Please note that Cypress is an Infineon Technologies Company.

The document following this cover page is marked as “Cypress” document as this is the company that originally developed the product. Please note that Infineon will continue to offer the product to new and existing customers as part of the Infineon product portfolio.

Continuity of document content

The fact that Infineon offers the following product as part of the Infineon product portfolio does not lead to any changes to this document. Future revisions will occur when appropriate, and any changes will be set out on the document history page.

Continuity of ordering part numbers

Infineon continues to support existing part numbers. Please continue to use the ordering part numbers listed in the datasheet for ordering.

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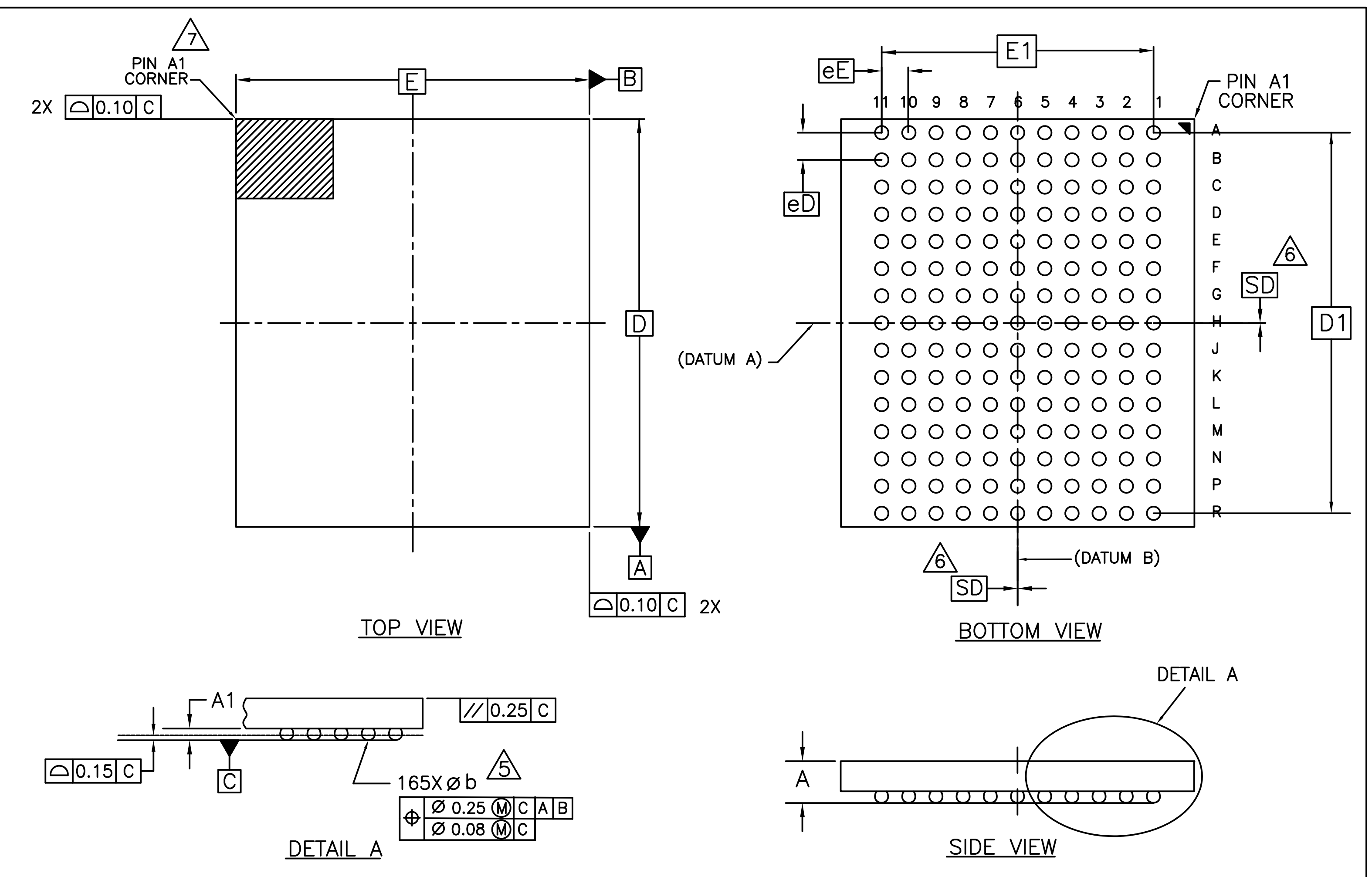

