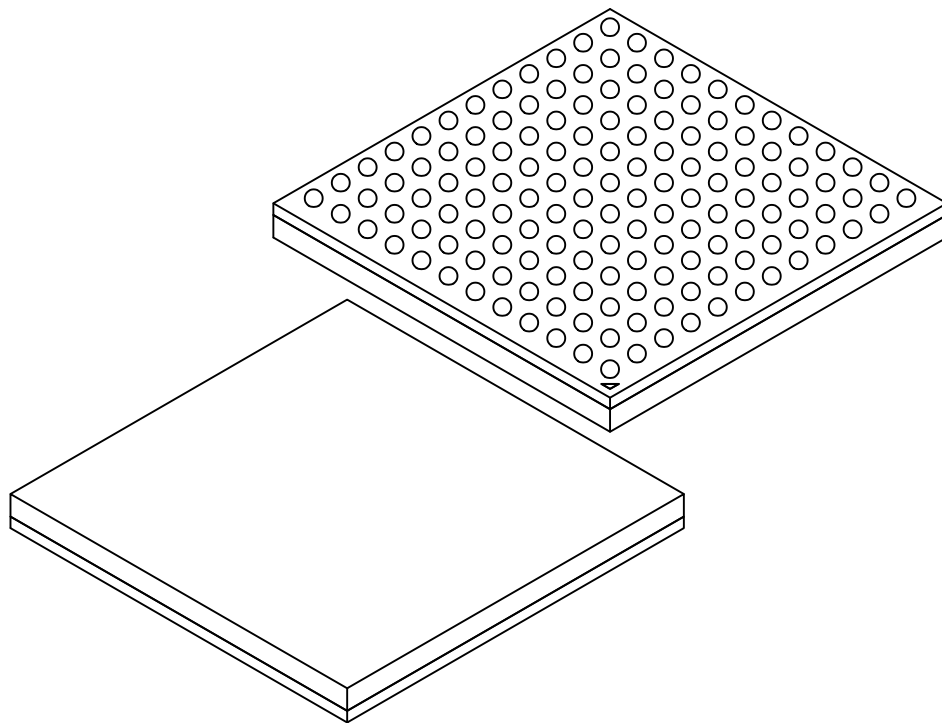


144-Ball Thin Fine-Pitch Ball Grid Array Package (HQB) - 10x10x1.2 mm Body [TFBGA]

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



Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Terminals	N	144		
Pitch	e	0.80 BSC		
Overall Height	A	-	-	1.20
Ball Height	A1	0.22	-	0.32
Mold Thickness	M	0.53 REF		
Substrate Thickness	S	0.246 REF		
Overall Length	D	10.00 BSC		
Ball Array Length	D2	8.80 BSC		
Overall Width	E	10.00 BSC		
Ball Array Width	E2	8.80 BSC		
Ball Diameter	b	0.32	-	0.42

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.