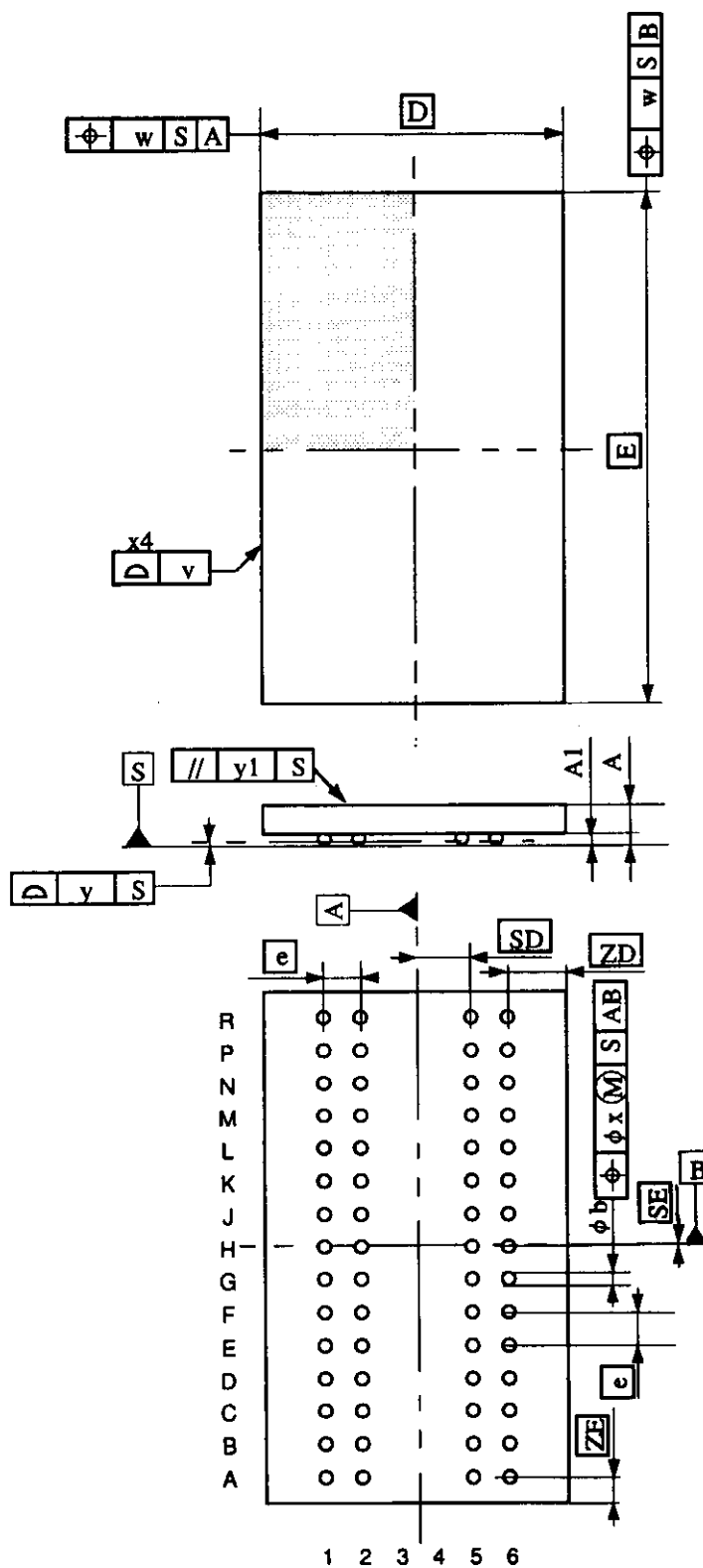
EIAJ STANDARD
PACKAGE OUTLINE DRAWINGS

DATE
97-06-25


SHEET
2/4

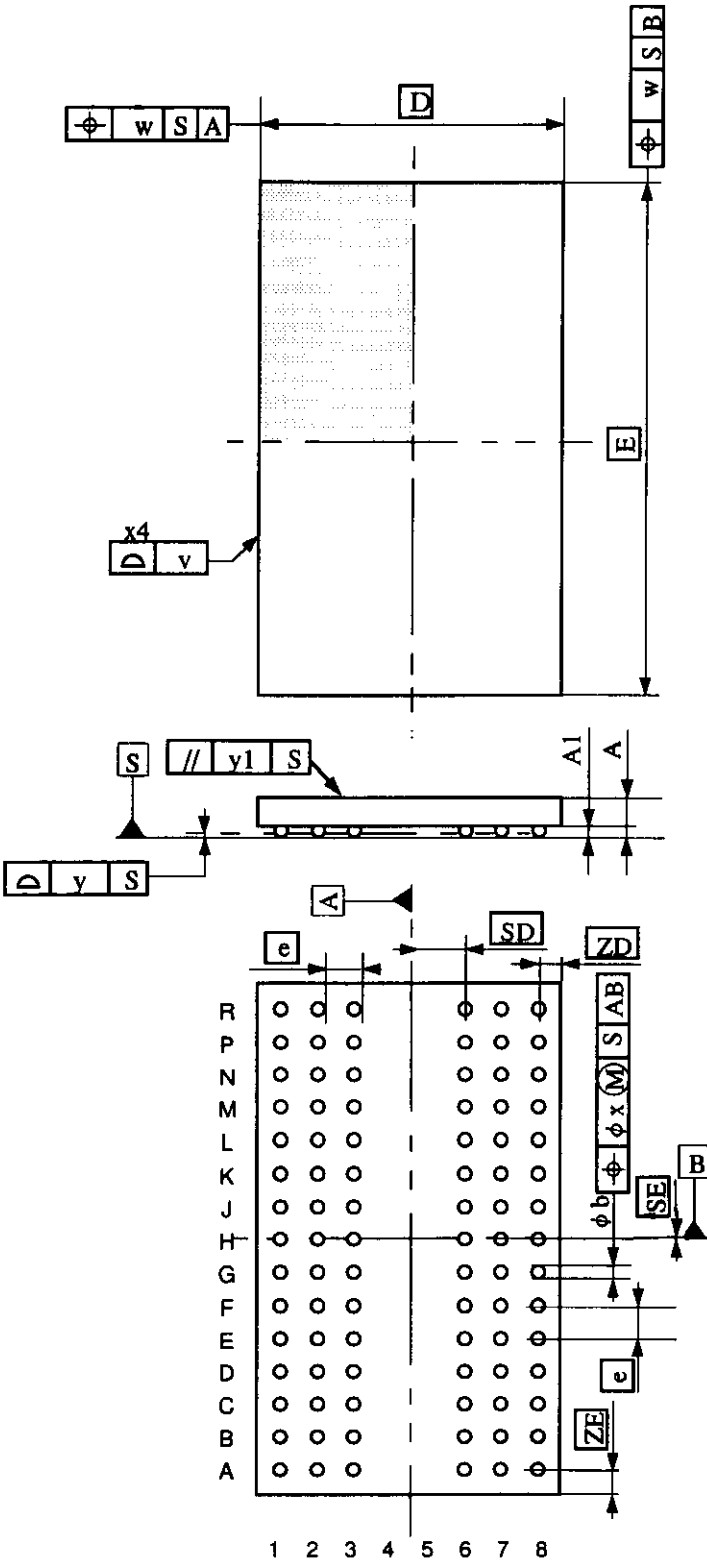
PACKAGE NAME
FBGA

EIAJ REGISTRATION NO.
IC-0000-002




AAタイプ
(Type of A)

	EIAJ STANDARD PACKAGE OUTLINE DRAWINGS	DATE 97-06-25	SHEET 3/4
PACKAGE NAME FBGA		EIAJ REGISTRATION NO. IC-0000-002	



ABタイプ
(Type of AB)

	EIAJ STANDARD PACKAGE OUTLINE DRAWINGS	DATE 97-06-25	SHEET 4/4
PACKAGE NAME FBGA		EIAJ REGISTRATION NO. IC-0000-002	

COMMENTS

1. PROCESS OF DELIBERATION

FBGA includes not only Flanged type but also Real Chip Size type where the device decides the package dimension, therefore, the device size is required to be clarified. To decide the package size, it must be considered that the manufacturers have the various device types and the devices vary depending on the generation. We actually surveyed to decide the size, however, it was concluded that it was technically too difficult to decide a package size. As a result, it was decided to enable the device sizes to be converted and unify the minimum terminal arrangements.

Thus, the FBGA length and width (dimension D and E) are not unified. Instead, the maximum outer dimension estimated by each manufacturer including the minimum area where the terminal can fit was established as the dimension provision based on the agreement between the manufacturers. For terminal pitch and other dimensions, it was decided to comply with the square FBGA design guide based on the agreement between the manufacturers.

2. REVIEW COMMITTEE MEMBERS

