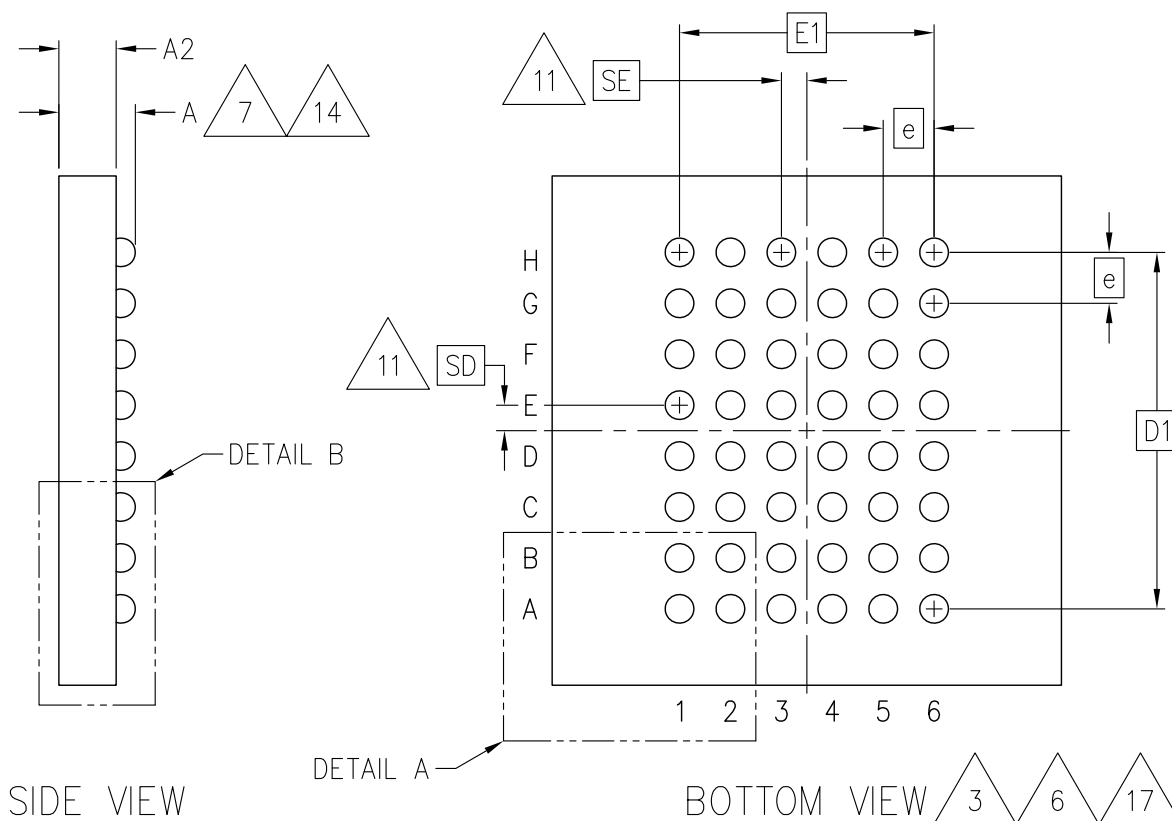
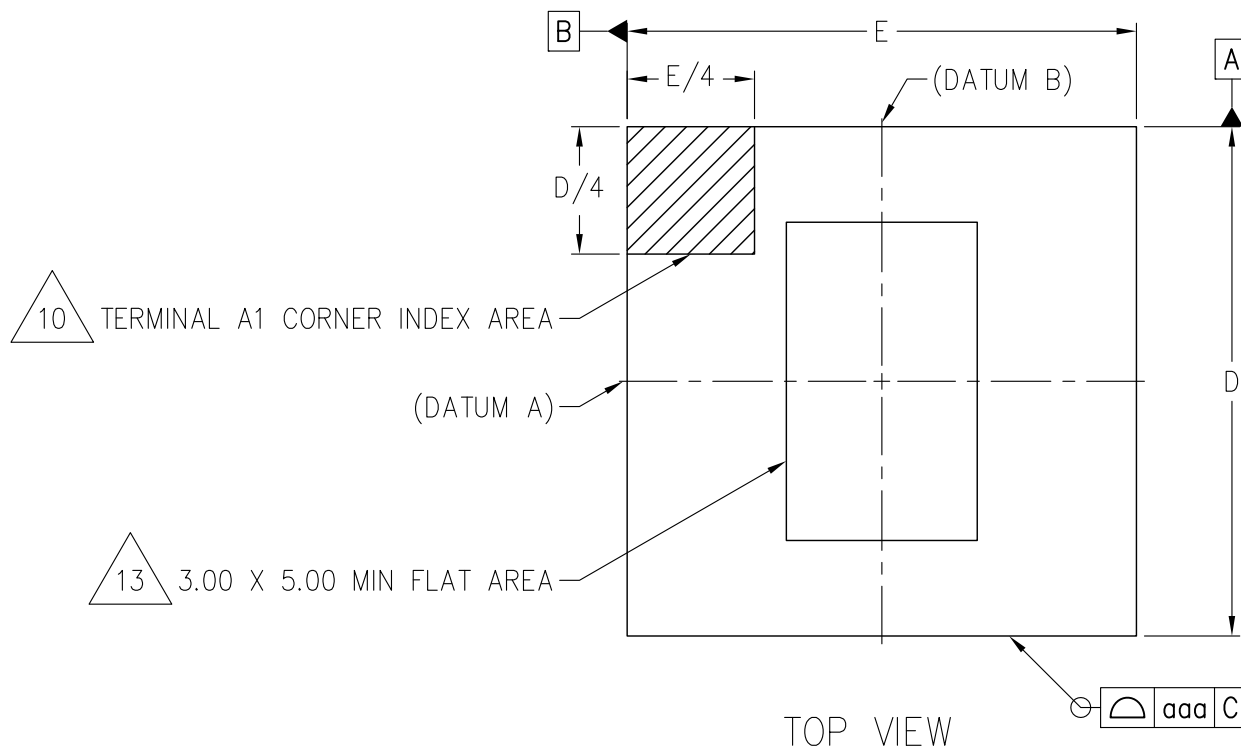




