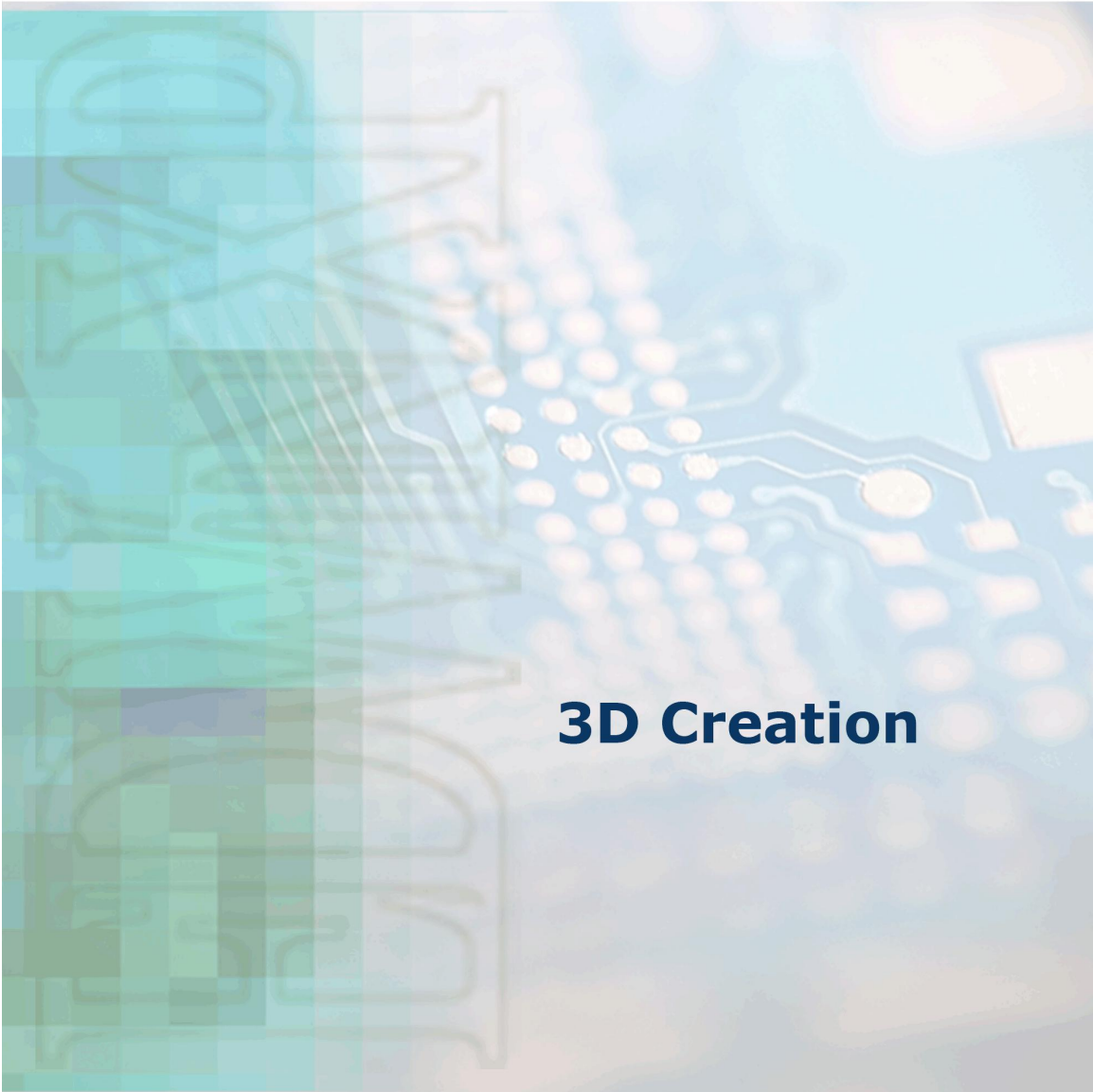


Electronic Design for Windows
EDWINXP



VISIONICS

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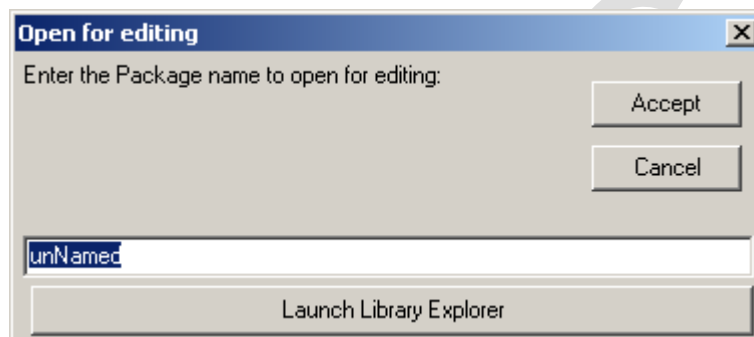
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VISIONICS

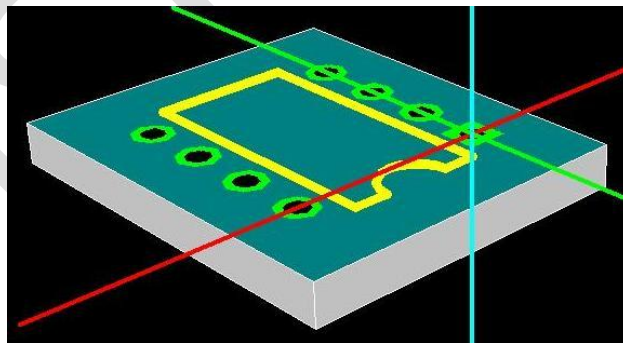
3D Creation

Creation of Body

1. Select **Library Editor** from Project Explorer Main window.
2. Click on Package tab.
3. Select Menu bar → **File** → **Open Package for Editing** (Ctrl+O).



4. Enter the package name in the dialog box. Here DIP8/300 is considered.
5. Click **Accept**. 2D package outline is displayed.
6. To get a 3D view, select *Menu* bar → **Edit**. → **3D Viewer**.



The 3D workspace is displayed with three perpendicular axes

X-axis is shown in red.

