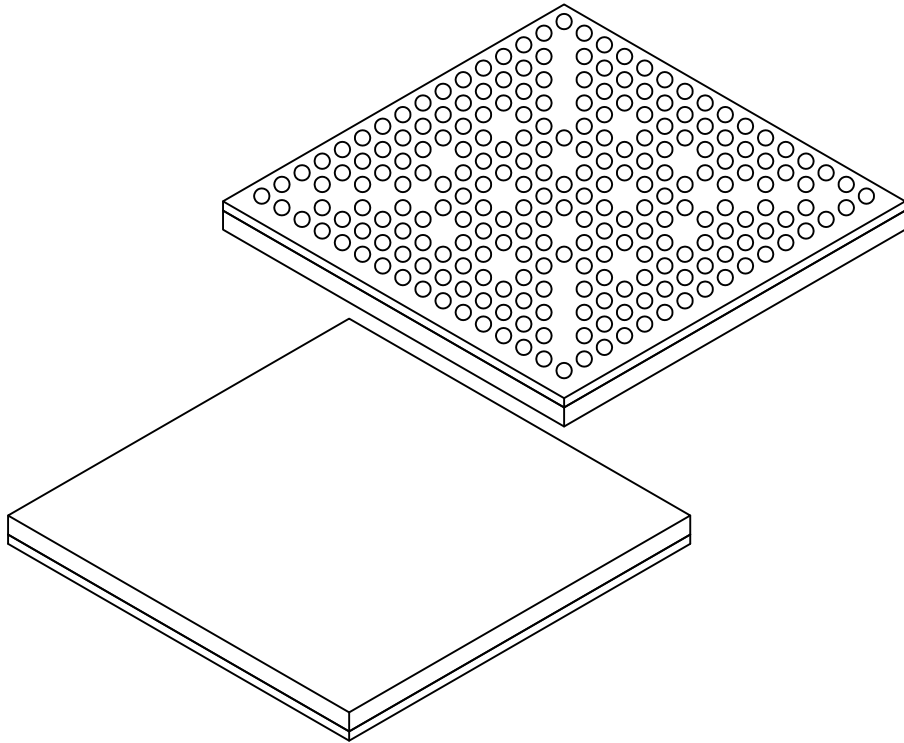


228-Ball Thin, Fine Pitch Ball Grid Array (DWB) - 11x11 mm Body [TFBGA]

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



Dimension Limits	Units	MILLIMETERS		
		MIN	NOM	MAX
Number of Terminals	N	228		
Pitch	e	0.65 BSC		
Overall Height	A	-	-	1.20
Ball Height	A1	0.22	0.27	0.32
Substrate Thickness	S	0.26 REF		
Mold Cap Thickness	M	0.53 REF		
Overall Length	D	11.00 BSC		
Overall Width	E	11.00 BSC		
Terminal Diameter	b	0.32	0.37	0.42

Notes:

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