



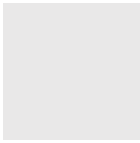
U.S. CIRCUIT, INC.

MANUFACTURER OF PRINTED CIRCUIT BOARDS >>

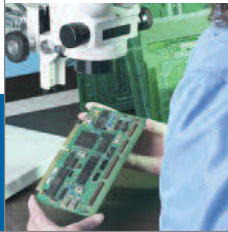
COMMERCIAL
MILITARY
MEDICAL
BAREBOARD



U.S. CIRCUIT



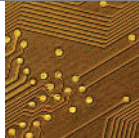
MISSION



U.S. Circuit, Inc. will continually strive to be a leader in the printed circuit board manufacturing industry by providing the highest quality products and the best customer service possible. We will succeed by establishing long-term partnerships with our customers, vendors, and employees.

VISION

To be recognized as an industry leader delivering quality products on time, U.S. Circuit, Inc. will steadily grow and prosper.



U.S. Circuit's customer service department is committed to providing customers with accurate and timely communication in a pleasant and professional manner.

CUSTOMER SERVICE



SALES AND ENGINEERING DEPARTMENT

Barcode Interface
Computerized Production Planning System
Computerized Sales Management System
Si 6000b Controlled Impedance Design System

CAM DEPARTMENT

3 Orbotech Genesis 2000 Cam Stations and 3 CAM350 Stations
EIE RP362-DL Auto Loader Raster Photoplotter
Glunz & Jensen 28" Film Processor

PROGRAMMING, DRILLING & FABRICATION DEPTS.

Ceco Hole Checker 8 Auto Optical Inspection
Multiline XRT System 7000 X-Ray Post Lamination
Tooling and Inspection
1 Lenz-DRB 610 1+1 AL Driller & Router with built-in camera
1 Excellon Concept 129 with built-in x-ray camera (180k RPM)
1 Excellon Concept 689 (180k RPM)
2 Excellon Mark VII Driller
Excellon Mark VI Driller/Router
Excellon Ex 200 Driller/Router
2 Excellon Mark V Driller/Router
Laser Micrometer
Accuscore Scoring Machine
Automatic Stacking Machine
2 Glenn Brook Real Time X-Ray
DNC File Server
Bevelers, Edgemate, Shear Machine
Plasma Etchback (March Plasma Systems)

DRY FILM AND PHOTO DEPARTMENTS

2 Maskless Lithography Direct Digital Imaging System
Multiline Semi-Automatic Artwork Punch
Multiline Automatic Post-Etch Punching Of Inner Layers
2 ORC Exposure Unit 5kw
2 Hakuto Mach 610i Auto Cut-Sheet Laminators
3 Western Magnum Substrate Cleaner Line
Chemcut 547 Semi-Automatic Developer

MULTI-LAYER LAMINATION DEPARTMENT

2 Fully Automated TMP Four Opening Vacuum Lamination Presses
2 TMP Cold Presses
Complete Multiline Registration System
Multiline De-Pinner
Ceco Overarm Digital Micrometer

PLATING DEPARTMENT

Semi-Automatic ENEPIG / ENIG Line
Semi-Automatic Immersion Silver Line
Potassium Permanganate De-Smear Line
2 1500 Gallon Direct Impingement Copper Plating Line
1 1500 Gallon Direct Impingement Tin Plating Line
Semi-Automatic Electroless Copper Line
Chemcut Semi-Automatic Conveyorized:
· DES Line (develop/cupric chloride etc & strip)
· Oxide Replacement Line
· Inner Layer Clean Line
· Film Stripping Line
· Ammonia Etching Machines
· Tin Stripper
· Conveyorized Direct Metallization
Double-Sided Scrubber/Deburrer Dryer Units
Chemcut Pre-Clean and Flux Coater
Quick Silver SM Hot Air Solder Coater Machine
Marseco Semi-Automatic Post Cleaner System
Kinetic Ionic Exchange Fully Automated Computerized Wastewater Treatment System
Pola e Massa PLZ650 Conveyorized Planarizer

