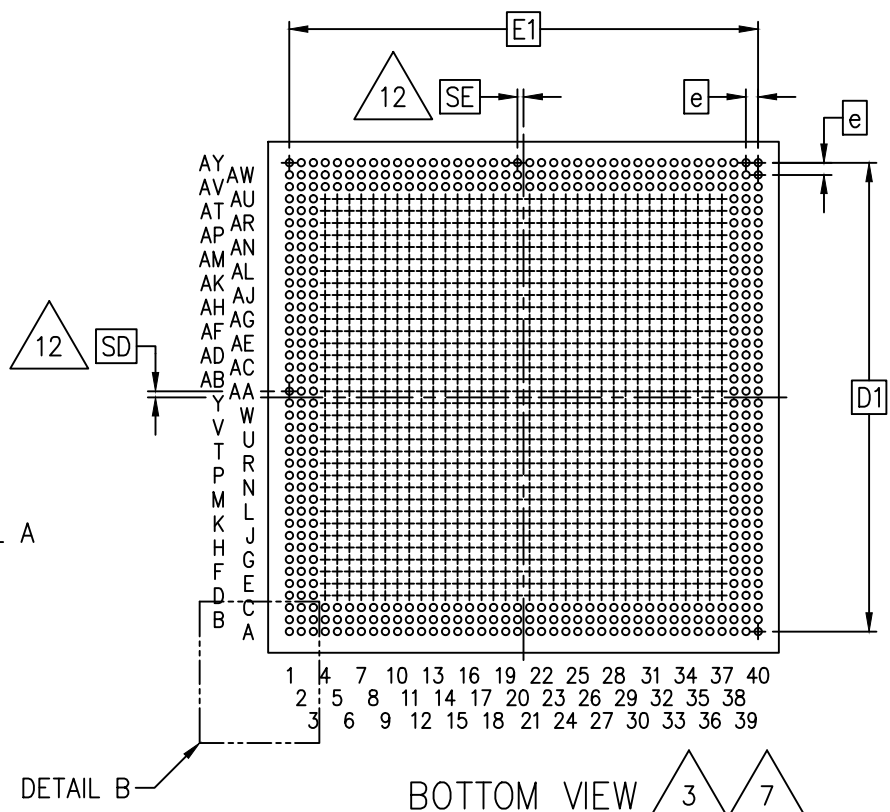
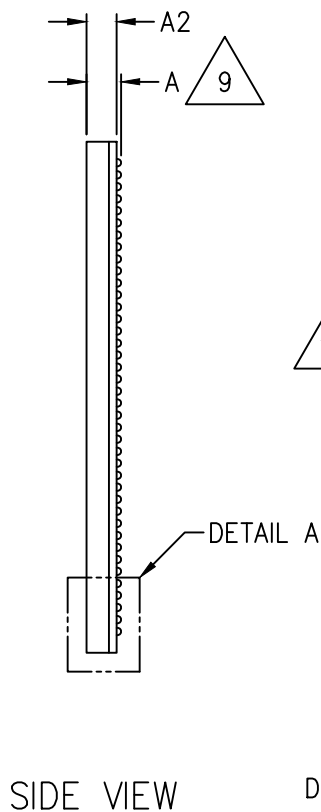
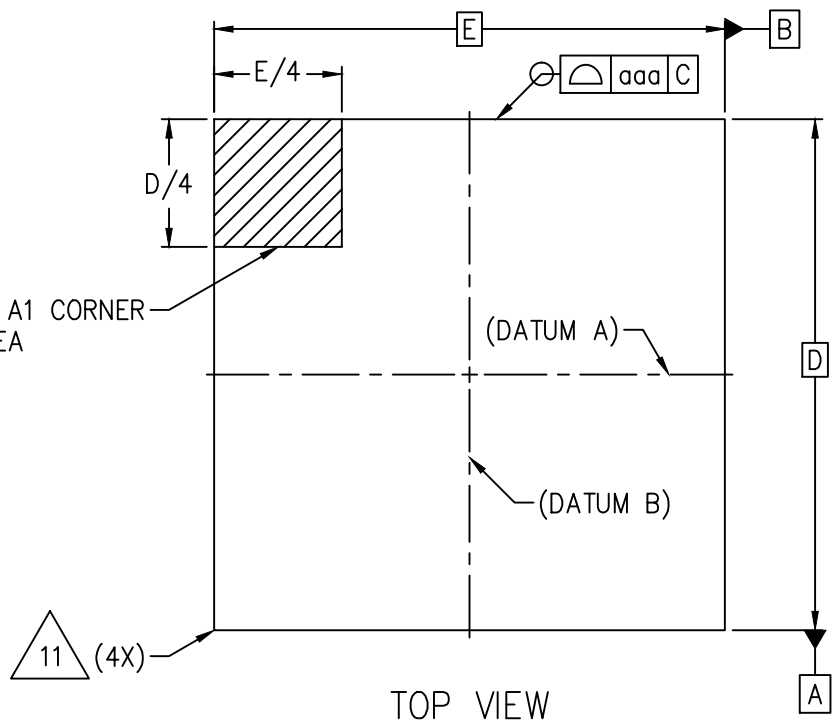


