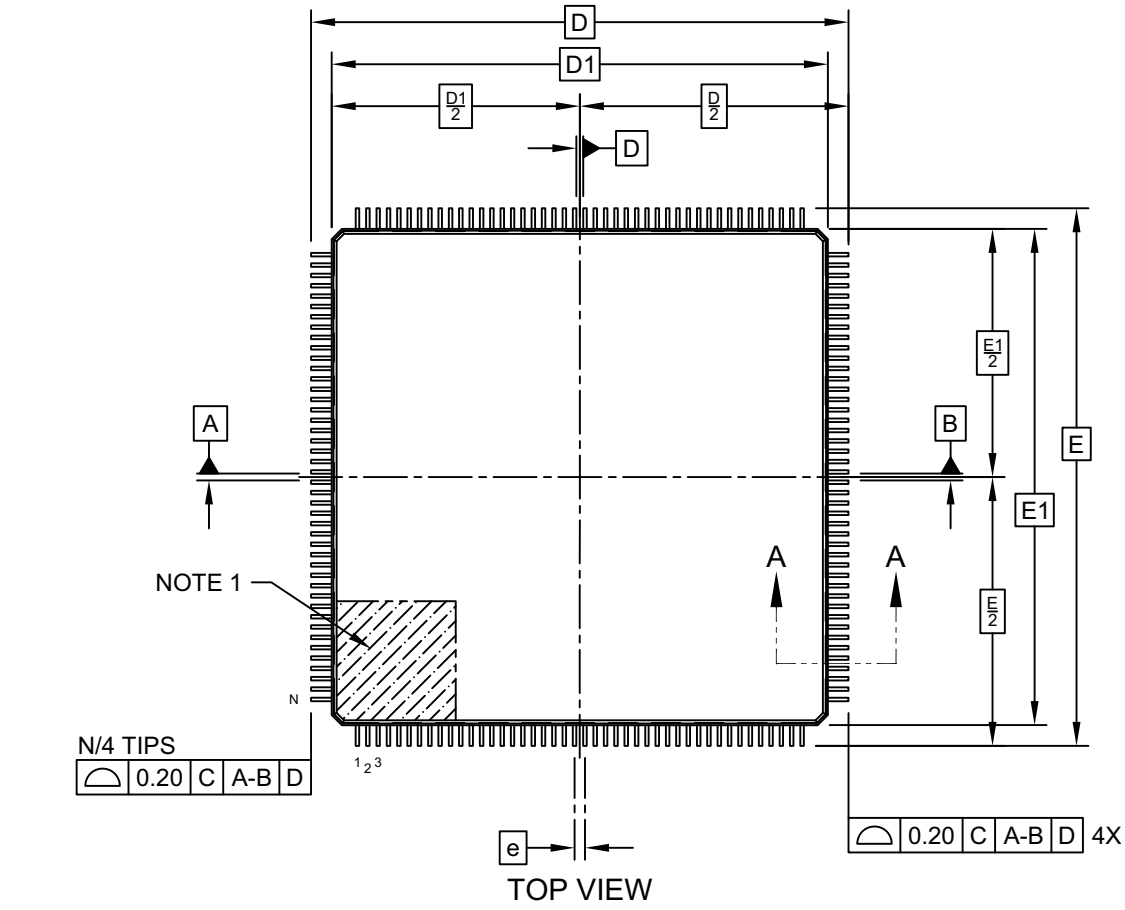
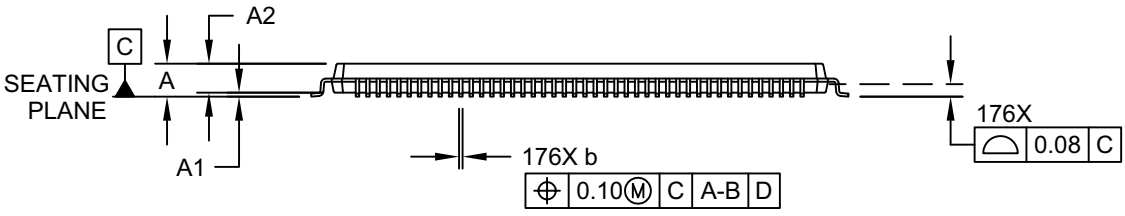
176-Lead Plastic Quad Flatpack (2VB) - 24x24x1.4 mm Body [LQFP]
Atmel Legacy Global Package Code AGR

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



TOP VIEW



SIDE VIEW

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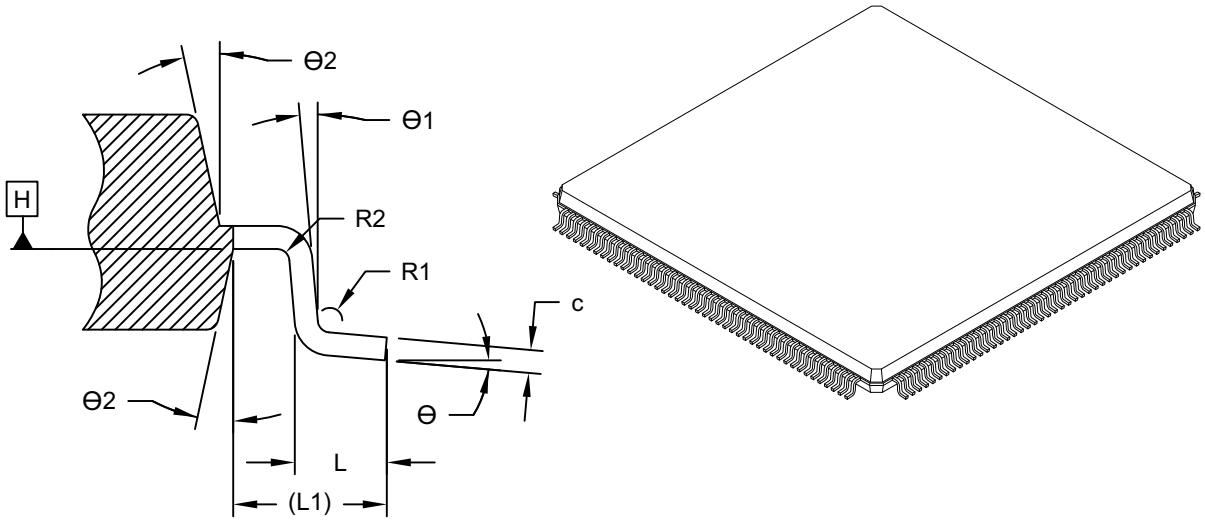

