128 97

1 96

32 65

33 64

REV.	DESCRIPTION	DATE
00	INITIAL RELEASE PER DCN NO. A36988.	11/22 1993
01	INC. PER DCN #A37830	4/27 1994
02	INC. PER DCN #A40703	05/27 1996
03	REVISED PER DCN #D25888	06/26 1998
04	REVISED PER DCN #D26142	11/25 1998
05	REVISED TO REMOVED SID NO. FOR Ag SPOT PLATING OPTION PER	09/04 2000
06	RE-ACTIVATE SID NO. 101224832 PER IWR 55435.	04/14 2004

CUSTOMER NO:
DEVICE:
DIE SIZE: X: Y:
DIE THICKNESS:
BOND PAD OPENING:
BOND PAD PITCH:
LONGEST WIRE/LD #: /
SHORTEST WIRE/LD #: /
TOTAL WIRE LENGTH:
WIRE SIZE/# WIRES: /
L/F MAT'L:
L/F MAT'L THICKNESS:
BODY THICKNESS:
DIE TO PAD RATIO:
ASSEMBLY LOCATION:
REQUESTED SID #
"o" - BALL BOND
"—<" - STITCH BOND
"NC" - NO CONNECT

COMMENTS: BACK SIDE DIMPLES NOT SHOWN FOR CLARITY

Y X ORIENTATION

.100"

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APPROVALS		DATE
DRAWN BY	AVALL	03/11 2004
CHECKED BY	JCABR	03/11 2004
PRODUCT MANAGER	CHOIYH	03/11 2004
RELEASED BY	MHELA	04/14 2004

TITLE

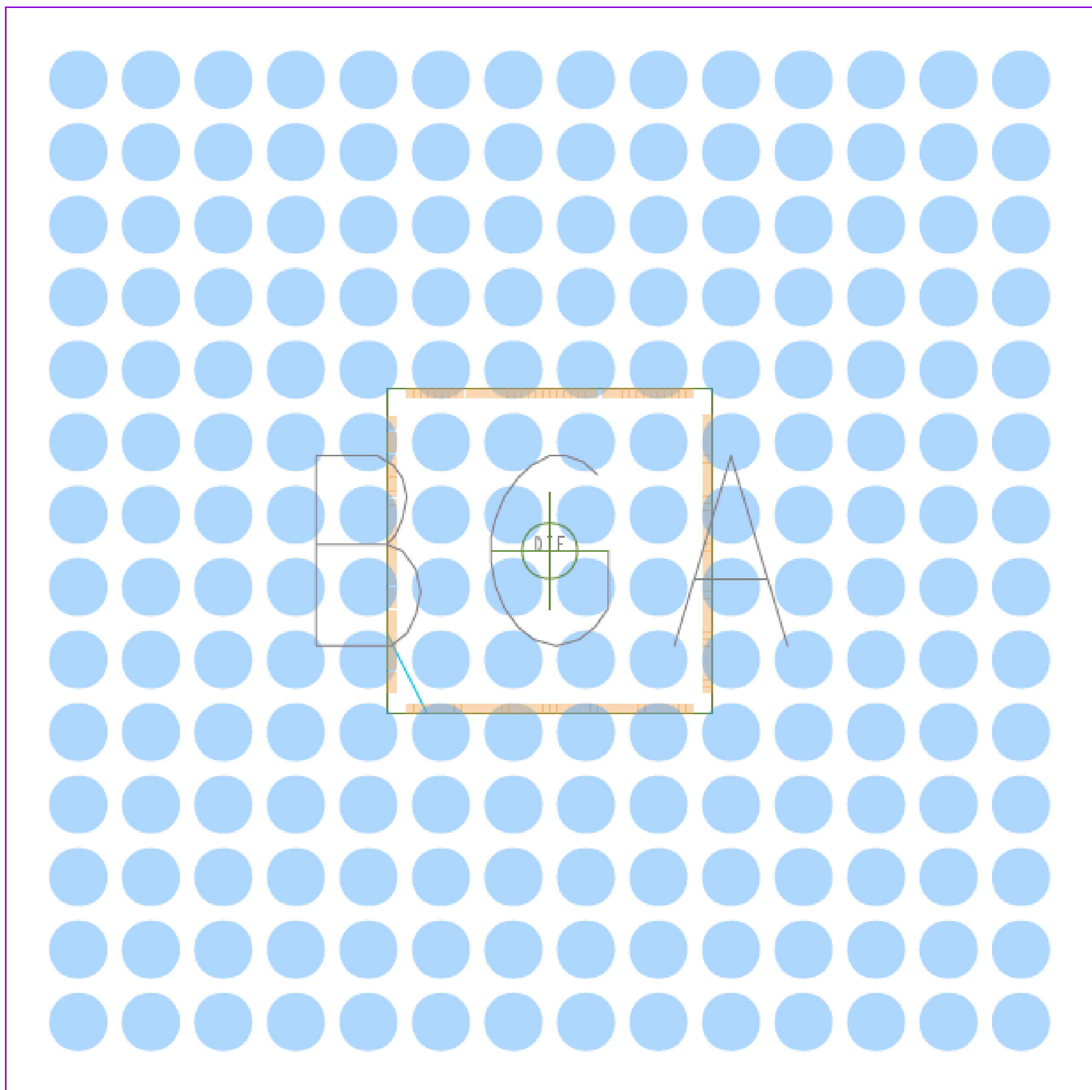
BOND DIAGRAM, MATRIX, L/TQFP, 128 LEAD, 14 X 14 mm BODY, 6.5 X 6.5 mm PAD, ETCHED, PLATING OPTIONS

