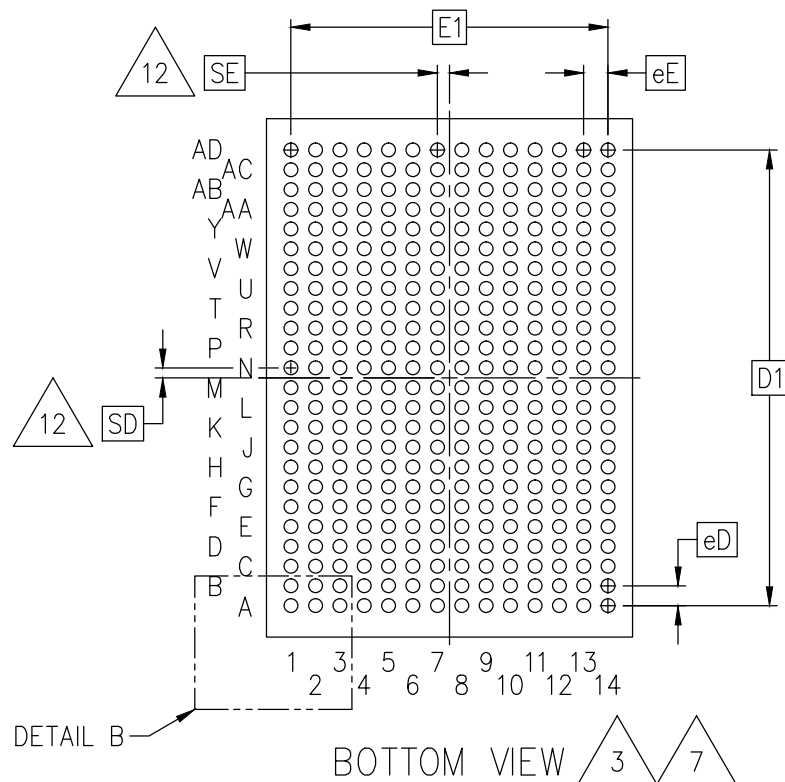
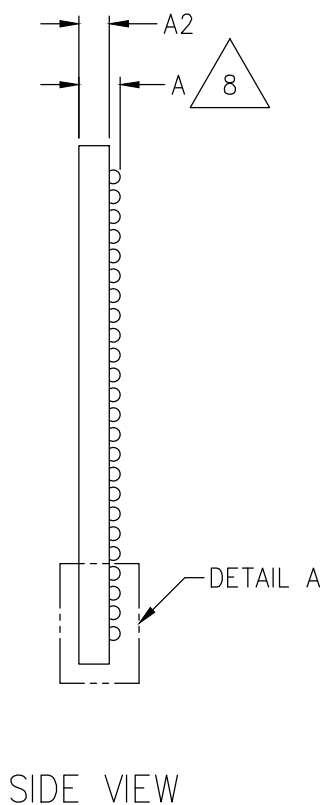
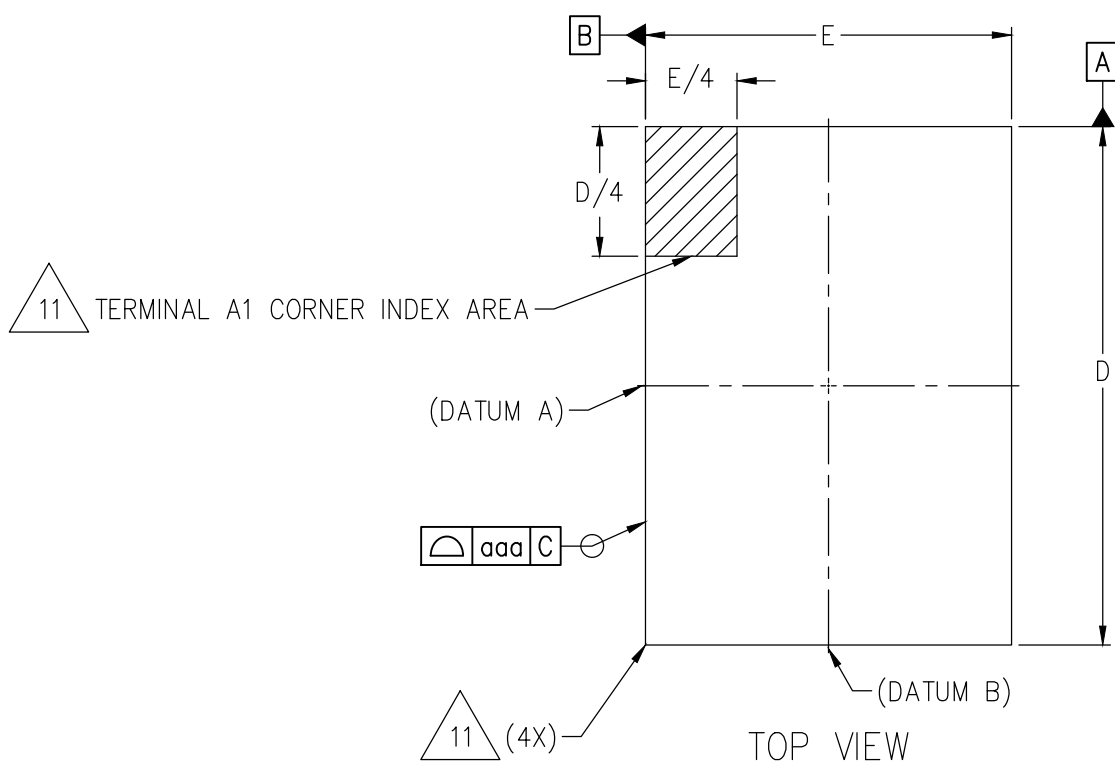




JEDEC SOLID STATE
PRODUCT OUTLINE
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AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY;
CHANGES ARE LIKELY TO OCCUR.

