

Minimum Through Hole Solder Joint Requirements • Class 3

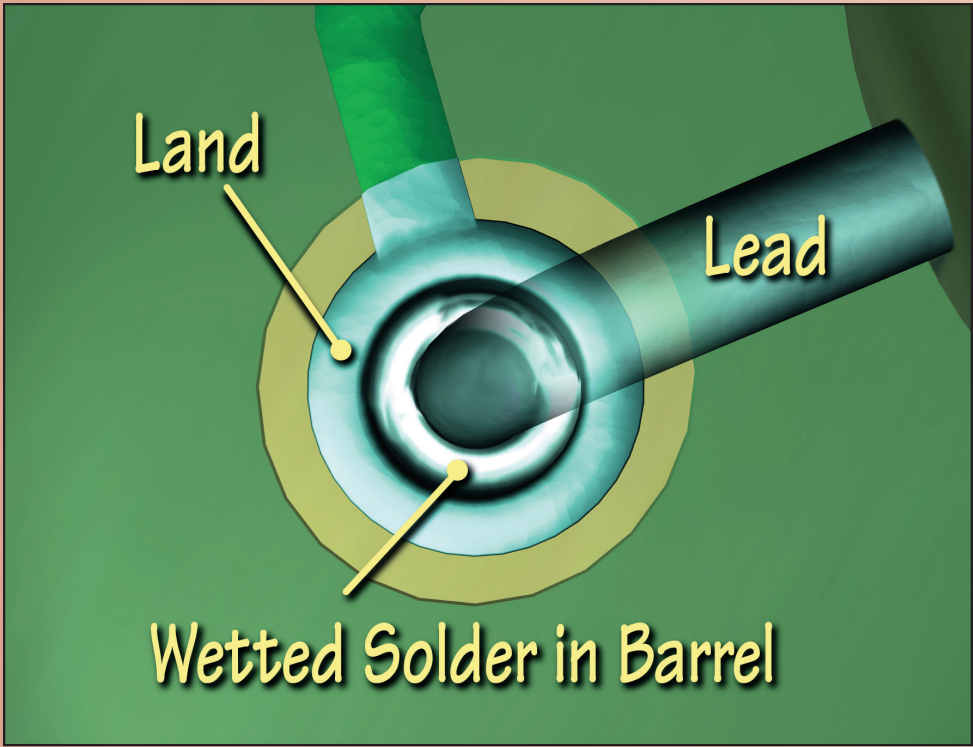


Shown below are the minimum acceptable conditions for a Class 3 Plated-Through Hole Solder Joint. All of the illustrations show the same solder connection from three different views: top, barrel (cutaway), and bottom.

Any Class 3 solder connection failing to meet these minimum requirements should be considered a **defect**.

