**PCB specifications for MiniScope v1.0 image sensor board**

**Layer order:**

1 - Top

Inner 2 - VDD3V3 Plane (POWER)

Inner 3 - DGND Plane (GROUND)

4 - Bottom

**Gerber files description:**

Board Outline: MINISCOPE - Board Outline.gbr

Bottom Solder Paste: MINISCOPE - Bottom Copper (Paste).gbr

Bottom Layer: MINISCOPE - Bottom Copper.gbr

Inner Layer 2: MINISCOPE - VDD\_3V3 Plane (Powerplane).gbr

Drills: MINISCOPE - Drill Data - [Through Hole].drl

Top Solder Paste: MINISCOPE - Top Copper (Paste).gbr

Top Layer: MINISCOPE - Top Copper.gbr

Top Silkscreen: MINISCOPE - Top Silkscreen.gbr

Bottom Silkscreen: MINISCOPE - Bottom Silkscreen.gbr

Inner Layer 3: MINISCOPE - DGND Plane (Powerplane).gbr

**PCB specifications:**

Layers: 4

PCB Fabrication Spec (IPC Spec): IPC-600G Class 2

Material: Nan Ya NP-175

Finished Thickness: 0.031 inches

Thickness Tolerance: Plus or Minus 10%

Surface Finish: ENIG/HASL

Surface Finish 2: None

Gold Fingers: No

Outer Layer Finish Copper: 1 Oz

Inner Copper: 1 Oz Inners

Flex Board: No

ITAR: No

Board Dimensions: 0.4405 in x 0.4115 in

Route and Retain: No

Scoring : No

ROHS compliant: No

Edge Plating: No

Minimum Hole Size: 19.7 Mils

Minimum Annular Ring Width (Component Holes): 8 mil or more

Internal Slots: None

Internal Cutouts: None

Counter Sink: No

Counter Bore: No

Edge Plated Holes: No

Min Trace (Outer layer): 6 mils

Min Space (Outer layer): 5 mils

Min Trace (Inner layer): 6 mils

Min Space (Inner layer): 5 mils

Solder Mask Sides: Top and Bottom

Solder Mask Via Opens: Covered on both sides

Silk Screen Sides: Both

Thru-Hole Via in Pad: Yes

Thru-Hole Filled Via: Non-Conductive

SM Plugged Vias: No

Minimum Drill to Copper distance: 0.0081 inches

Blind vias: No

Buried vias: No

Controlled depth drilling: No