

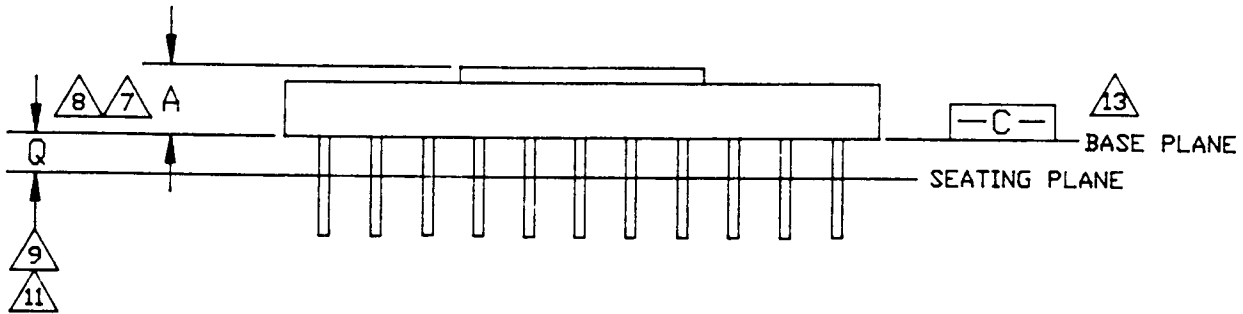
FIGURE 1

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE: S-CPGA-P PIN GRID ARRAY FAMILY .100 INCH PITCH (SMALL OUTLINE)	ISSUE: C	DATE: APR 94	ITEM: MD-066	SHEET: 1/6
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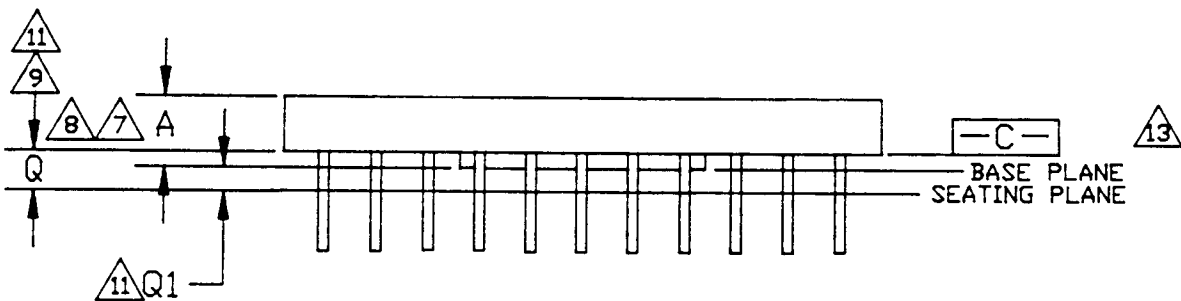
INCH

FIGURE 2

CAVITY UP



CAVITY DOWN



JEDEC
SOLID STATE
PRODUCT OUTLINE

TITLE: S-CPGA-P
PIN GRID ARRAY FAMILY
.100 INCH PITCH (SMALL OUTLINE)

ISSUE:

C

DATE:

APR
94

ITEM:

MD-066

SHEET:

2/6

SYMBOL	VARIATIONS											
	AA			NOTE	AB			NOTE	AC			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	0.890	0.900	0.935	18	0.990	1.000	1.035	18	1.090	1.100	1.135	18
E	0.890	0.900	0.935	18	0.990	1.000	1.035	18	1.090	1.100	1.135	18
M	--	9	--	4	--	10	--	4	--	11	--	4
N	--	--	81	5	--	--	100	5	--	--	121	5
Q	0.045	--	0.075	11	0.045	--	0.075	11	0.045	--	0.075	11
Q1	0.025	--	--	11	0.025	--	--	11	0.025	--	--	11
S	--	0.000	--	21	--	0.050	--	21	--	0.000	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-122											
ISSUE	A											