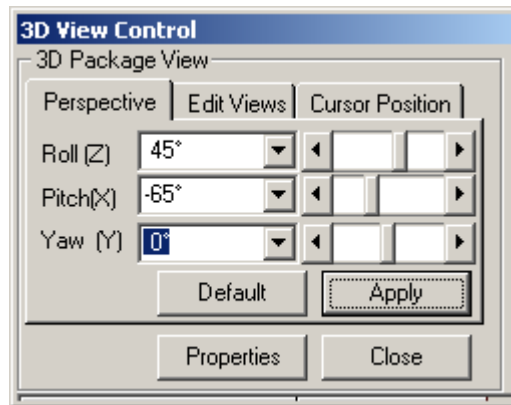
Y-axis is shown in green.

Z-axis is shown in blue.

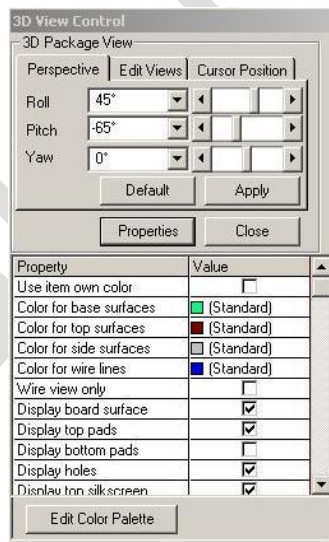
We get a default board containing the outline of the DIP8/300 package as shown:

Note: Delete items, if any on the board.

Click 3D **View Control** → **Properties**.



In the new window,

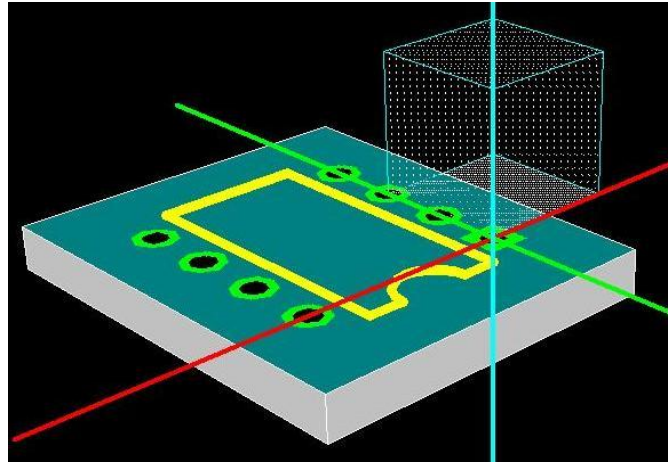


Check Wire view only.

Creation of Main body

1. Set Grid = .1" and Snap = .05".
2. Select Create 3D item (function tools) → Create rectangular bar (Option Tools).

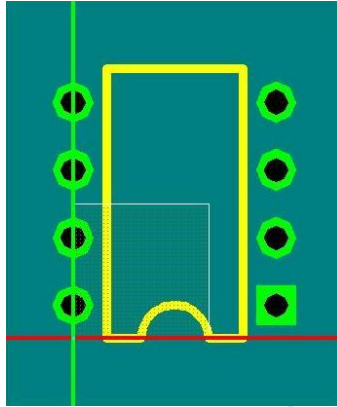
3. Click anywhere in the workspace, a rectangular bar will be placed with the center of its base placed on the intersection of the 3 axes.



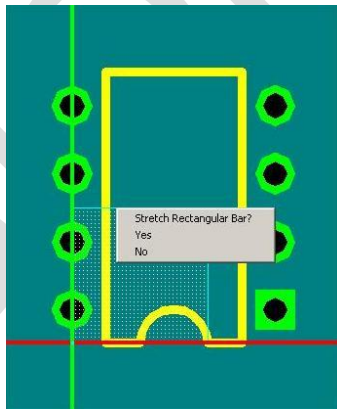
4. Click **Finish relocation** (option tool)
5. Select **Properties** (function tool).
6. Click over the rectangular block, in the **Properties in** dialog enter Height as **.0625"**.
7. Select **Relocate 3D object(s)** (function tools).
8. Click on the rectangular block.
9. Click **yes** in the dialog box appearing in the workspace.
10. Select **Edit view** from **3D View Control** window.
11. Choose **From Top**.
12. To move the axes to a desired point press **Shift** (to take the Snap value) and **click in the direction** where it has to be placed. Place the Rectangular block as shown.

Note:

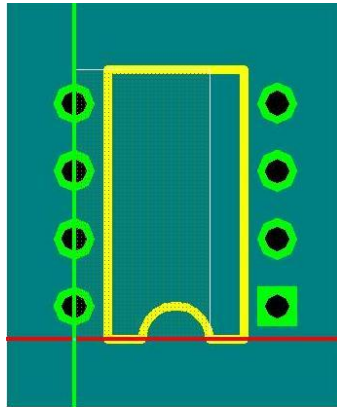
- *For finer displacement adjust the value of Snap.*
- *For very small displacement switch off Snap.*



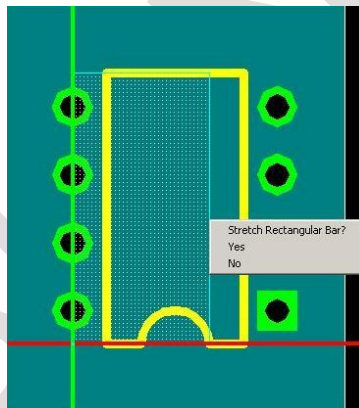
13. After placing properly, **Click** on **Finish Relocation** (sixth option tool).
14. Choose Stretch (function tools).
15. Click on the rectangular bar.



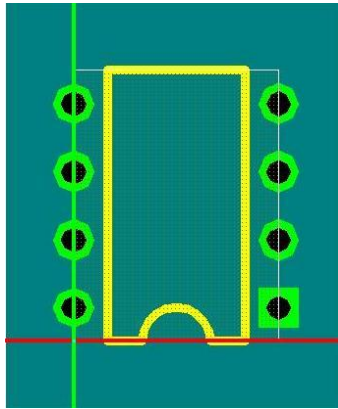
16. Click **Yes** in the dialog box **Stretch Rectangular Bar?**
17. Click over the green axis to stretch the block in X direction, after stretching to the required dimension.



