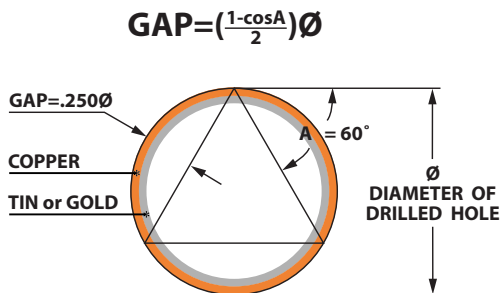


The Design of Multi-faceted Press-fit Pins for Plated Through-Holes

Retention of the press-fit pin prior to wave or reflow soldering is provided by the thickness of the copper plating in the holes. The across points dimension of the geometric feature is made the same as the drilled hole diameter. The drilled hole diameter itself is usually .0005" less than the nominal drill size due to drill tolerance and tool wear. Repointed drills are not recommended for "press-fit" PTHs. Often the sharp points of the geometric feature are given a .002" flat so as not to cut the copper of the PTH when inserted.

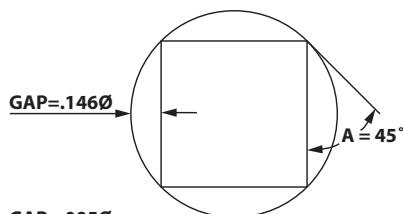
When the pin is pressed into the plated-thru-hole, it is important for a gap to remain and permit solder to fill the hole and "wick" through the board without voids or flux entrapment.

When specifying plated-thru-holes that will receive multi-faceted press-fit pins, the PCB fabricator should be given the actual drill size (prior to plating thru) to use as well as a commercial finished hole tolerance ($\pm .002$ ", $\pm .003$ " etc.).

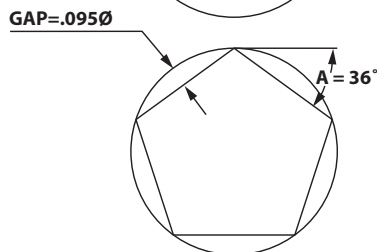


If the hole is plated .001" minimum to .0025" maximum copper, these are the recommended minimum drilled hole diameters for each geometry:

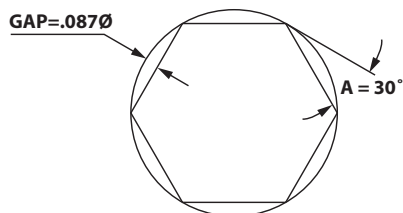
TRIANGULAR (rarely used):
Ø.023" (use 0,6mm DRILL) minimum.



SQUARE:
Ø.039" (use 1,0mm DRILL) minimum.



PENTAGONAL (rarely used):
Ø.0605" (use 1,55mm DRILL) minimum.



HEXAGONAL:
Ø.0645" (use 1,65mm DRILL) minimum.