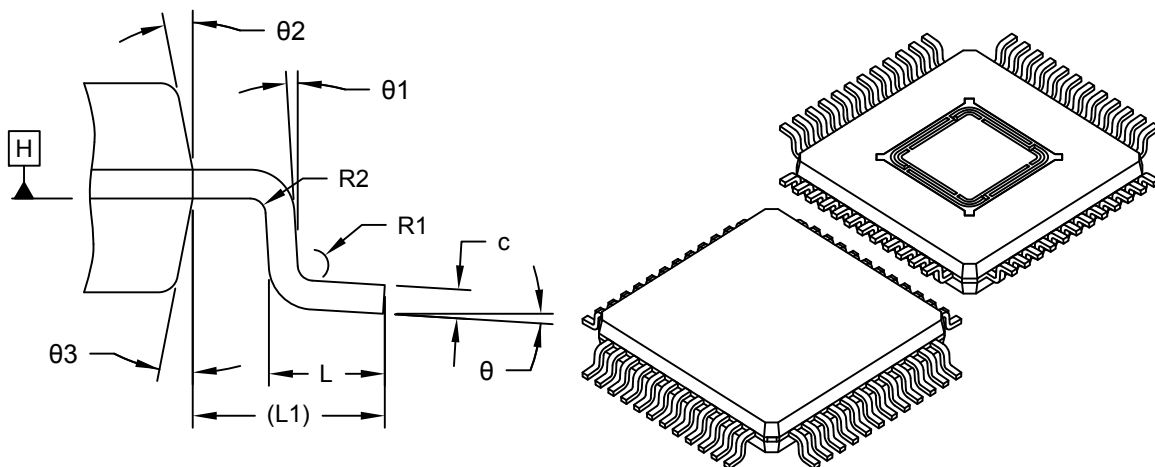


# 48-Lead Thermally Enhanced Thin Quad Flat Pack (PT) 7x7x1.0 mm Body [TQFP] With Grooved Exposed Pad

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



**DETAIL 1**

Dimension Limits	Units	MILLIMETERS		
		MIN	NOM	MAX
Number of Leads	N	48		
Lead Pitch	e	0.50 BSC		
Overall Height	A	-	-	1.20
Standoff	A1	0.05	0.10	0.15
Molded Package Thickness	A2	0.95	1.00	1.05
Overall Length	D	9.00 BSC		
Molded Package Length	D1	7.00 BSC		
Molded Package Length	D2	3.40	3.50	3.60
Overall Width	E	9.00 BSC		
Molded Package Width	E1	7.00 BSC		
Molded Package Length	E2	3.40	3.50	3.60
Foot Length	L	0.45	0.60	0.75
Footprint	L1	1.00 REF		
Lead Width	b	0.17	0.20	0.27
Lead Thickness	c	0.09	-	0.20
Lead Width	R1	0.08	-	-
Lead Width	R2	0.08	-	0.20
Terminal Foot Angle	$\theta$	0°	3.5°	7°
Lead Angle	$\theta 1$	0°	-	-
Mold Draft Angle Top	$\theta 2$	11°	12°	13°
Mold Draft Angle Bottom	$\theta 3$	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.