JEDEC SOLID STATE
PRODUCT OUTLINE
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TITLE SQUARE & RECTANGULAR
DIE-SIZE, BALL GRID
ARRAY FAMILY

PACKAGE DESIGNATOR
(L,T,V,W)
F (R)-xDSB

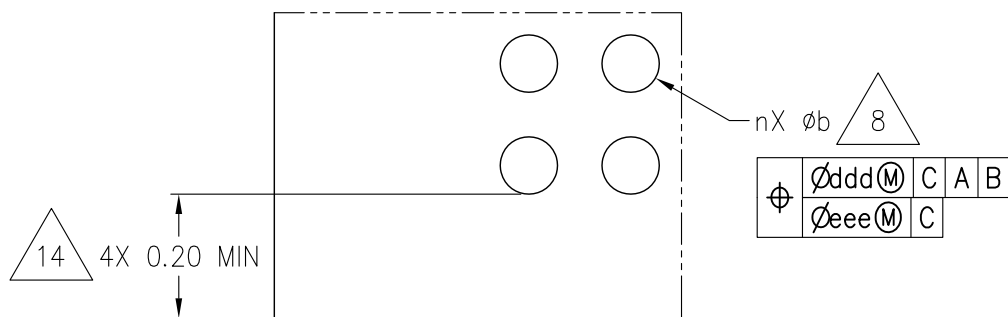
NUMBER
MO-207

ISSUE
N

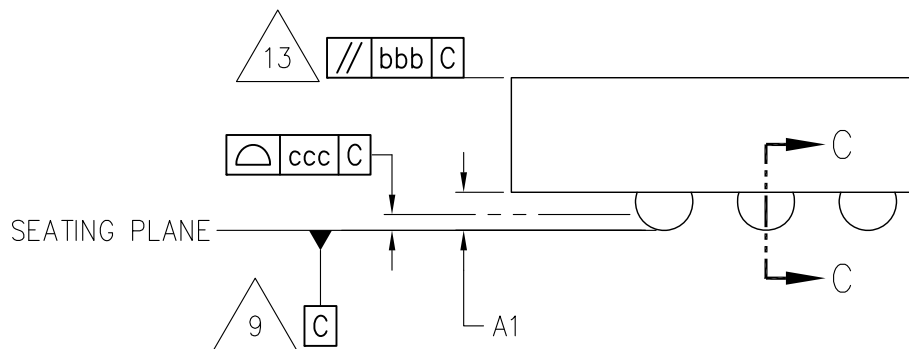
DATE
JUN 2013

SHEET
1 OF 24

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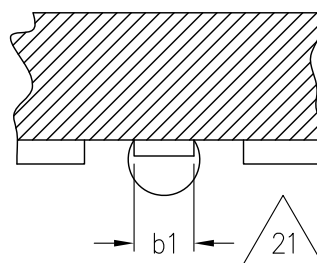
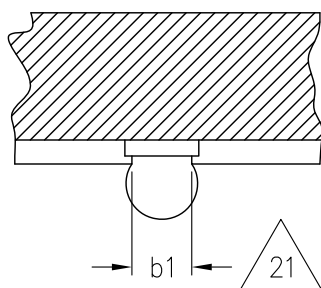
DETAIL A



DETAIL B
(ROTATED 90° CW)

TYPE 1 – SMD
(SOLDER MASK DEFINED)

TYPE 2 – NSMD
(NON SOLDER MASK DEFINED)



SECTION C-C

TABLE 1

16

TOLERANCE OF FORM AND POSITION					
VARIATION	Ayy-zs	Byy-zs	Cyy-zs	Dyy-zs	NOTES
SYMBOL					
e	0.75 BASIC	0.65 BASIC	0.50 BASIC	0.80 BASIC	4
aaa	0.15	0.15	0.15	0.15	
bbb	0.20	0.20	0.20	0.20	13
ddd	0.15	0.15	0.15	0.15	
eee	0.08	0.08	0.05	0.08	
NOTES	1, 2, 18	1, 2, 18	1, 2, 18	1, 2, 18	
REF	11-846	11-846	11-846	11-846	
ISSUE	N	N	N	N	

FIRST DIGIT IS BALL PITCH (MM): A=0.75, B=0.65, C=0.50, D=0.80

yy = A, B, C...AA, AB, AC...FOR THE VARIOUS BODY/MATRIX SIZE COMBINATIONS (MAY BE 1 OR 2 CHARACTERS). EACH SET OF PITCH VARIATIONS IS INDEPENDENT.

z = PROFILE HEIGHT OPTIONS:

