

## FABRICATION GUIDELINES

### ANNULAR RING

|                      |   |
|----------------------|---|
| Minimum Pad Diameter | Finished Hole Diameter                                      |
| (Inner Layer)        | + .020" Fabrication Tolerance<br>+ Minimum Annular Ring x 2 |
| (Outer Layer)        | + .014" Fabrication Tolerance<br>+ Minimum Annular Ring x 2 |

### THREMAL PAD – VCC/GND PLANE

|                      |   |
|----------------------|---|
| Minimum Pad Diameter | Finished Hole Diameter<br>+ .020" Fabrication Tolerance |
|----------------------|---|

### CLEARANCE – VCC/GND PLANE

|   |   |
|---|---|
| Clearance Around Through Hole<br>Hole With No Pad | Finished Hole Diameter<br>+ .035" Fabrication Tolerance |
| Clearance Around Non-Plated<br>Through Hole       | Finished Hole Diameter<br>+ .015" Fabrication Tolerance |

### CLEARANCE – BETWEEN ANY NON-CONTACT LAND AREAS

Finish Sizes .005" Minimum

### CLEARANCE – SOLDERMASK TO PADS

|                     |   |
|---------------------|---|
| LPI Photoimagable   | Pad Diameter<br>+ .005" Fabrication Tolerance |
| Epoxy Mask Screened | Pad Diameter<br>+ .008" Fabrication Tolerance |

### TOLERANCES

|                              |               |
|------------------------------|---------------|
| Finished Line Width          | .004" Minimum |
| Hole Location Accuracy       | +/- .003"     |
| Feature To Edge Accuracy     | +/- .005"     |
| NPTH Hole Diameter Tolerance | +/- .002"     |
| PTH Hole Diameter Tolerance  | +/- .003"     |
| Finished Board Thickness     | +/- 10%       |

### COPPER AREA (Finished Sizes)

|  |  |
|--|--|
| ½ oz. copper = Artwork - .001" etch factor | 1 oz. copper = Artwork - .002" etch factor |
| 2 oz. copper = Artwork - .004" etch factor | 3 oz. copper = Artwork - .008" etch factor |
| 4 oz. copper = Artwork - .010" etch factor | 5 oz. copper = Artwork - .012" etch factor |