References: IPC-A-610G

COMPONENT SIDE
(PRIMARY, TOP)
SOLDER DESTINATION

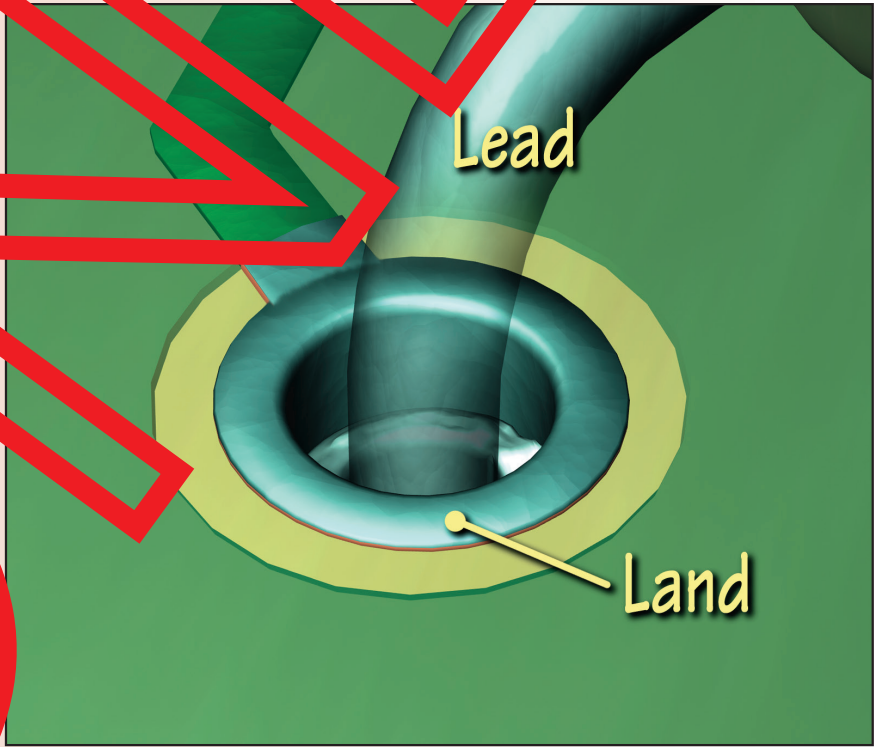


Wetting of component side

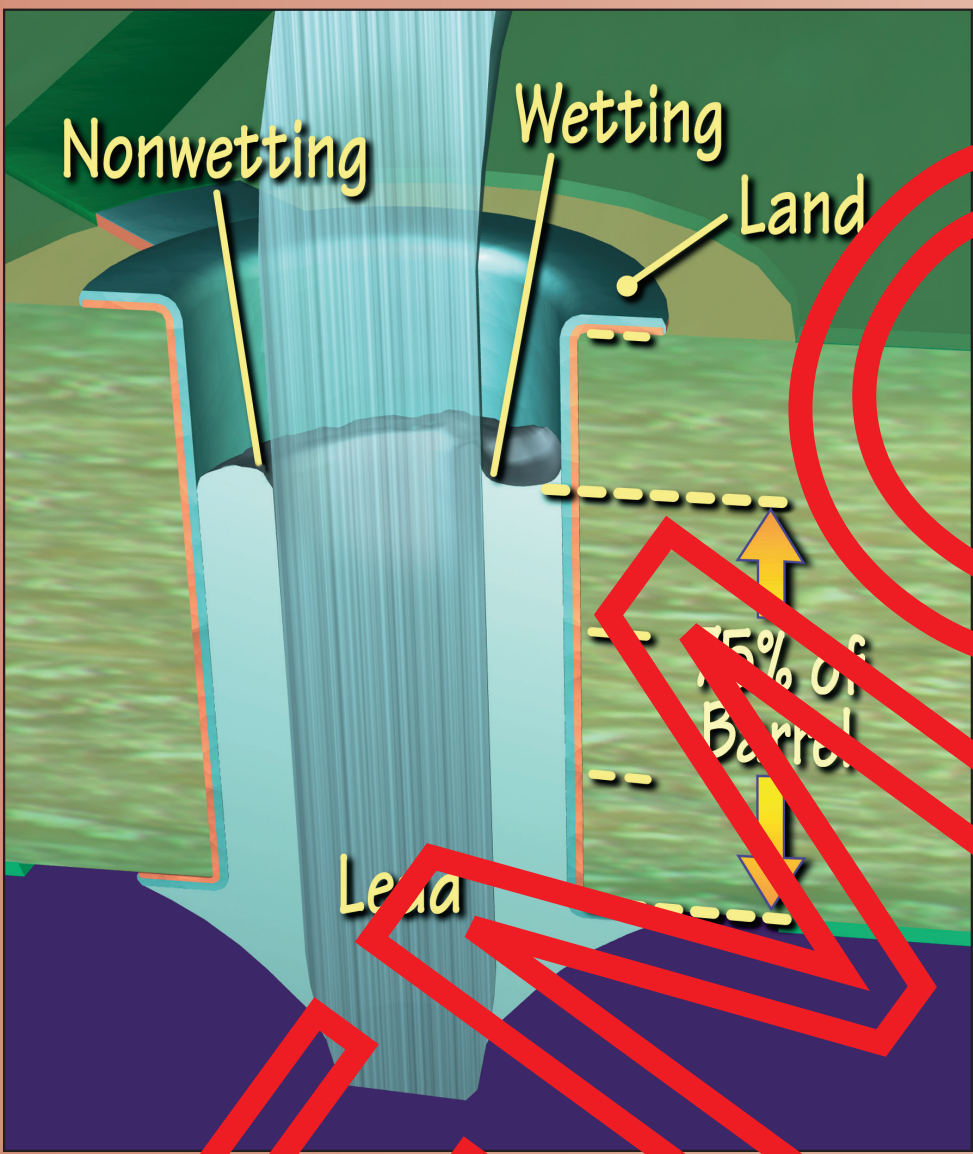
land = 0%

A properly wetted solder joint on the solder destination or component side land is not required.