**U.S. CIRCUIT**

SOLDERMASK/SILKSCREEN DEPARTMENTS

DP-1500-2x Dual Sided LPI Soldermask Coater
Orbotech Inkjet Legend Printer
TC-150 Conveyorized Oven
Two Tc-120 Conveyorized Ovens
Olec Ap30-8000 Super Eight Exposing Unit
NuArc Flip Top 4k
Grieve Sc-350 82" X 64" X 32" Oven
Proheatco 82"X 64"X 42" Oven
Chemcut 547 Semi-Automatic Developer
3 24"X 30" Screen Tables
24" I.S. Pumice Scrubber Dryer
Western Magnum Substrate Clean Line
Complete Load and Unload System
Circuit Automation DP-VDM Vacuum System

QUALITY CONTROL DEPARTMENT

Polar Inst. CITS 500s Controlled Impedance
(TDR) Test System
3 atg A5 Flying Probe Test Systems (Netlist Test)
3 Camtek Orion 804 WR (AOI)
Camtek Orion 868 (AOI)
Buehler Cross-Section Laboratory
Microscope with Digital Capture
Accu-scope Microscope
CMI PTX Series for Measuring Copper Thickness
CMI 900 XRF for Coating Thickness Measurement
YSC Digital Video Microscope
Nikon Sm2-10 Zoom Microscope
MicroDerm 500 for Measuring Gold/Nickel Thickness
Complete Chemical Analysis Laboratory
CVS Unit Including Automatic Chemical Analysis
Buck Scientific AA (Atomic Absorption) Spectrophotometer
Thermo Spectronic 20d+ Spectrometer
Keaco Omega Meter 600R Iconograph



U.S. CIRCUIT

GENERAL INFORMATION

Founded In 1985

Product: Commercial & Military Printed Circuit Boards

40,000 (Custom built 2005)

37,500 Sq. Ft. Manufacturing Area & Quality Control

2,500 Sq. Ft. Administration Area

20 Miles North of San Diego

BOARD CRITERIA

Panel Size: 18" x 24" Max.

Overall Thickness: .005-.250" Max.

No. Of Layers: 24 Max.

Line Width/Spacing: .003" Min. (Inner Layer)

.003" Min. (Outer Layer)

Drilled Hole Size: .006" Min.

Inner Layer Core Thickness: .003" Min.

Copper Weight: .25-8 Oz. Max.

LEAD TIMES

Standard Delivery 3-4 Weeks

"Quick Turn" Upon Request

MATERIALS

FR-4 Laminate (RoHS Compliant)

High Temp FR4

Getek Laminate

Rogers Type 4003, 4350

Nelco N4000-13

Polyimide

Halogen Free

PROCESS CAPABILITIES

Maskless Lithography Direct Digital Imaging System

Artwork Generated via Gerber with EIE RP362-DL

Multiline Semi-Automatic Film Punch

Dryfilm Imaging

Post-Etch Punching Of Cad Generated Artwork And Layers

Automatic Optical Inspection (AOI) On Four Camtek Orion 804

Vacuum Assisted Lamination with Two Hot And Two Cold Presses

Drilling With Complete Electronic Programming Functions

Conveyorized AOI Inspection

Plasma Etch

Potassium Permanganate desmear System

Electroless cuposit Line

Direct Impingement Copper Plating Line

Tin Lead Hot-Air-Leveling (Hot-Air Solder Leveling—HASL) And Lead-Free HASL

Electroless Gold, Immersion Gold, Hard and Soft Gold (Full Body),

ENEPIG Plating (Electroless Nickel, Electroless Palladium,

Immersion Gold)

Immersion Silver, Immersion Tin, OSP and Carbon Paste

Liquid Photoimageable Soldermask (LPI Mask)

QUALITY CONTROL

ITAR Registered since 2009

MIL-PRF-55110 G with Etchback Approved for both GFN & GIN materials

ISO 9001:2008 Registered

IPC-A-600 Quality and Manufacturing Standard

UL Approval Rating 94v-0

Polar Instruments TDR for Impedance Control

3 atg A5 Flying Probe Test System (Netlist Test)

TrueChem Wet-Process Statistical Process Control (SPC)

Mil-C-45662 Equipment Calibration System

Microsection Preparation and Evaluation (Full Group 'A' Testing)



U.S. CIRCUIT

CERTIFICATION

UNDERWRITERS LABORATORIES, INC.