SYMBOL	DIMENSIONS		
	MIN.	NOM.	MAX.
A	–	–	1.40
A1	0.29	–	–
D	15.00 BSC		
E	13.00 BSC		
D1	14.00 BSC		
E1	10.00 BSC		
MD	15		
ME	11		
N	165		
Ø b	0.44	0.50	0.64
eE	1.00 BSC		
eD	1.00 BSC		
SD/SE	0.00 BSC		

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. BALL POSITION DESIGNATION PER JEP95, SECTION 3, SPP-020.
3. "e" REPRESENTS THE SOLDER BALL GRID PITCH.
4. SYMBOL "MD" IS THE BALL MATRIX SIZE IN THE "D" DIRECTION.
   SYMBOL "ME" IS THE BALL MATRIX SIZE IN THE "E" DIRECTION.
   N IS THE NUMBER OF POPULATED SOLDER BALL POSITIONS FOR MATRIX SIZE MD X ME.
5. DIMENSION "b" IS MEASURED AT THE MAXIMUM BALL DIAMETER IN A PLANE PARALLEL TO DATUM C.
6. "SD" AND "SE" ARE MEASURED WITH RESPECT TO DATUMS A AND B AND DEFINE THE POSITION OF THE CENTER SOLDER BALL IN THE OUTER ROW.
   WHEN THERE IS AN ODD NUMBER OF SOLDER BALLS IN THE OUTER ROW, "SD" OR "SE"= 0.
   WHEN THERE IS AN EVEN NUMBER OF SOLDER BALLS IN THE OUTER ROW, SD"=eD/2 AND "SE"= eE/2.
7. A1 CORNER TO BE IDENTIFIED BY CHAMFER, LASER OR INK MARK, METALLIZED MARK INDENTATION OR OTHER MEANS.
8. JEDEC SPECIFICATION NO. REF : MO-216 / ISSUE E.

CYPRESS
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PACKAGE CODE(S)	BB165 BW165 BB0AC	BB0AH BW0AC BW0AH	LAF165	DRAWN BY: KOTA	DATE: 10-JUN-19
				APPROVED BY: CS	DATE: 10-JUN-19

TITLE: PACKAGE OUTLINE, 165 BALL FBGA 15.0X13.0X1.4 MM BB165/BW165/BB0AC/BB0AH/BW0AC/BW0AH/LAF165

SPEC NO. 51-85180 REV *H

SCALE : TO FIT SHEET 1 OF 2

REVISIONS			
Rev	ECN No.	Orig. of change	Reason for Revision
**	124782	N/A	NEW RELEASE
*A	400534	N/A	CHANGE STANDOFF LIMIT FROM 0.41±0.05 TO 0.35±0.06 ADD SOLDER PAD TYPE AS NON SOLDER MASK DEFINED (NSMD) ADD PACKAGE WEIGHT 0.475g ADD JEDEC REFERENCE:MO-216/DESIGN 4.6C ADD PACKAGE CODE REFERENCE : BB0AC
*B	2741152	BZG	CONVERTED TO STANDARD DRAWING FORMAT CHANGED POSITION TOLERANCE FROM 0.05 TO 0.08
*C	2811236	QAD	Change Template and Title from PACKAGE OUTLINE, 165LD FBGA 13X15X1.40MM to PACKAGE OUTLINE, 165LD FBGA 13X15X1.4 MM BB165D/BW165D (0.5 BALL DIAMETER).
*D	3391562	QAD	Deleted PACKAGE WEIGHT : 0.475g
*E	3441910	QAD	ADD PACKAGE CODE BW0AC AND ADDED NOTE: PACKAGE WEIGHT: SEE CYPRESS PACKAGE MATERIAL DECLARATION DATASHEET (PMDD) POSTED ON THE CYPRESS WEB.
*F	3740180	QAD	NO CHANGE. SUNSET REVIEW.
*G	4898639	CS	REMOVED CAP AND SUBSTRATE REFERENCE DIMENSIONS.
*H	6591625	KOTA	Convert spec 51-85180 to new format per spec 001-82380. Add Package Codes LAF165, BB0AC, BB0AH, BW0AC and BW0AH.

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PACKAGE CODE(S)	BB165 BW165 BB0AC	BB0AH BW0AC BW0AH	LAF165

DRAWN BY	DATE
KOTA	10-JUN-19
APPROVED BY	DATE
CS	10-JUN-19

TITLE
PACKAGE OUTLINE, 165 BALL FBGA 15.0X13.0X1.4 MM
BB165/BW165/BB0AC/BB0AH/BW0AC/BW0AH/LAF165

SPEC NO. 51-85180 REV *H

SCALE : TO FIT SHEET 2 OF 2