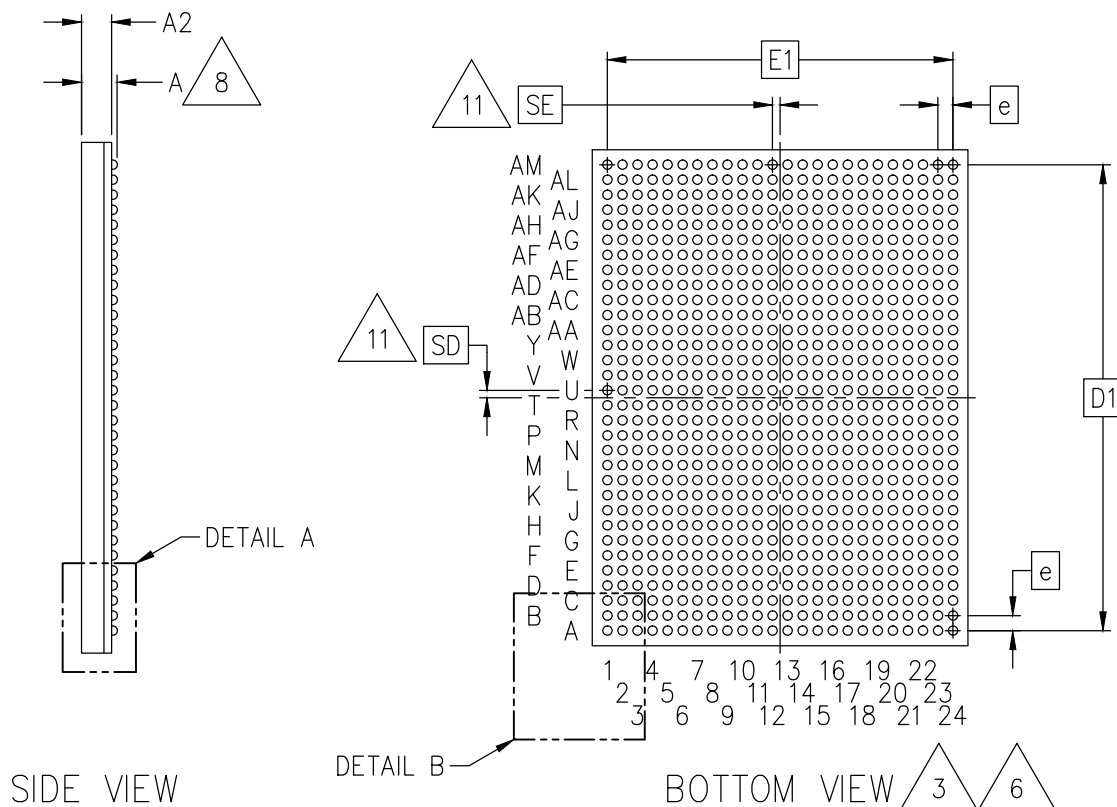
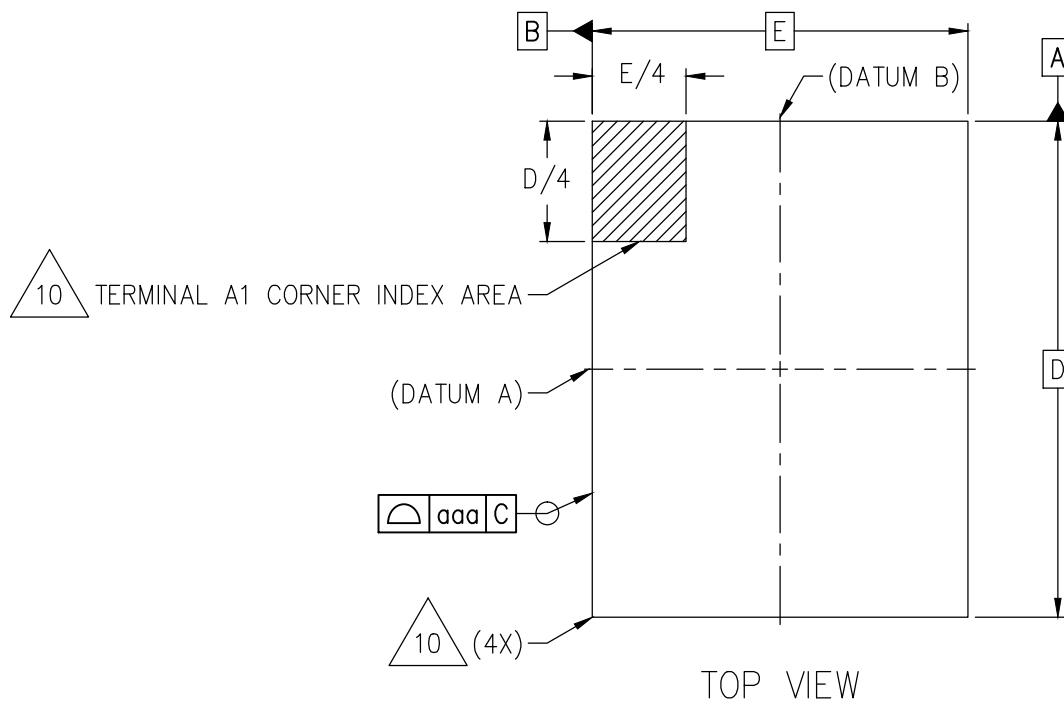




JEDEC SOLID STATE
PRODUCT OUTLINE
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THIS **REGISTERED OUTLINE** HAS BEEN PREPARED BY THE JEDEC JC-11 COMMITTEE
AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY;
CHANGES ARE LIKELY TO OCCUR.