18. Click **Finish stretch** in *Option Tools* Toolbar.
19. Choose Stretch (function tools).
20. Click on the rectangular bar.

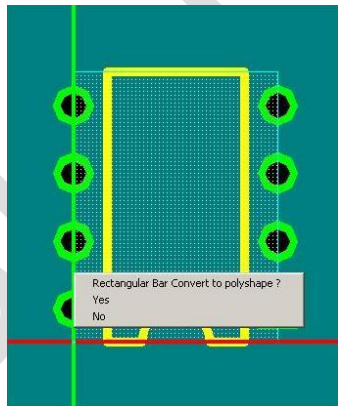


21. Click **Yes** in the dialog box **Stretch Rectangular Bar?**
22. Click over the red axis to stretch the block in Y-direction, after stretching to the required dimension.



23. Click **Finish stretch** in *Option Tools* Toolbar.

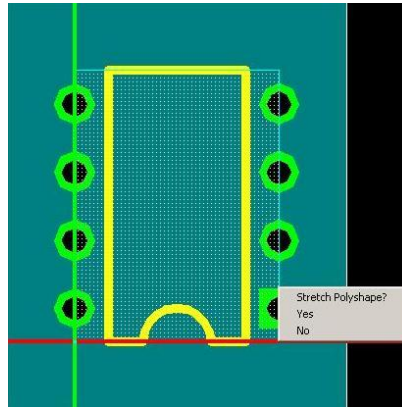
24. Choose **Convert 3Ditem to polygon shape** (function tools), click on the rectangular bar.



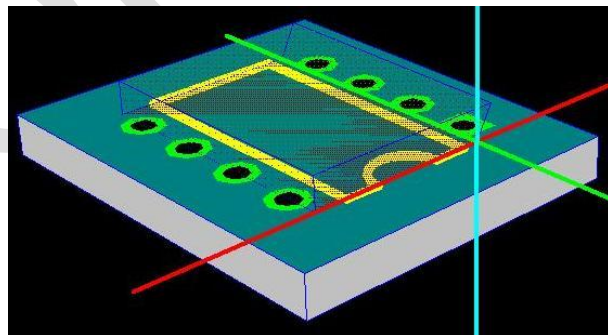
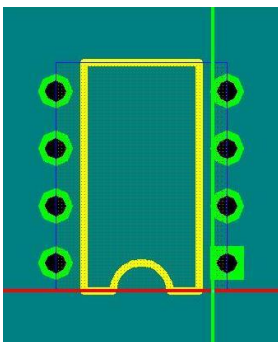
25. Click yes, on the dialog box Rectangular Bar Convert to polyshape?

26. Choose Stretch (function tools) → Insert Edge vertex before (Option Tools).

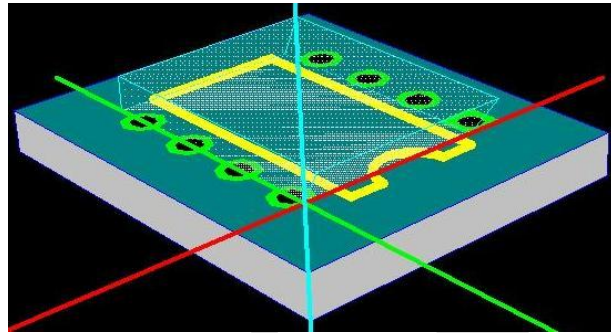
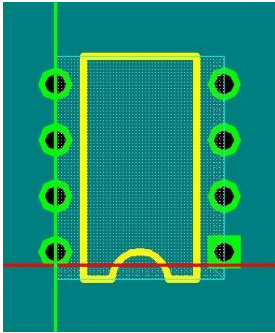
27. Click on one of the vertical edges of the rectangular bar.



28. Click **Yes** in the dialog box **Stretch Polyshape?**
29. Set **Snap = .025"**.
30. Click on Red axis with shift key pressed(to take Snap Value).
31. For 3D appearance, Select **Perspective** → **Default** in **3D View Control**.

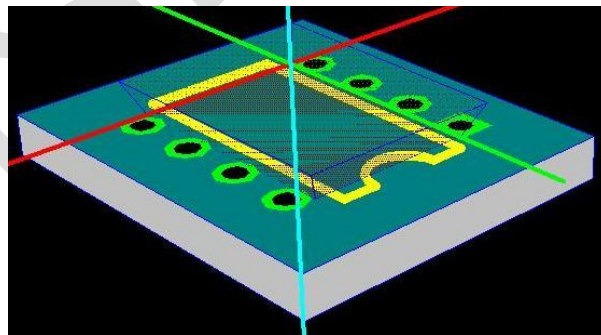
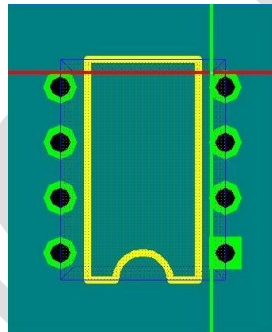


32. After stretching to the required shape, select **Finish stretch** (Option Tools).
33. Choose **Stretch** (function tools) → **Insert Edge vertex before** (Option Tools)
34. Click on one of the horizontal edges of the rectangular bar Click **Yes** in the dialog box **Stretch Polyshape?**
35. Click on Green axis with shift key pressed (to take Snap Value).
36. For 3D appearance, Select **Perspective** > **Default** in **3D View Control**.