SIZE	PAD SIZE IN INCHES	DWG. NO.	REV.
A3	.256 X .256	34868	06

SCALE	L/F SID NO.	L/F DWG. NO.	SHEET
18:1	S-Ag-0.17 D/S : 101224832 DR-0.17 D/S : 101305780 S-Ag-0.20 D/S : 101300185 DR-0.20 D/S : 101305782 S-Ag-0.23 D/S : 101304671 DR-0.23 D/S : 101305781	34867	1 OF 1

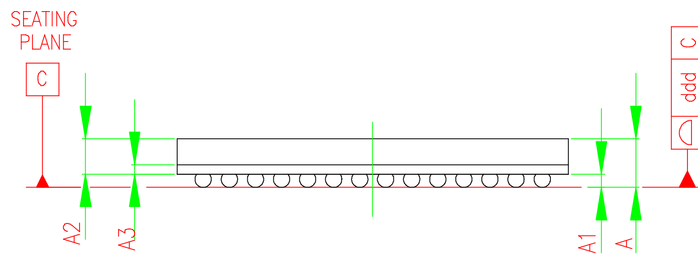
FORM NO: MBDF_LF_A.DWG

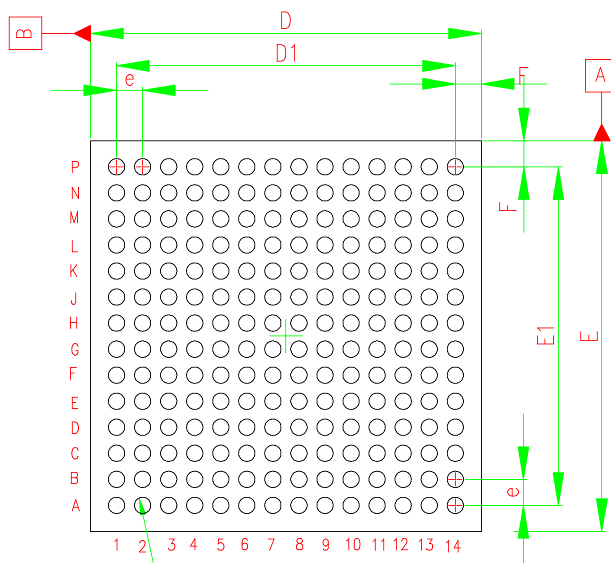
- Package Type: LFBGA
  Low Profile Fine Pitch BGA (Chip Scale Package)
- Ball Pitch: 0.8 mm
- Size: 12 x 12 mm
- Height: 1.2-1.7 mm
- Pin count: 196

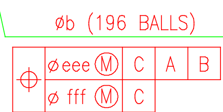


PACKAGE OUTLINE

LFBGA 12x12x1.2 196 2R14x14 PITCH 0.8 BALL 0.5







BOTTOM VIEW

DIMENSIONS

SYMBOL	MILLIMETER		
	MIN.	NOM.	MAX.
A			1.70
A_1	0.27		
A_2		1.08	
A_3		0.28	
b	0.45	0.50	0.55
D	11.85	12.00	12.15
D_1		10.40	
e		0.80	
E	11.85	12.00	12.15
E_1		10.40	
F		0.80	
ddd			0.12
eee			0.15
fff			0.08