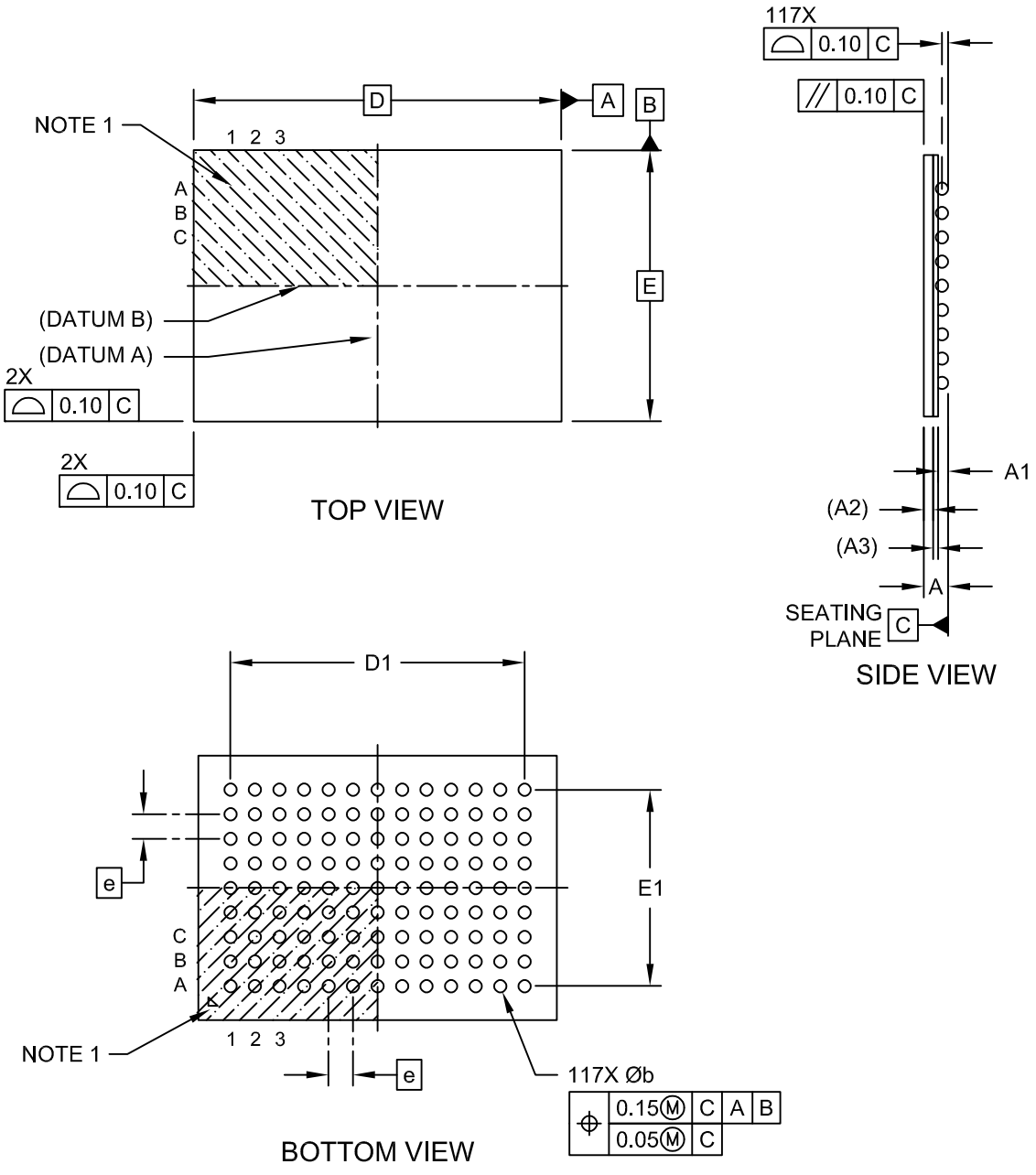
117-ball Ultra Thin Fine-Pitch Ball Grid Array Package (C5B) - 9.5×7×0.65 mm Body With 13x9 Array, 0.65 mm Pitch [UFBGA]; Atmel Legacy GPC CBW

Note: For the most current package drawings, please see the Microchip Packaging Specification located at http://www.microchip.com/packaging



117-ball Ultra Thin Fine-Pitch Ball Grid Array Package (C5B) - 9.5×7×0.65 mm Body With 13x9 Array, 0.65 mm Pitch [UFBGA]; Atmel Legacy GPC CBW