37. After stretching to the required shape, Select **Finish stretch** (Option Tools).

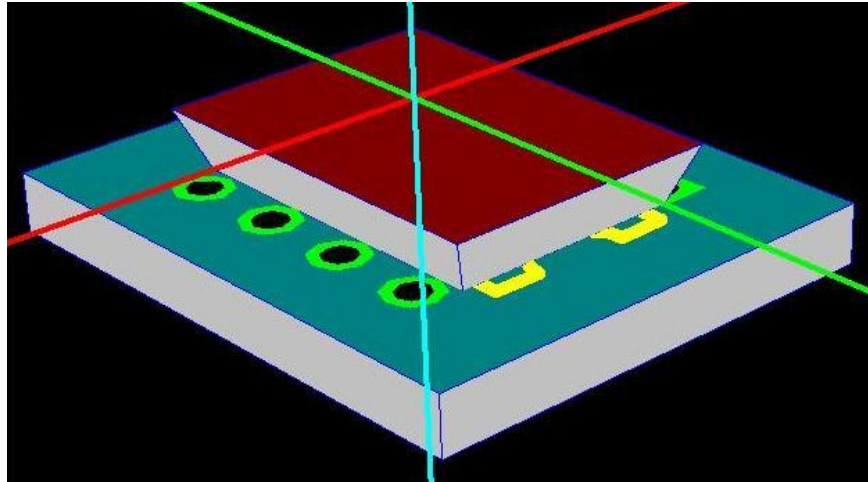
38. Repeat the same steps for the remaining edges to get the following shape.



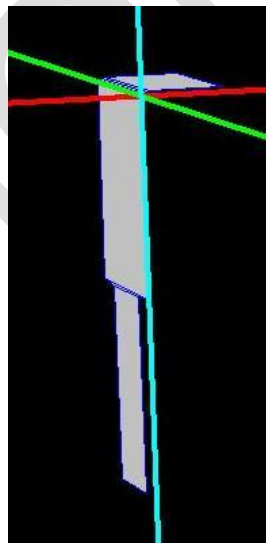
Top View

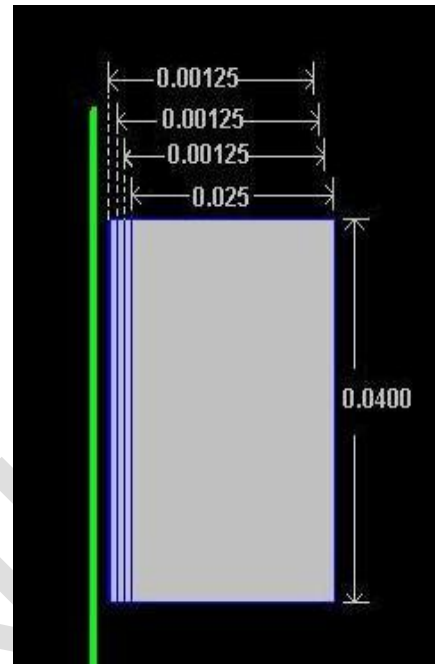
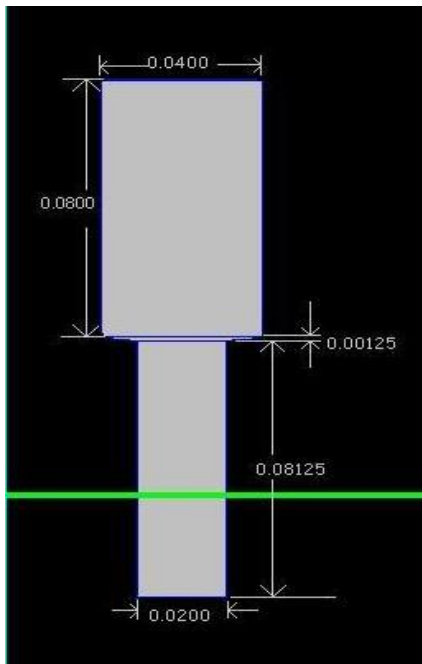
3D View

39. Uncheck Wire view only

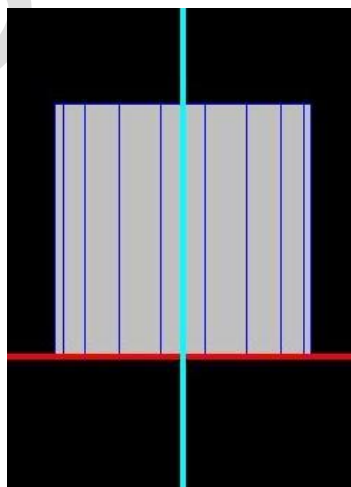


Creation of pin





1. Choose **Create 3Ditem** (function tools) → **Create semi-cylindrical strip** (option tools). A semicircular strip will be loaded on the workspace.
2. Click **Finish Relocation** from *Option Tools* Toolbar



3. Choose **Properties** (*function tools*), Click over the rectangular strip In the **Properties in** dialog,
Change the ITEM values

Properties in (Inch)	
ITEM	Semi-cylindrical Strip
X Pos	-0.3000"
Y Pos	0.5000"
Z Pos	0.0000"
Height	0.2000"
Z rotation	0.0°
X rotation	0.0°
Y rotation	0.0°
With side surface(s)	<input checked="" type="checkbox"/>
Base radius	0.1000"
Top radius	0.1000"
Dome shape	None
Dome shape fitting steps	7
No. of Vertex	10
Angle A	0.0°
Angle B	180.0°
Color	■ (Palette)
Color of wire lines	■ (Palette)

Height = .04

Z rotation = 90

X rotation = 90

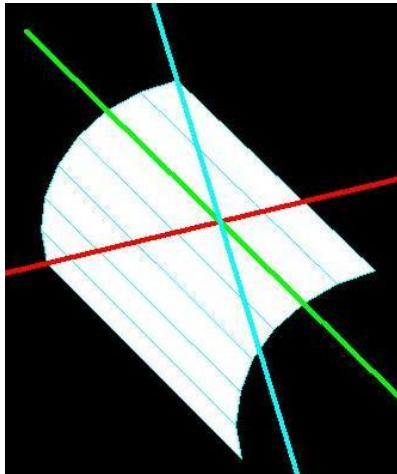
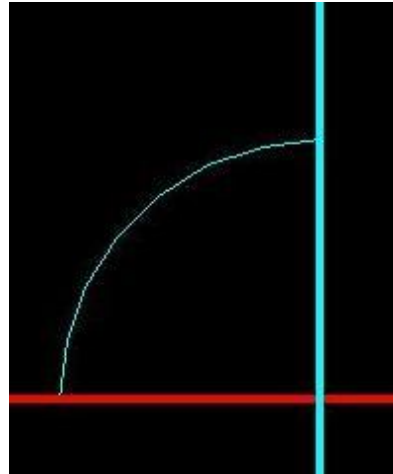
Base radius =
.00875

Top radius =
.00875

No. of vertex = 8

Angle B = 90

The semi-cylindrical strip changes to the following shape:

**3D View****2D View (From South)**

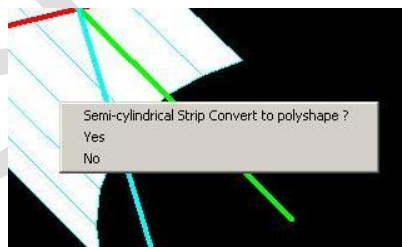
Note: Zoom Up using (+) for better view.