The standard was mainly reviewed by the Subcommittee on Area Array Package, and Project Group of Technical Standardization Committee on Semiconductor Device Package of which members are as follows.

<Technical Standardization Committee on Semiconductor Device Package>

Chairman	Mitsubishi Electric Corp	Toshiaki Shinohara
----------	--------------------------	--------------------

<Sub-committee on Area Array Package>

Leader	Texas Instruments Japan Ltd.	Kenji Masumoto
Sub-Leader	Toshiba Corp.	Nobu Izawa
	NEC Corp.	Miwa Monma
Member	Anam Japan	Hirofuka Ueda
	Enplas Corp.	Hiroki Yamagishi
	OKI Electric Industry Co.,Ltd.	Sigeru Yamada
	Kyocera Corp.	Sachio Ninomiya
	Komatsu Ltd.	Eiji Mizutani
	Citizen Watch Co.,Ltd	Katsuji Komatsu
	Sharp Corp.	Katsuyuki Tarui
	Sumitomo 3M,Ltd	Hideto Odagiri
	Sony Corp.	Mutsumi Nagano
	Toshiba Corp.	Hideo Taguchi
	IBM Japan,Ltd.	Toshihiko Nishio
	Nippon Motorola Ltd.	Yushi Matsuda
	Hitachi,Ltd.	Masanori Shibamoto
	Hitachi Cable,Ltd.	Toyohiko Kumakura
	Fujitsu Ltd.	Mitsutaka Sato
	Matsushita Electronic Corp.	Tomohiro Tamaki
	Mitsubishi Electric Corp.	Katsuhiro Tomita
	Yamaichi Electronics Co.,Ltd.	Syunji Abe
	Rohm Co.,Ltd.	Tadahiro Morifuji
	Yasunaga Corp.	Masahiko Fukuoka
	Toshiba Corp.	Shuzo Akejima
Special Member	Dainippon Ink and Chemicals,Inc.	Satoru Furunishi
	NEC Corp.	Yoshiyuki Hirano

EIAJ ED - 7311- 6 Comments

<Project Group>

Leader	Hitachi,Ltd.
Sub-Leader	NEC Corp.
	Toshiba Corp.
	Txas Instruments Japan Ltd.
	Fujitsu Ltd.
	Mitsubishi Electric Corp.
	Matsushita Electronic Corp.
	Sony Corp.
	SEIKO EPSON Corp.
	Sharp Corp.
	OKI Electric Industry Co.,Ltd.
	SAMSUNG (South Korea)
	AMD (USA)
	Kyocera Corp.