SYMBOL	VARIATIONS											
	AD			NOTE	AE			NOTE	AF			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	1.190	1.200	1.235	18	1.290	1.300	1.335	18	1.390	1.400	1.435	18
E	1.190	1.200	1.235	18	1.290	1.300	1.335	18	1.390	1.400	1.435	18
M	--	12	--	4	--	13	--	4	--	14	--	4
N	--	--	144	5	--	--	169	5	--	--	196	5
Q	0.045	--	0.075	11	0.045	--	0.075	11	0.045	--	0.075	11
Q1	0.025	--	--	11	0.025	--	--	11	0.025	--	--	11
S	--	0.050	--	21	--	0.000	--	21	--	0.050	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-122											
ISSUE	A											

SYMBOL	VARIATIONS											
	AG			NOTE	AH			NOTE	AJ			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	1.490	1.500	1.535	18	1.590	1.600	1.635	18	1.690	1.700	1.735	18
E	1.490	1.500	1.535	18	1.590	1.600	1.635	18	1.690	1.700	1.735	18
M	--	15	--	4	--	16	--	4	--	17	--	4
N	--	--	225	5	--	--	256	5	--	--	289	5
Q	0.045	--	0.075	11	0.045	--	0.075	11	0.045	--	0.075	11
Q1	0.025	--	--	11	0.025	--	--	11	0.025	--	--	11
S	--	0.000	--	21	--	0.050	--	21	--	0.000	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-122											
ISSUE	A											

SYMBOL	VARIATIONS											
	AK			NOTE	AL			NOTE	AM			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	1.790	1.800	1.835	18	1.890	1.900	1.935	18	1.990	2.000	2.035	18
E	1.790	1.800	1.835	18	1.890	1.900	1.935	18	1.990	2.000	2.035	18
M	--	18	--	4	--	19	--	4	--	20	--	4
N	--	--	324	5	--	--	361	5	--	--	400	5
Q	0.045	--	0.075	11	0.045	--	0.075	11	0.045	--	0.075	11
Q1	0.025	--	--	11	0.025	--	--	11	0.025	--	--	11
S	--	0.050	--	21	--	0.000	--	21	--	0.050	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-122											
ISSUE	A											

JEDEC
SOLID STATE
PRODUCT OUTLINE

TITLE: S-CPGA-P
PIN GRID ARRAY FAMILY
.100 INCH PITCH (SMALL OUTLINE)

ISSUE:
C

DATE:
APR
94

ITEM:
MD-066

SHEET:
3/6

SYMBOL	VARIATIONS											
	BA			NOTE	BB			NOTE	BC			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	0.890	0.900	0.935	18	0.990	1.000	1.035	18	1.090	1.100	1.135	18
E	0.890	0.900	0.935	18	0.990	1.000	1.035	18	1.090	1.100	1.135	18
M	--	9	--	4	--	10	--	4	--	11	--	4
N	--	--	81	5	--	--	100	5	--	--	121	5
Q	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
Q1	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
S	--	0.000	--	21	--	0.050	--	21	--	0.000	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-331											
ISSUE	B											

SYMBOL	VARIATIONS											
	BD			NOTE	BE			NOTE	BF			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	1.190	1.200	1.235	18	1.290	1.300	1.335	18	1.390	1.400	1.435	18
E	1.190	1.200	1.235	18	1.290	1.300	1.335	18	1.390	1.400	1.435	18
M	--	12	--	4	--	13	--	4	--	14	--	4
N	--	--	144	5	--	--	169	5	--	--	196	5
Q	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
Q1	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
S	--	0.050	--	21	--	0.000	--	21	--	0.050	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-331											
ISSUE	B											



















SYMBOL	VARIATIONS											
	BG			NOTE	BH			NOTE	BJ			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	1.490	1.500	1.535	18	1.590	1.600	1.635	18	1.690	1.700	1.735	18
E	1.490	1.500	1.535	18	1.590	1.600	1.635	18	1.690	1.700	1.735	18
M	--	15	--	4	--	16	--	4	--	17	--	4
N	--	--	225	5	--	--	256	5	--	--	289	5
Q	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
Q1	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
S	--	0.000	--	21	--	0.050	--	21	--	0.000	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-331											
ISSUE	B											