1 = 1.70 MM MAXIMUM (STANDARD PROFILE)

2 = 1.20 MM MAXIMUM (THIN PROFILE)

3 = 1.00 MM MAXIMUM (VERY THIN PROFILE)

4 = 0.80 MM MAXIMUM (VERY VERY THIN PROFILE)

s = a, b, etc. OPTIONAL CHARACTER FOR SPECIAL FEATURES

TABLE 2

16

PROFILE DIMENSIONS – LOW										
VARIATION	Ayy–1			Byy–1			Cyy–1			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	1.70	–	–	1.70	–	–	1.70	7, 14
A1	0.25	–	–	0.20	–	–	0.15	–	–	
A2	0.60	–	–	0.60	–	–	0.60	–	–	
b	0.40	0.45	0.50	0.35	0.40	0.45	0.25	0.30	0.35	8
b1	0.30	–	–	0.25	–	–	0.20	–	–	
e	0.75 BASIC			0.65 BASIC			0.50 BASIC			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.12			0.10			0.08			
NOTES	1, 2, 18			1, 2, 18			1, 2, 18			
REF	04–628			11–846			04–628			
ISSUE	G			N			G			

TABLE 2 CONTINUED

PROFILE DIMENSIONS – LOW										
VARIATION	Dyy–1			–			–			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	1.70	–	–	–	–	–	–	7, 14
A1	0.25	–	–	–	–	–	–	–	–	
A2	0.60	–	–	–	–	–	–	–	–	
b	0.40	0.45	0.50	–	–	–	–	–	–	8
b1	0.30	–	–	–	–	–	–	–	–	
e	0.80 BASIC			–			–			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.12			–			–			
NOTES	1, 2, 18			–			–			
REF	04–703			–			–			
ISSUE	J			–			–			