TITLE DUAL PITCH BALL GRID
ARRAY FAMILY, RECTANGULAR,
0.80MM X 0.65MM PITCH

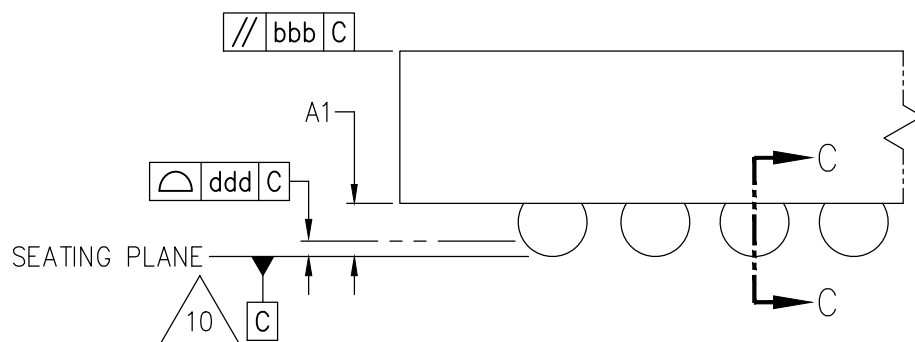
PACKAGE DESIGNATOR
(T,V)FR-XBGA

NUMBER
MO-311

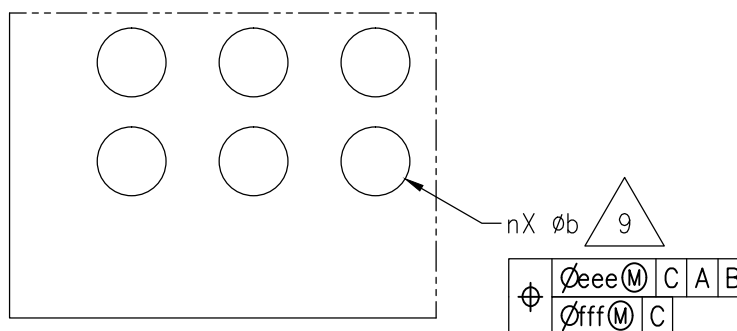
ISSUE
1

DATE
DEC 2014

SHEET
1 OF 10



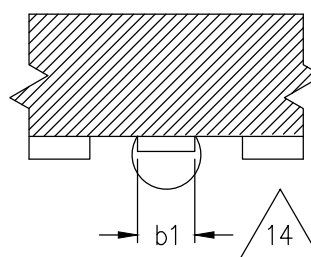
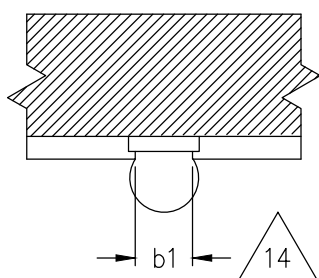
DETAIL A
(ROTATED 90° CW)



DETAIL B

TYPE 1 – SMD
(SOLDER MASK DEFINED)

TYPE 2 – NSMD
(NON SOLDER MASK DEFINED)



SECTION C-C

TABLE 1

COMMON DIMENSIONS									
VARIATION	Ax			Bx			Cx		
SYMBOL	V: VERY THIN PROFILE			T: THIN PROFILE			T: THIN PROFILE		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	—	—	1.00	—	—	1.10	—	—	1.20
A2	—	—	0.80	—	—	0.90	—	—	0.90
eD	0.65 BSC								
eE	0.80 BSC								
NOTES	1, 2								
REF	11–867			11–873					
ISSUE	A			B					
VARIATION Bx IN THIS TABLE DOES NOT MEET JEDEC PROFILE HEIGHTS DEFINED IN JESD30 AND SHOULD NOT BE USED WHEN ADDING NEW VARIATIONS. PLEASE USE TABLE 3 FOR ALL NEW PACKAGE PROFILE HEIGHTS.									

TABLE 2

COMMON DIMENSIONS									
SYMBOL	P = PACKAGE PROFILE HEIGHT								
	V: VERY THIN PROFILE			T: THIN PROFILE			---		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	---	---	1.00	---	---	1.20	---	---	---
A2	---	---	0.80	---	---	0.90	---	---	---
eD	0.65 BSC								
eE	0.80 BSC								
NOTES	1, 2								
REF	11-900			11-900			-		
ISSUE	D			D			-		

TABLE 3

COMMON DIMENSIONS							
SYMBOL	SOLDER BALL DIAMETER						
	MIN	NOM	MAX	MIN	NOM	MAX	NOTES
A1	0.15	---	---	0.21	---	---	
b	0.25	0.30	0.35	0.35	0.40	0.45	9
b1	TYPE 1	0.20	---	---	0.28	---	14
	TYPE 2	0.20	---	---	0.30	---	14
NOTES	1, 2						
REF	11-900						
ISSUE	D						