IT IS REQUESTED THAT ANY FOOTPRINTS THAT ARE ADDED TO THIS MO ALSO BE ADDED TO THE CORRESPONDING LOWER POP PACKAGE.

11 TERMINAL A1 CORNER INDEX AREA



JEDEC SOLID STATE
PRODUCT OUTLINE
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THIS *REGISTERED OUTLINE* HAS BEEN PREPARED BY THE JEDEC JC-11 COMMITTEE AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY; CHANGES ARE LIKELY TO OCCUR.

UPPER POP BALL GRID
ARRAY FAMILY, SQUARE,
0.40 MM PITCH

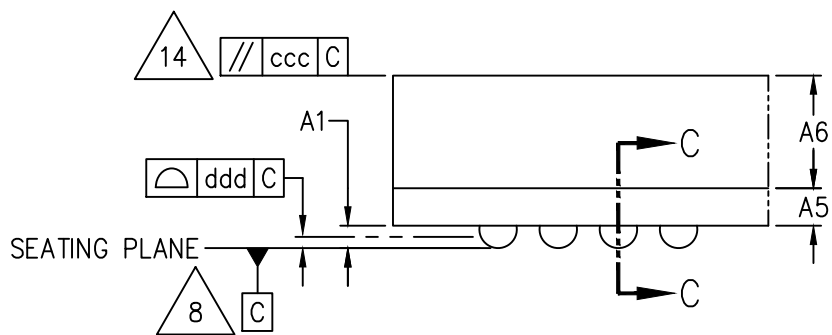
PACKAGE DESIGNATOR
PBGA

ITEM
MO-317

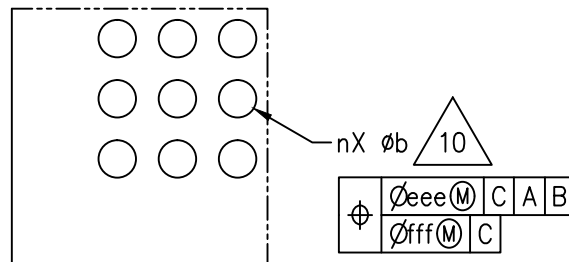
ISSUE
B.01

DATE
MAR 2017

SHEET
1 OF 13

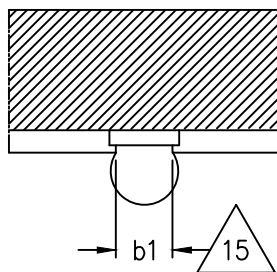


DETAIL A
(ROTATED 90° CW)

