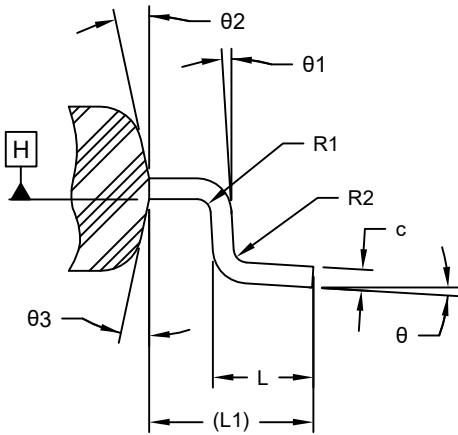
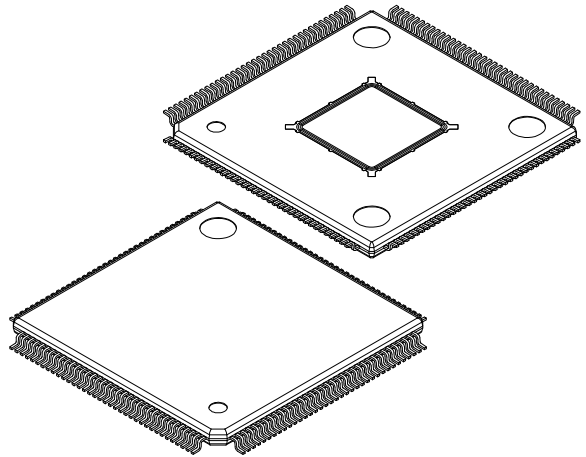


# 144-Lead Plastic Thin Quad Flatpack (4KB) - 16x16 mm Body [TQFP] With 6.3 mm Grooved Exposed Pad

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



**SECTION A-A**



Dimension Limits	Units	MILLIMETERS		
		MIN	NOM	MAX
Number of Terminals	N	144		
Pitch	e	0.40 BSC		
Overall Height	A	-	-	1.20
Standoff	A1	0.05	-	0.15
Molded Package Thickness	A2	0.95	1.00	1.05
Overall Length	D	18.00 BSC		
Molded Package Length	D1	16.00 BSC		
Exposed Pad Length	D2	6.30 REF		
Overall Width	E	18.00 BSC		
Molded Package Width	E1	16.00 BSC		
Exposed Pad Width	E2	6.30 REF		
Terminal Width	b	0.13	0.16	0.23
Terminal Thickness	c	0.09	.127	0.20
Terminal Length	L	0.45	0.60	0.75
Footprint	L1	1.00 REF		
Lead Bend Radius	R1	0.08	-	-
Lead Bend Radius	R2	0.08	-	0.20
Foot Angle	$\theta$	0°	3.5°	7°
Lead Angle	$\theta_1$	0°	-	-
Mold Draft Angle	$\theta_2$	11°	12°	13°
Mold Draft Angle	$\theta_3$	11°	12°	13°

**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.