SECTION A-A

Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Terminals	N		176	
Pitch	e		0.50 BSC	
Overall Height	A	-	-	1.60
Standoff	A1	0.05	-	0.15
Molded Package Thickness	A2	1.35	1.40	1.45
Overall Length	D		26.00 BSC	
Molded Package Length	D1		24.00 BSC	
Overall Width	E		26.00 BSC	
Molded Package Width	E1		24.00 BSC	
Terminal Width	b	0.17	0.22	0.27
Terminal Thickness	c	0.09	-	0.20
Terminal Length	L	0.45	0.60	0.75
Footprint	L1		1.00 REF	-
Lead Bend Radius	R	0.08	-	-
Lead Bend Radius	R2	0.08	-	0.20
Foot Angle	Θ	0°	3.5°	7°
Lead Angle	Θ1	0°	-	-
Terminal-to-Exposed-Pad	Θ2	11°	12°	13°

Notes:

1. Pin 1 visual index feature may vary, but must be located within the hatched area.
2. 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.

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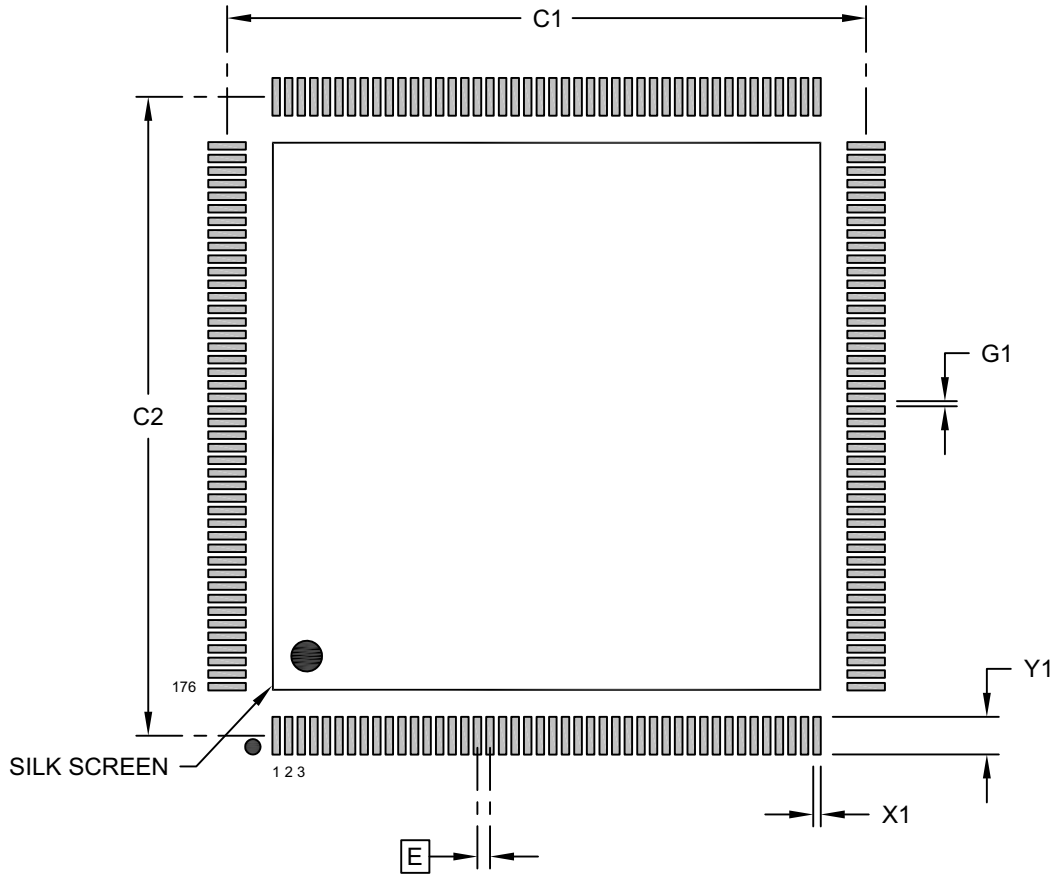

RECOMMENDED LAND PATTERN

Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Contact Pitch	E	0.50 BSC		
Contact Pad Spacing	C1		25.40	
Contact Pad Spacing	C2		25.40	
Contact Pad Width (X176)	X1			0.30
Contact Pad Length (X176)	Y1			1.50
Contact Pad to Center Pad (X172)	G1	0.20		

Notes:

1. Dimensioning and tolerancing per ASME Y14.5M

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

Microchip Technology Drawing C04-23013 Rev A