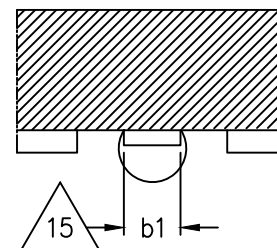


DETAIL B

TYPE 1 – SMD
(SOLDER MASK DEFINED)



TYPE 2 – NSMD
(NON SOLDER MASK DEFINED)



SECTION C-C

TABLE 1

COMMON DIMENSIONS									
SYMBOL	P = PACKAGE PROFILE HEIGHT								
	60			70			80		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	> 0.50	----	0.60	> 0.60	----	0.70	> 0.70	----	0.80
A2	----	----	0.48	----	----	0.58	----	----	0.68
A5	OPTIONAL – DESIGN SPECIFIC								
A6	OPTIONAL – DESIGN SPECIFIC								
e	0.40 BASIC								
NOTES	1, 2, 9			1, 2, 9			1, 2, 9		
REF	11–911, 11–918, 11–941E			11–911, 11–918, 11–941E			11–911, 11–918, 11–941E		
ISSUE	B.01			B.01			B.01		

TABLE 1 CONTINUED

COMMON DIMENSIONS									
SYMBOL	P = PACKAGE PROFILE HEIGHT								
	90			100			110		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	> 0.80	----	0.90	> 0.90	----	1.00	> 1.00	----	1.10
A2	----	----	0.78	----	----	0.88	----	----	0.98
A5	OPTIONAL – DESIGN SPECIFIC								
A6	OPTIONAL – DESIGN SPECIFIC								
e	0.40 BASIC								
NOTES	1, 2, 9			1, 2, 9			1, 2, 9		
REF	11–911, 11–918, 11–941E			11–911, 11–918, 11–941E			11–911, 11–918, 11–941E		
ISSUE	B.01			B.01			B.01		

TABLE 1 CONTINUED

COMMON DIMENSIONS									
SYMBOL	P = PACKAGE PROFILE HEIGHT								
	120			130			140		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.10	----	1.20	> 1.20	----	1.30	> 1.30	----	1.40
A2	----	----	1.08	----	----	1.18	----	----	1.28
A5	OPTIONAL – DESIGN SPECIFIC								
A6	OPTIONAL – DESIGN SPECIFIC								
e	0.40 BASIC								
NOTES	1, 2, 9			1, 2, 9			1, 2, 9		
REF	11–911, 11–918, 11–941E			11–911, 11–918, 11–941E			11–911, 11–918, 11–941E		
ISSUE	B.01			B.01			B.01		

TABLE 1 CONTINUED

COMMON DIMENSIONS									
SYMBOL	P = PACKAGE PROFILE HEIGHT								
	150			160			170		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.40	----	1.50	> 1.50	----	1.60	> 1.60	----	1.70
A2	----	----	1.38	----	----	1.48	----	----	1.58
A5	OPTIONAL – DESIGN SPECIFIC								
A6	OPTIONAL – DESIGN SPECIFIC								
e	0.40 BASIC								
NOTES	1, 2, 9			1, 2, 9			1, 2, 9		
REF	11–911, 11–918, 11–941E			11–911, 11–918, 11–941E			11–911, 11–918, 11–941E		
ISSUE	B.01			B.01			B.01		

TABLE 2

COMMON DIMENSIONS			
SYMBOL	(b) SOLDER BALL DIAMETER		
	MIN	NOM	MAX
A1	0.12	---	---
b	0.20	0.25	0.30
b1	TYPE 1	0.20	---
	TYPE 2	0.20	---
NOTES	1, 2		
REF	11-911, 11-918		
ISSUE	B		

TABLE 3

TOLERANCE OF FORM AND POSITION		
SYMBOL	VALUE	
	b NOM = 0.25	
aaa	0.10	
ccc	0.20	
ddd	D OR E	
	≤10.00	0.08
	>10.00, <14.00	0.10
	≥14.00	0.12
eee	0.15	
fff	0.05	
NOTES	1, 2	
REF	11–911, 11–918	
ISSUE	B	