BALL GRID ARRAY FAMILY,
RECTANGULAR, 0.50 MM PITCH

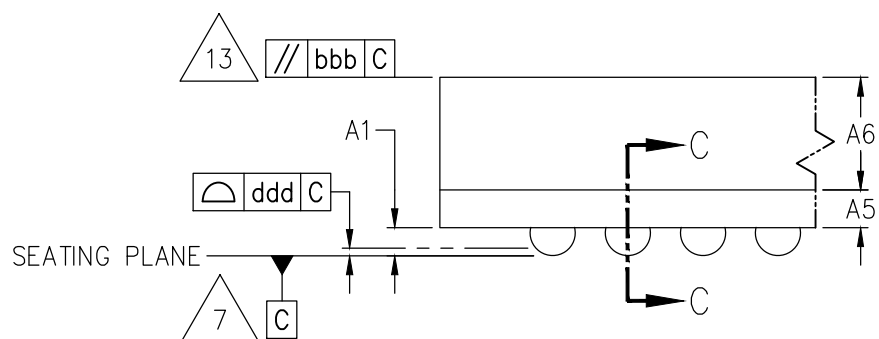
PACKAGE DESIGNATOR
PBGA

ITEM
MO-276

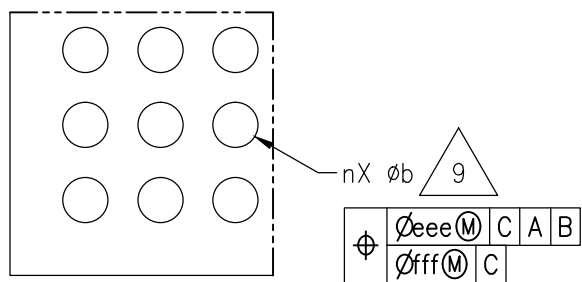
ISSUE
LVA

DATE
SEP-2017

SHEET
1 OF 19

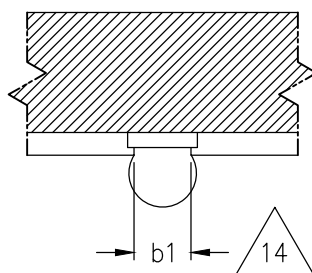


DETAIL A
(ROTATED 90° CW)



DETAIL B

(SOLDER MASK DEFINED)



SECTION C-C

TABLE 1

VARIATION	Ax			Bx			Cx		
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	—	—	1.40	—	—	1.30	—	—	1.85
A1	0.15	—	—	0.15	—	—	0.15	—	—
A2	—	—	1.20	—	—	1.10	—	—	1.70
NOTES	1, 2, 8			1, 2, 8			1, 2, 8		
REF	11–756			11–756			11–847		
ISSUE	A			A			E		
VARIATIONS IN THIS TABLE DO NOT MEET JEDEC PROFILE HEIGHTS DEFINED IN JESD30 AND SHOULD NOT BE USED WHEN ADDING NEW VARIATIONS.									

TABLE 2

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	070			080		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 0.60	---	0.70	> 0.70	---	0.80
A2	---	---	0.50	---	---	0.60
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	090			100		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 0.80	---	0.90	> 0.90	---	1.00
A2	---	---	0.70	---	---	0.80
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	110			120		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.00	---	1.10	> 1.10	---	1.20
A2	---	---	0.90	---	---	1.00
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	130			140		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.20	---	1.30	> 1.30	---	1.40
A2	---	---	1.10	---	---	1.20
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	150			160		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.40	---	1.50	> 1.50	---	1.60
A2	---	---	1.30	---	---	1.40
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	170			180		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.60	---	1.70	> 1.70	---	1.80
A2	---	---	1.50	---	---	1.60
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	190			200		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 1.80	----	1.90	> 1.90	----	2.00
A2	----	----	1.70	----	----	1.80
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11–901, 11–942			11–901, 11–942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	210			220		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 2.00	----	2.10	> 2.10	----	2.20
A2	----	----	1.90	----	----	2.00
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11–901, 11–942			11–901, 11–942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	230			240		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 2.20	---	2.30	> 2.30	---	2.40
A2	---	---	2.10	---	---	2.20
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		

TABLE 2 CONTINUED

COMMON DIMENSIONS						
SYMBOL	P = PACKAGE PROFILE HEIGHT					
	250			260		
	MIN	NOM	MAX	MIN	NOM	MAX
A	> 2.40	---	2.50	> 2.50	---	2.60
A2	---	---	2.30	---	---	2.40
A5	OPTIONAL – DESIGN SPECIFIC					
A6	OPTIONAL – DESIGN SPECIFIC					
e	0.50 BASIC					
NOTES	1, 2, 8			1, 2, 8		
REF	11-901, 11-942			11-901, 11-942		
ISSUE	L			L		