4. To stretch the strip to required shape the strip has to be converted to polyshape.

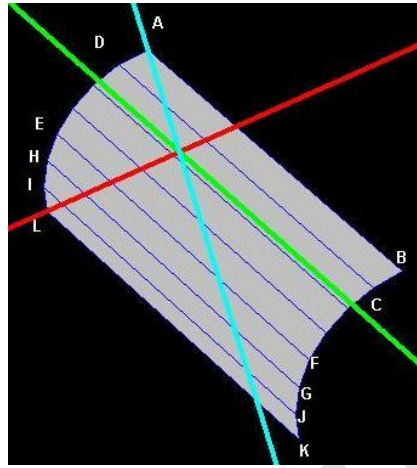
For this,

Select **Convert 3D item to polyshape** (function tools).

5. Click on the strip.



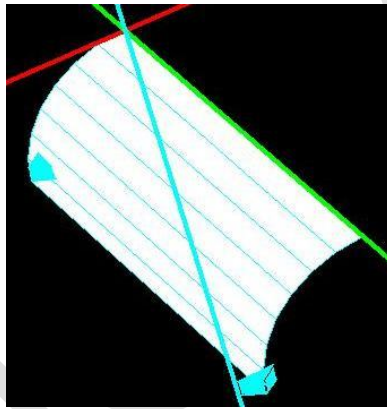
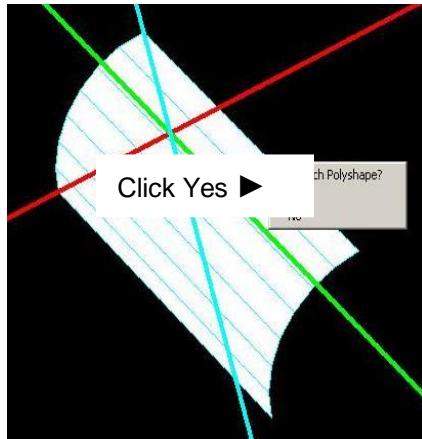
6. Click **Yes** for converting to Polyshape, The edges of the Polyshape to be stretched are denoted using alphabets as shown.



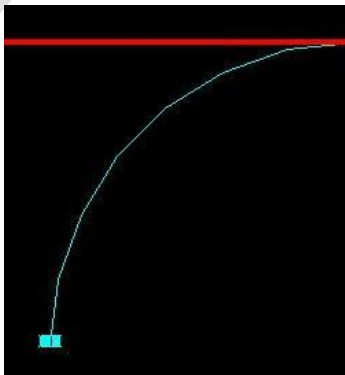
Creation of face "ABCD".

Note: Selection of edges is easier in Perspective View and setting dimensions in 2D views, like From South.

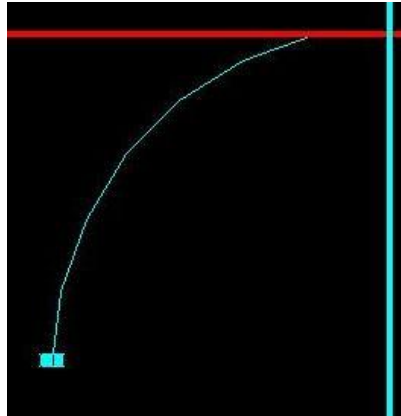
1. Select Stretch (*Function Tool*).
2. Click on the edge AB.



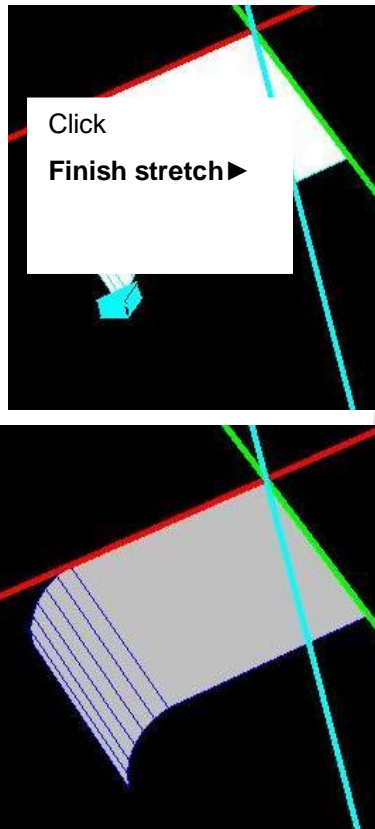
3. Go to 3D View Control, select Edit Views → From South.



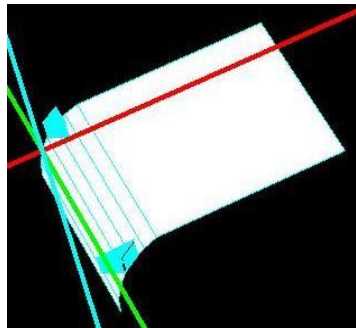
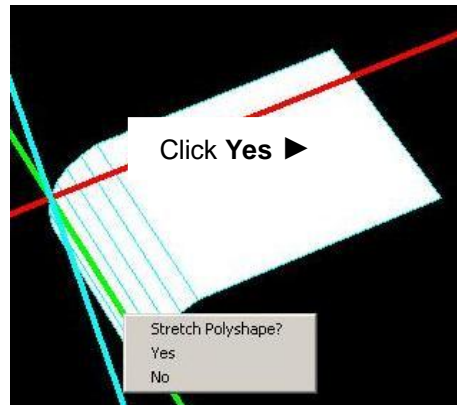
4. Switch off **Snap** and click in the -ve z-direction till face ABCD is parallel to x-axis.



