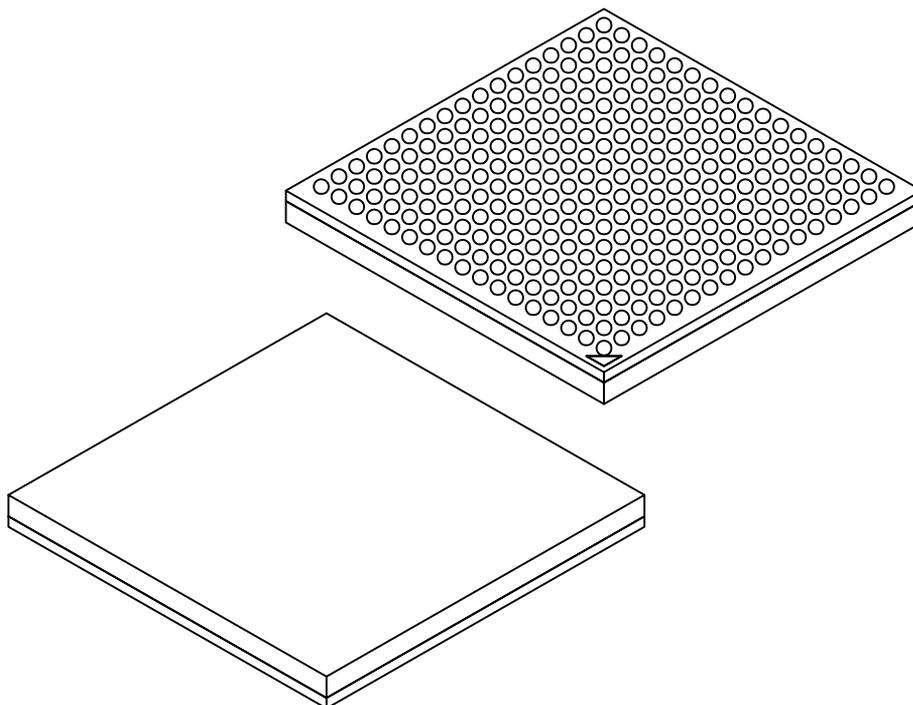


# 289-Ball Thin Fine-Pitch Ball Grid Array Package (8GW) - 9x9x1.2 mm Body [TFBGA]

**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	289		
Pitch	e	0.50 BSC		
Overall Height	A	–	–	1.200
Ball Height	A1	0.160	0.210	0.260
Mold Thickness	M	0.530 REF		
Substrate Thickness	S	0.352 REF		
Overall Length	D	9.00 BSC		
Ball Array Length	D2	8.00 BSC		
Overall Width	E	9.00 BSC		
Ball Array Width	E2	8.00 BSC		
Ball Diameter	b	0.270	0.320	0.370

**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.