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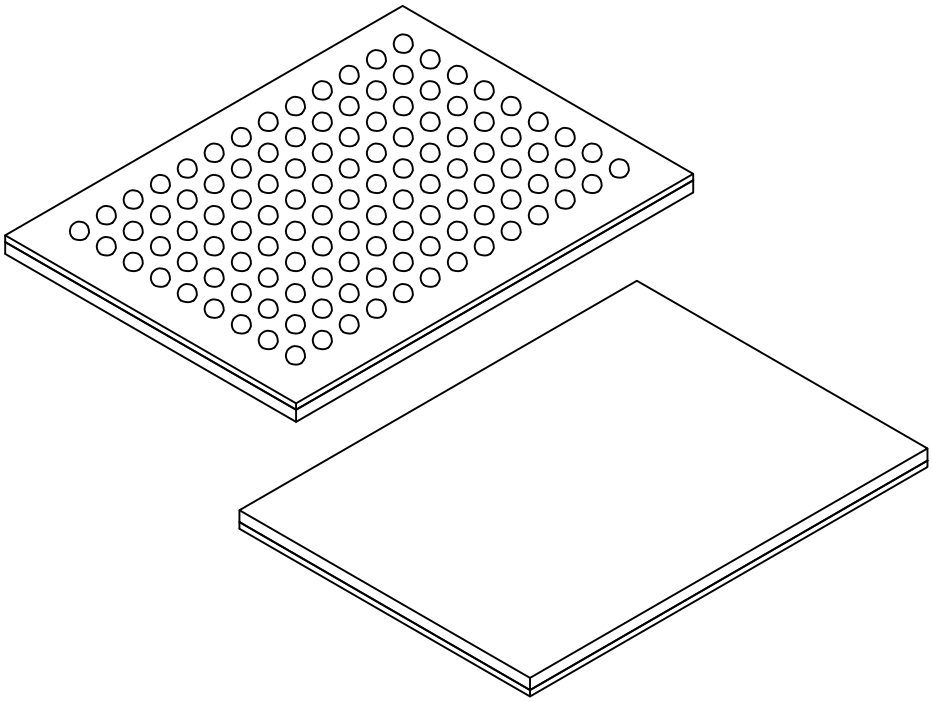

Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Terminals	N		117	
Pitch	e		0.65 BSC	
Overall Height	A	-	-	0.65
Ball Height	A1	0.160	-	0.260
Mold Thickness	A2		0.250 REF	
Substrate Thickness	A3		0.136 REF	
Overall Length	D		9.50 BSC	
Ball Array Length	D1	-	7.80	-
Overall Width	E		7.00 BSC	
Ball Array Width	E1	-	5.20	-
Ball Width	b	0.270	-	0.370
Ball Diameter			0.300 REF	

Notes:

1. Pin 1 visual index feature may vary, but must be located within the hatched area.
2. Package is saw singulated
3. Dimensioning and tolerancing per ASME Y14.5M

   BSC: Basic Dimension. Theoretically exact value shown without tolerances.

   REF: Reference Dimension, usually without tolerance, for information purposes only.

117-ball Ultra Thin Fine-Pitch Ball Grid Array Package (C5B) - 9.5×7×0.65 mm Body With 13x9 Array, 0.65 mm Pitch [UFBGA]; Atmel Legacy GPC CBW

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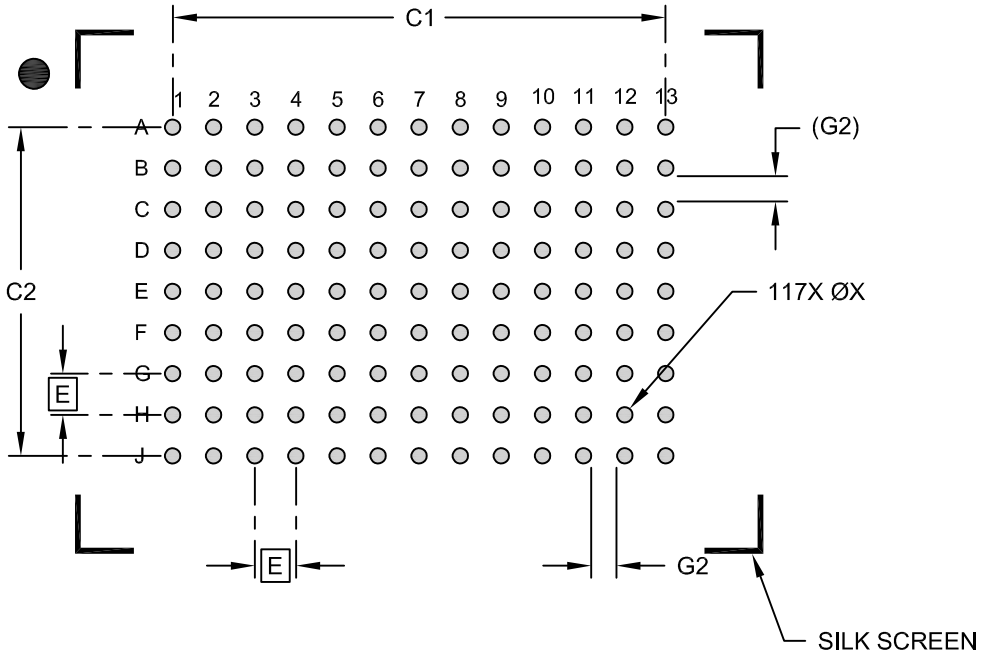

RECOMMENDED LAND PATTERN

Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Contact Pitch	E		0.65 BSC	
Contact Pad Spacing	C1		7.80	
Contact Pad Spacing	C2		5.20	
Contact Pad Diameter (X117)	X			0.25
Contact Pad to Contact Pad (X117)	G2	0.40		

Notes:

1. Dimensioning and tolerancing per ASME Y14.5M
   BSC: Basic Dimension. Theoretically exact value shown without tolerances.

Microchip Technology Drawing C04-23166 Rev A