5. Go to 3D View Control, select Perspective and click Default.
6. Switch on Snap and set the value as .02375(as the face is already .00125" long and the required length is .025").
7. With Shift key pressed click once on the x-axis.



8. To create the trunk of the pin, the faces EFGH, GHIJ, IJKL are made parallel to the y-axis before stretching.



9. Switch off **Snap**. Click on the edge GH.

10. Go to **3D View Control**, select **Edit Views** and choose **From South**.



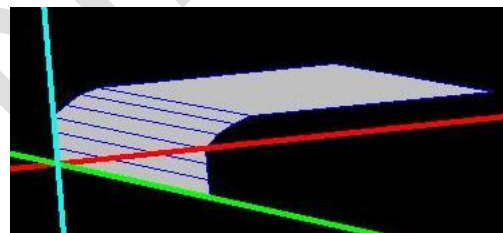
11. Switch off **Snap** and click on the +ve x-axis till the face is parallel to z-axis.



12. Click **Finish stretch**, Repeat the same procedure with edges IJ and KL, u will get the following figure.



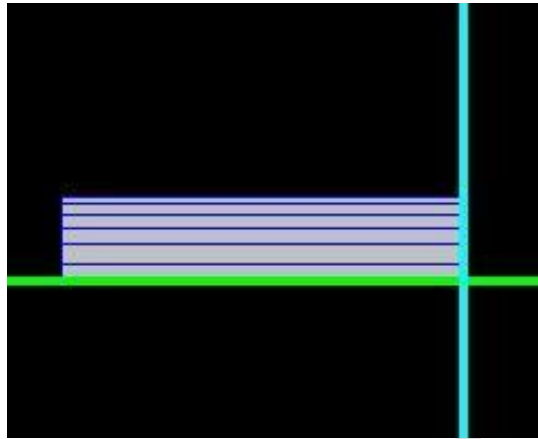
2D View



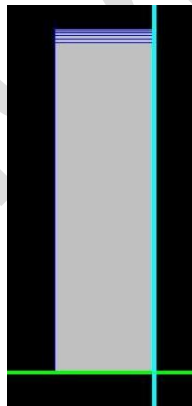
3D View

Creation of face IJKL

1. Go to 3D View Control, select Edit Views and choose From East.



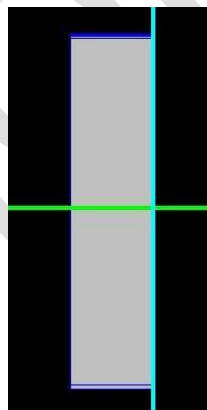
2. Switch on **Snap** and set the value as .15875"
3. Click on edge KL.
4. Click **Yes** in **Stretch Polyshape?**
5. With Shift key pressed click once on the z-axis.



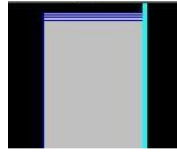
6. Click **Finish** stretch.
7. Repeat the same for IJ.



8. Change **Snap** value to .07875"
9. Click on edge GH.
10. Click **Yes** in **Stretch Polyshape?**
11. With Shift key pressed click once on the z-axis.

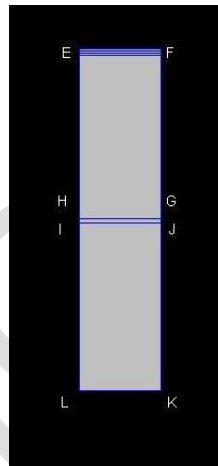
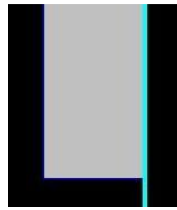


12. Click Finish stretch.
13. Change **Snap** value to .08
14. Click on edge GH.
15. Click **Yes** in **Stretch Polyshape?**
16. With Shift key pressed click once on the z-axis.

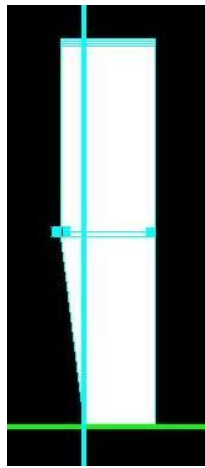


Click Finish stretch

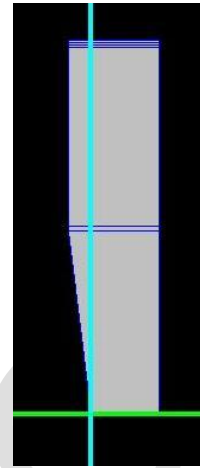
Relocate the axes to get a better view ►



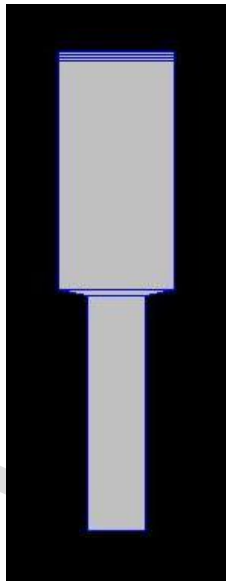
17. Faces EFGH and HGJI are completed.
18. Take face IJKL.
19. Change **Snap** value to .01".
20. Click on end point L.
21. Click **Yes** in **Stretch Polyshape?**
22. With Shift key pressed click once on the y-axis.