SYMBOL	VARIATIONS											
	BK			NOTE	BL			NOTE	BM			NOTE
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D	1.790	1.800	1.835	18	1.890	1.900	1.935	18	1.990	2.000	2.035	18
E	1.790	1.800	1.835	18	1.890	1.900	1.935	18	1.990	2.000	2.035	18
M	--	18	--	4	--	19	--	4	--	20	--	4
N	--	--	324	5	--	--	361	5	--	--	400	5
Q	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
Q1	0.000	--	0.000	11	0.000	--	0.000	11	0.000	--	0.000	11
S	--	0.050	--	21	--	0.000	--	21	--	0.050	--	21
NOTE	1,2,3,6,8,17,21											
REF	Item 10-331											
ISSUE	B											

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE: S-CPGA-P PIN GRID ARRAY FAMILY .100 INCH PITCH (SMALL OUTLINE)	ISSUE: C	DATE: APR 94	ITEM: MD-066	SHEET: 4/6

NOTES:

INCH

- 1 Dimensioning & Tolerancing per ANSI Y14.5M-1982.
- 2 Refer to applicable symbol list.
- 3 Terminal position designation per JEDEC standard procedures and practices, JESD 95-1, SPP-010.
- 4 Symbol 'M' is the pin matrix size.
- 5 Symbol 'N' is the maximum allowable number of pins.
- 6 11x11 and 12x12 matrix sizes shown for illustration only.
- 7  Dimension 'A' includes the package body and lid for both cavity up and cavity down configurations. (See Figure 2, Page 2)
- 8  Dimension 'A' does not include heatsinks or other attached features.
- 9  Standoffs for variations AA through AM must be located on the pin matrix diagonals. The major dimension of the standoff shall be .045 inch minimum. There are no standoffs on variations BA-BM.
- 10  For variations AA-AM, the seating plane is defined by the outer standoff surface facing away from the ceramic body (outer standoff surface). For variations BA-BM, the seating plane is defined by the user method of application and thereby allows for no standoffs.
- 11  Dimension 'Q' is measured from the ceramic body to the outer standoff surface and is applicable to both cavity up and cavity down configurations. Dimension 'Q1' is measured from the lid to the outer standoff surface and is applicable to the cavity down configuration only. (See Figure 2, Page 2)
- 12  All pins must be on .100 inch grid.
- 13   is the plane of pin to package interface for both cavity up and down configurations. (See Figure 2, Page 2)
- 14  See APPLICATION NOTE.
- 15  Pin tips should have a radius or chamfer. See APPLICATION NOTE.
- 16  This dimension allows a 750 microinch thick coating for solder dipped parts. See APPLICATION NOTE.
- 17 There must be some type of A1 corner identification on both top and bottom surfaces of the package. ID type is optional and may consist of notches, ID pins, metallized markings or other features. The features used on each surface may be of different types.
- 18  There must be .020 inch minimum spacing between any two metal features on the package surface.
- 19  Dimension 'D' and 'E' do not include ceramic protrusions. Such protrusions may not extend more than .003 inches on any side. Corners and edges of the package body may have chamfers for mechanical protection or identification.
- 20  This dimension defines the maximum size for the pin braze pads.
- 21   is measured with respect to  and .
- 22 All dimensions are in INCHES.

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE: S-CPGA-P PIN GRID ARRAY FAMILY .100 INCH PITCH (SMALL OUTLINE)	ISSUE: C	DATE: APR 94	ITEM: MD-066	SHEET: 5/6
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INCH

APPLICATION NOTES:

- A. For applications where a PGA package is used in a socket, the following requirements may apply:
- a. Pin tips must have a radius or chamfer.
 - b. Minimum pin length (dimension "L") must be .120".
 - c. Maximum pin diameter including finish should be .020".
- B. For military applications the pin length (dimension "L") range may be restricted to .120"/.140".
- C. All variations are suitable for single and multichip applications.

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE: S-CPGA-P PIN GRID ARRAY FAMILY .100 INCH PITCH (SMALL OUTLINE)	ISSUE: C	DATE: APR 94	ITEM: MD-066	SHEET: 6/6
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