Ref: 7.3.5.3



CUTAWAY VIEW
(BARREL)



Vertical fill of

barrel = 75%

Solder must fill at least 75%, or 3/4 the height of the hole.

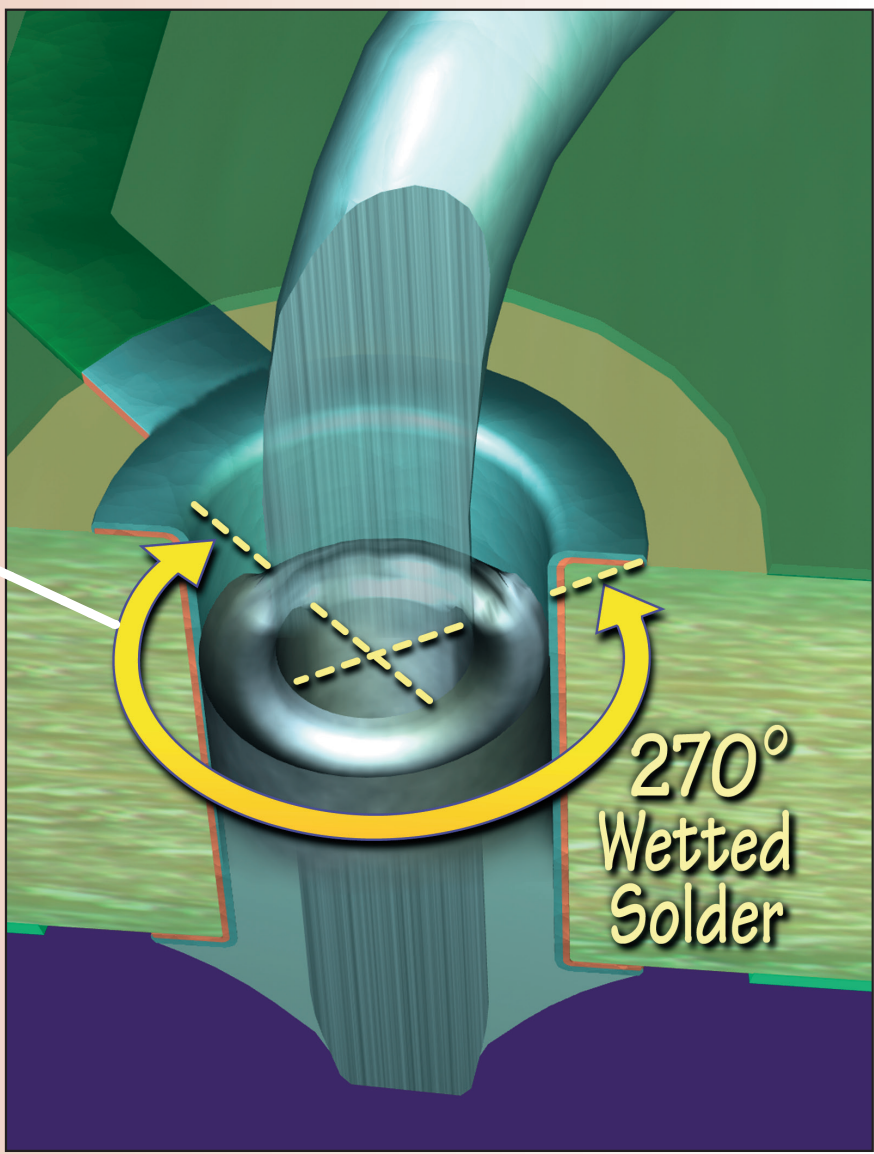
Ref: 7.3.5.1

Wetting of component side

lead & barrel = 270°

A properly wetted solder fillet must circle at least 270° (or 75%) of the way around the lead and barrel.

Ref: 7.3.5.2



SOLDER SIDE
(SECONDARY, BOTTOM)
SOLDER SOURCE



Wetting of solder side

lead & barrel = 330°

The wetting on lead and barrel must be at least 330° (approx. 90%).

Ref: 7.3.5.4

Wetting of solder side

land = 270°

A properly wetted fillet must extend at least 270° (or 75%) of the way around the land on the solder source side of the board.

Ref: 7.3.5.5