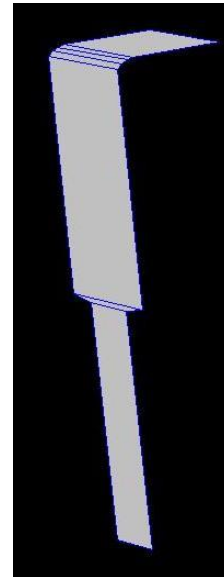
Click Finish stretch ►



23. Repeat the same steps at end points I,J,K to complete the face.
The appearance of the pin will be:

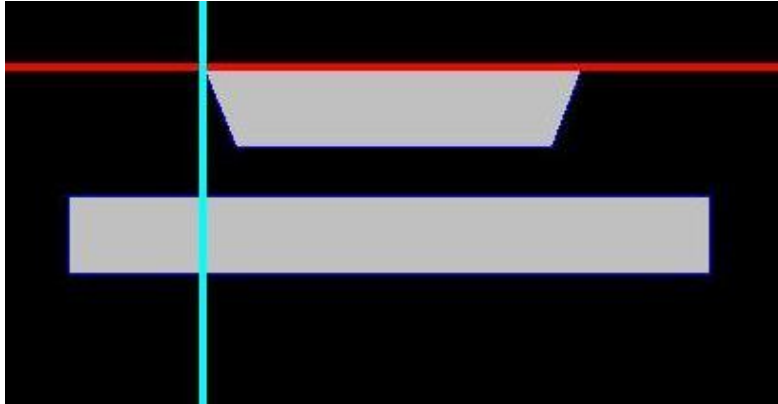


2D View

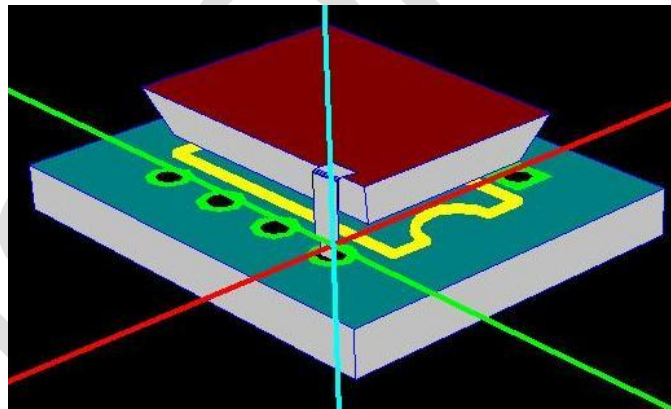


3D View

24. Elevate the body of the package by around (.0375") above the board using the relocate tool.



25. Using Relocate tool place the pin in the first hole as shown:

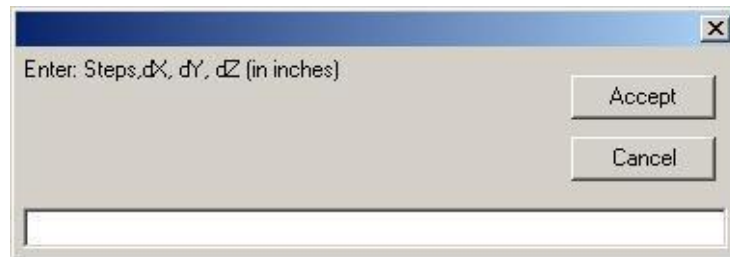


26. Select **Repeat 3D object** (function tools) → **Step repeat object** (option tools).

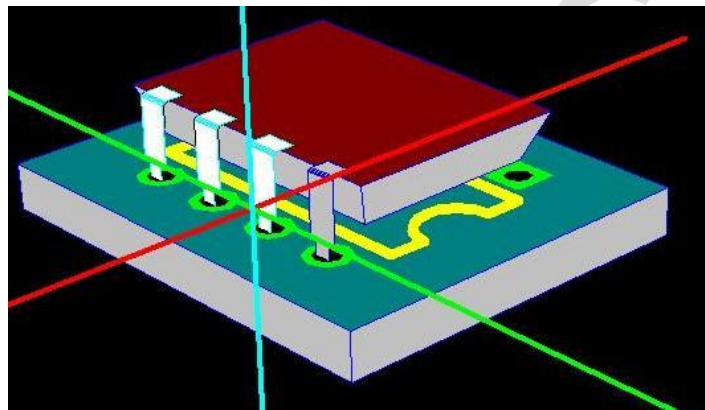
27. Click over the pin.

28. Click **Yes** in **Repeat Polyshape?**

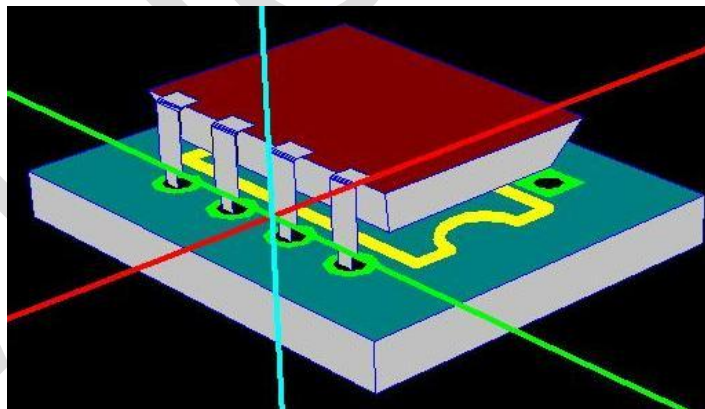
29. In the dialog Enter 3,0,0.1,0 and Click **Accept**.



The pin will be repeated thrice and placed in the adjacent three holes.