TABLE 3

16

PROFILE DIMENSIONS – THIN										
VARIATION	Ayy–2			Ayy–2a			Byy–2			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	1.20	–	–	1.20	–	–	1.20	7, 14
A1	0.25	–	–	0.18	–	–	0.20	–	–	
A2	0.60	–	–	0.60	–	–	0.60	–	–	
b	0.40	0.45	0.50	0.30	0.35	0.40	0.35	0.40	0.45	8
b1	0.30	–	–	0.25	–	–	0.30	–	–	
e	0.75 BASIC			0.75 BASIC			0.65 BASIC			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.12			0.10			0.10			
NOTES	1, 2, 18			1, 2, 18			1, 2, 18			
REF	11–846			11–846			11–846			
ISSUE	N			N			N			

TABLE 3 CONTINUED

PROFILE DIMENSIONS – THIN										
VARIATION	Cyy–2			Dyy–2			–			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	1.20	–	–	1.20	–	–	–	7, 14
A1	0.15	–	–	0.25	–	–	–	–	–	
A2	0.60	–	–	0.60	–	–	–	–	–	
b	0.25	0.30	.035	0.40	0.45	0.50	–	–	–	8
b1	0.20	–	–	0.30	–	–	–	–	–	
e	0.50 BASIC			0.80 BASIC			–			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.08			0.12			–			
NOTES	1, 2, 18			1, 2, 18, 22			–			
REF	11–846			11–846			–			
ISSUE	N			N			–			

TABLE 4

16

PROFILE DIMENSIONS – VERY THIN										
VARIATION	Ayy–3			Ayy–3a			Ayy–3b			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	1.00	–	–	1.00	–	–	1.00	7, 14
A1	0.15	–	–	0.25	–	–	0.15	–	–	
A2	–	–	0.80	–	–	0.70	–	–	0.80	
b	0.25	0.30	0.35	0.40	0.45	0.50	0.30	0.35	0.40	8
b1	0.20	–	–	0.30	–	–	0.25	–	–	
e	0.75 BASIC			0.75 BASIC			0.75 BASIC			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.08			0.12			0.10			
NOTES	1, 2, 18			1, 2, 18			1, 2, 18			
REF	11–846			11–846			11–846			
ISSUE	N			N			N			

TABLE 4 CONTINUED

PROFILE DIMENSIONS – VERY THIN										
VARIATION	Byy–3			Cyy–3			Dyy–3			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	1.00	–	–	1.00	–	–	1.00	7, 14
A1	0.15	–	–	0.15	–	–	0.25	–	–	
A2	–	–	0.80	–	–	0.80	–	–	0.70	
b	0.25	0.30	.035	0.25	0.30	0.35	0.40	0.45	0.50	8
b1	0.20	–	–	0.20	–	–	0.30	–	–	
e	0.65 BASIC			0.50 BASIC			0.80 BASIC			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.08			0.08			0.12			
NOTES	1, 2, 18			1, 2, 18			1, 2, 18			
REF	11–846			11–846			11–846			
ISSUE	N			N			N			

TABLE 5

16

PROFILE DIMENSIONS – VERY VERY THIN										
VARIATION	Cyy–4			–			–			NOTES
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
A	–	–	0.80	–	–	–	–	–	–	7, 14
A1	0.15	–	–	–	–	–	–	–	–	
A2	–	–	0.60	–	–	–	–	–	–	
b	0.25	0.30	0.35	–	–	–	–	–	–	8
b1	0.20	–	–	–	–	–	–	–	–	
e	0.50 BASIC			–			–			4
	TOLERANCE OF FORM AND POSITION									
ccc	0.08			–			–			
NOTES	1, 2, 18			–			–			
REF	11–846			–			–			
ISSUE	N			–			–			

TABLE 6

VARIATIONS – 0.50 PITCH														
VARIATION	D MAX	E MAX	D1 BASIC	E1 BASIC	MD	ME	SD BASIC	SE BASIC	n	N	FOOT PRINT	REF	ISSUE	NOTES
CA-z	5.00	4.50	2.50	3.50	6	8	0.25	0.25	48	48	–	11-494	A	
CB-z	6.00	4.00	5.00	2.50	11	6	0.00	0.25	48	66	17	04-683	I	
CC-z	6.00	4.00	4.00	2.50	9	6	0.00	0.25	34	54	18	04-683	I	
CD-z	12.00	12.00	8.00	8.00	17	17	0.00	0.00	253	289	26	11-846	–	25
NOTES					5	5	11	11	5, 12					
	1, 2, 16, 18													