Certificate of ISO 9001 Registration

DEFENSE LOGISTICS AGENCY

MIL-PRF-31032, GI Polyimide Material

Certificate of Qualification

DEFENSE LOGISTICS AGENCY

MIL-PRF-31032, GFN FR-4 Material

Certificate Of Qualification

ITAR REGISTERED

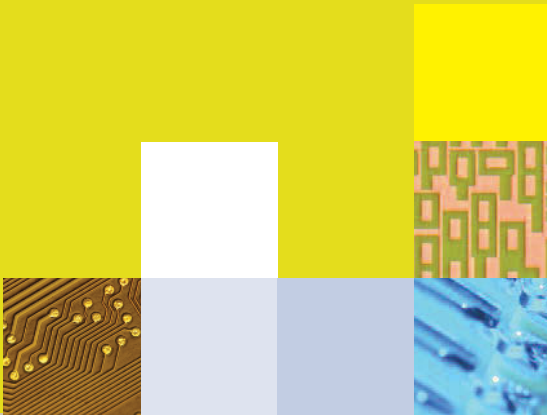
Certificate of Registration

Please visit our website to view & download the most current certifications.

DEFENSE LOGISTICS AGENCY LAND AND MARITIME POST OFFICE BOX 3990 COLUMBUS, OH 43218-3990		
April 4, 2019		
Mr. John McIntosh U.S. Circuits, Inc. 2071 Wineridge Place Escondido, CA 92029		
RE: Notification of Qualification; MIL-PRF-31032/1, /2; FSC 5998; CAGE Code 66483; VQ(VQE-19-033743); CN 066976		
Dear Mr. McIntosh:		
Qualification of your products is granted under the current issue of the specification as a result of successful qualification testing to Military Performance Specification MIL-PRF-31032, Printed Circuit Board Printed Wiring Board, and associated specification MIL-PRF-31032/1 and /2. The capabilities qualified for the base material and slash sheet indicated below shall be listed on Qualified Manufacturers List (QML-31032) and Qualified Product List (QPL-55110). The effective date of these qualifications is April 4, 2019.		
MANUFACTURER U.S. Circuits, Inc. 2071 Wineridge Place Escondido, CA 92029	PLANT LOCATIONS Same Address as Manufacturer	CAGE CODE: 66483 PHONE #: (760) 489-1413 EMAIL: uscircuits@uscircuits.com
Specification: MIL-PRF-31032/1, MIL-PRF-31032/2 Qualification Letters: VQ(VQE-19-033743) Composition: H- Homogeneous thermoplastic base material printed boards Rigid Base Material: GF- Woven E-Glass, Epoxy Resin, Flame Resistant Max. Panel Size: 18" x 24" Max. Number of Layers: 10 Max. Board Thickness: .110" Min. Hole Size: .012" Drilled Plated-Through Hole Before Plating Aspect Ratio: 9:1 Through-Hole Min. Conductor Width/Space: .004"/.004" Hole Preparation: Plasma Etchback Hole Wall Conductive Coating: Graphite Based Direct Metallization Copper Plating: Reverse Pulse Plate Solder Resist: Liquid Photoimageable Finish System: HASL		