30. Click Finish relocation.

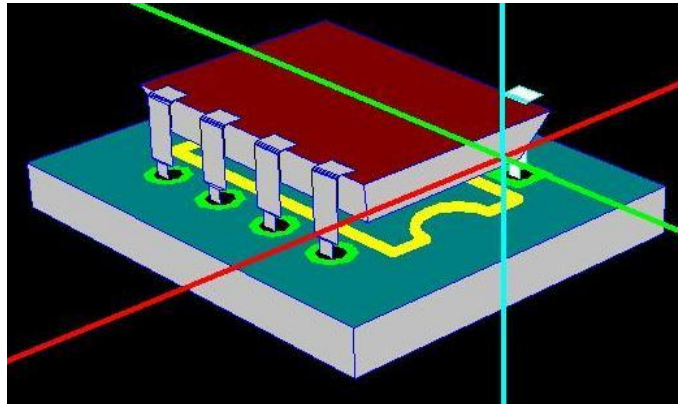


31. Select **Repeat 3D object** (Function Tools) → **Step repeat object** (Option Tool).

32. Click over the pin.

33. Click **Yes** in **Repeat Polyshape?** In the dialog enter 1,0.3,0,0.

34. Click **Accept**.

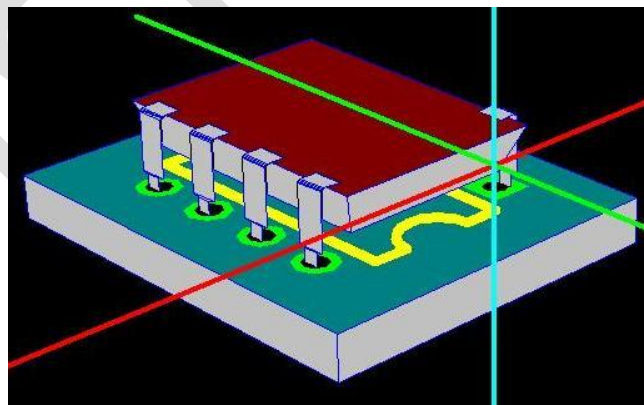


35. Select **Relocate** from *Function Tools* Toolbar.

36. Enable **Rotation around Z axis** from *Option Tools* Toolbar.

37. Rotate the by clicking **Rotate by 90 degree** in *Option Tools* Toolbar, then place in the first hole.

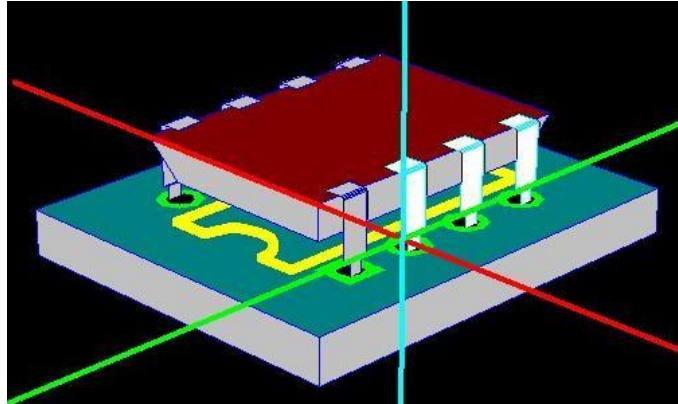
38. Click **Finish relocation**.



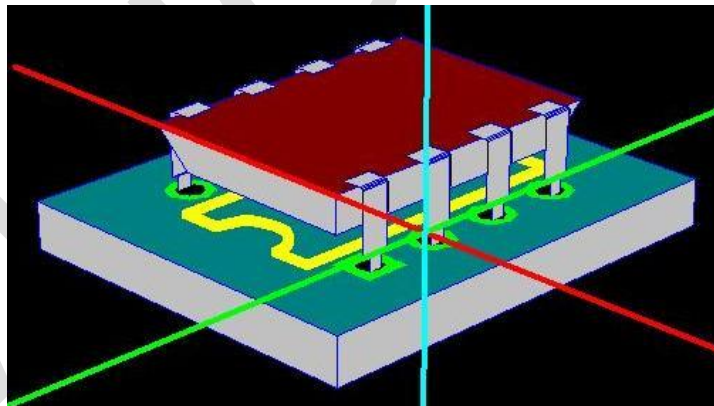
39. Select **Repeat 3D object** from *Function Tools* Toolbar.

40. Choose **Step repeat object** from *Option Tools* **Toolbar**, Click over the pin.

41. Click **Yes** in **Repeat Polyshape?** In the dialog enter 3,0,.1,0.
42. Click **Accept**.

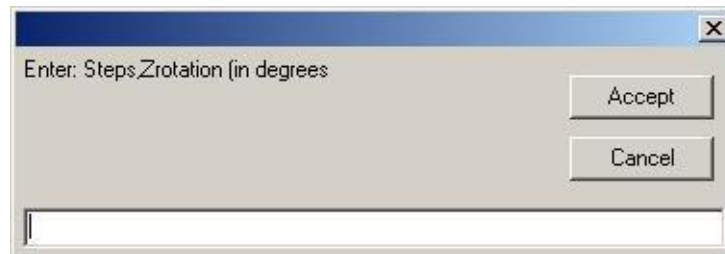


43. Click **Finish** relocation.



44. Select **Repeat 3D object** from *Function Tools* Toolbar.
45. Choose **Rotate and repeat** from *Option Tools* **Toolbar**.
46. Click over the rectangular bar.
47. Click **Yes** in **Repeat and rotate Polyshape?**

48. In the dialog Enter 1,180.



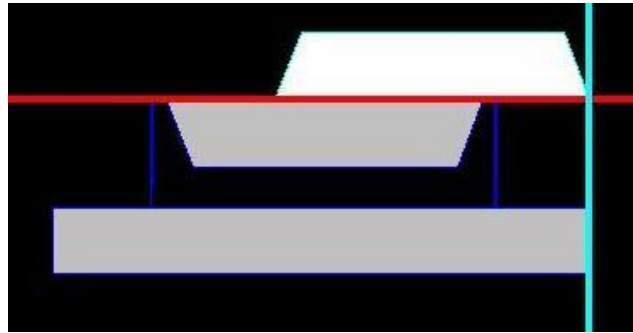
49. Click **Accept**.



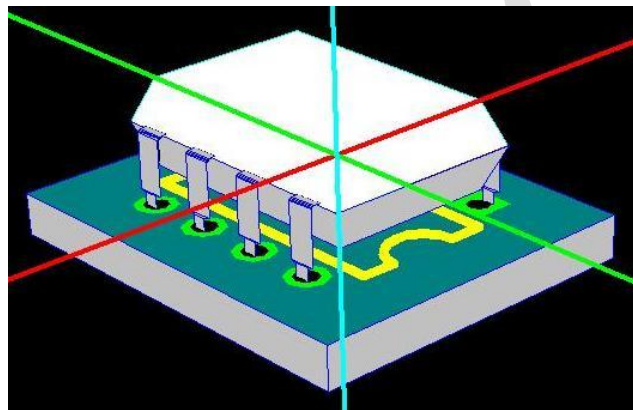
50. Select **Relocate** from *Function Tools* Toolbar.

51. Enable **Rotation around Y axis** from *Option Tools* Toolbar.

52. Rotate by clicking **Rotate by 90 degree** in *Option Tools* Toolbar.



53. Relocate and place the second bar over first as shown:



54. Click Finish relocation.