DEFENSE LOGISTICS AGENCY LAND AND MARITIME POST OFFICE BOX 3990 COLUMBUS, OH 43218-3990		
April 4, 2019		
Mr. John McIntosh U.S. Circuits, Inc. 2071 Wineridge Place Escondido, CA 92029		
RE: Notification of Qualification; MIL-PRF-31032/1, /2; FSC 5998; CAGE Code 66483; VQ(VQE-19-033743); CN 066977		
Dear Mr. McIntosh:		
Qualification of your products is granted under the current issue of the specification as a result of successful qualification testing to Military Performance Specification MIL-PRF-31032, Printed Circuit Board Printed Wiring Board, and associated specification MIL-PRF-31032/1 and /2. The capabilities qualified for the base material and slash sheet indicated below shall be listed on Qualified Manufacturers List (QML-31032) and Qualified Product List (QPL-55110). The effective date of these qualifications is April 4, 2019.		
MANUFACTURER U.S. Circuits, Inc. 2071 Wineridge Place Escondido, CA 92029	PLANT LOCATIONS Same Address as Manufacturer	CAGE CODE: 66483 PHONE #: (760) 489-1413 EMAIL: uscircuits@uscircuits.com
Specification: MIL-PRF-31032/1, MIL-PRF-31032/2 Qualification Letters: VQ(VQE-19-033743) Composition: H- Homogeneous thermoplastic base material printed boards Rigid Base Material: GI- Glass Base, Woven, Polyimide Resin, Heat Resistant Max. Panel Size: 18" x 24" Max. Number of Layers: 10 Max. Board Thickness: .110" Min. Hole Size: .012" Drilled Plated-Through Hole Before Plating Aspect Ratio: 9:1 Through-Hole Min. Conductor Width/Space: .004"/.004" Hole Preparation: Plasma Etchback Hole Wall Conductive Coating: Graphite Based Direct Metallization		

DEFENSE LOGISTICS AGENCY LAND AND MARITIME POST OFFICE BOX 3990 COLUMBUS, OH 43218-3990	
April 4, 2019	
Mr. John McIntosh U.S. Circuits, Inc. 2071 Wineridge Place Escondido, CA 92029	
RE: Notification of Qualification; MIL-PRF-31032/1, /2; FSC 5998; CAGE Code 66483; VQ(VQE-19-033743); CN 066977	
Dear Mr. McIntosh:	
Qualification of your products is granted under the current issue of the specification as a result of successful qualification testing to Military Performance Specification MIL-PRF-31032, Printed Circuit Board Printed Wiring Board, and associated specification MIL-PRF-31032/1 and /2. The capabilities qualified for the base material and slash sheet indicated below shall be listed on Qualified Manufacturers List (QML-31032) and Qualified Product List (QPL-55110). The effective date of these qualifications is April 4, 2019.	
MANUFACTURER U.S. Circuits, Inc. 2071 Wineridge Place Escondido, CA 92029	PLANT LOCATIONS Same Address as Manufacturer
CAGE CODE: 66483 PHONE #: (760) 489-1413 EMAIL: uscircuits@uscircuits.com	
Specification: MIL-PRF-31032/1, MIL-PRF-31032/2 Qualification Letters: VQ(VQE-19-033743) Composition: H- Homogeneous thermoplastic base material printed boards Rigid Base Material: GI- Glass Base, Woven, Polyimide Resin, Heat Resistant Max. Panel Size: 18" x 24" Max. Number of Layers: 10 Max. Board Thickness: .110" Min. Hole Size: .012" Drilled Plated-Through Hole Before Plating Aspect Ratio: 9:1 Through-Hole Min. Conductor Width/Space: .004"/.004" Hole Preparation: Plasma Etchback Hole Wall Conductive Coating: Graphite Based Direct Metallization	



FOUNDED IN 1985, U.S. Circuit, Inc.
is dedicated to the delivery of consistently superior product. From our spacious, state-of-the-art facilities, we are dedicated to excellence through innovation, technology and most importantly, service.





U.S. CIRCUIT, INC.
2071 WINERIDGE PLACE
ESCONDIDO, CALIFORNIA
92029 USA

760 489 1413 TEL
760 489 2965 FAX

WWW.USCIRCUIT.COM