



SATURN
PCB DESIGN, INC
Turnkey Electronic Engineering Solutions

Our experienced PCB designers and engineers can make your ideas happen!

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PCB Design service and turnkey
electronic engineering solutions.

www.saturnpcb.com

407-340-2666

sales@saturnpcb.com

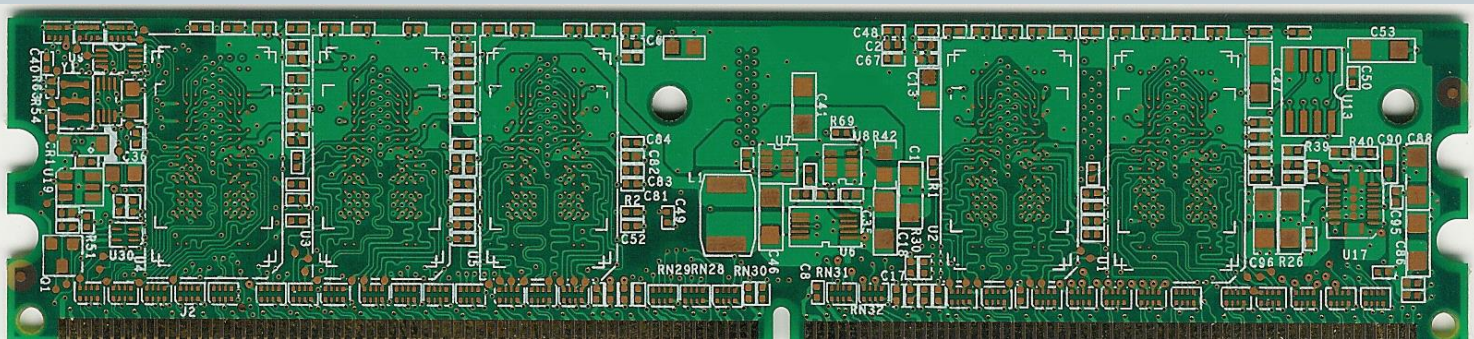
Designed In America



Introduction

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Saturn PCB Design, Inc. is an industry leader in high quality PCB design and turnkey electronic engineering offering the very best service at competitive prices. With our resources, we have what it takes to meet your project needs from concept to production. With over sixty years of experience, our team can be your complete electronic engineering partner no matter how large or small your project is.





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Turnkey Electronic Engineering Solutions

Mission Statement

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To provide the best quality PCB design and electronic engineering services available.



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Turnkey Electronic Engineering Solutions

Saturn PCB Design Company Attributes

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Here are just some of our many company attributes:

- Full turnkey electronic engineering solutions that cover your project from concept to production
- Military, aerospace, medical, automotive and commercial design experience
- Highly knowledgeable team of electronic engineers and PCB designers
- Experts in RF PCB design, high speed digital design and microwave electronic design
- Member of IPC designer's council with PCB design certification
- Solid PCB manufacturing and assembly knowledge for superior design performance
- Great communication with customers and comprehensive online design reviews
- Exceptional turn time on projects to help meet customer deadlines
- Competitive prices on all of our services
- Complete confidentiality of your projects and IP
- Customers worldwide!



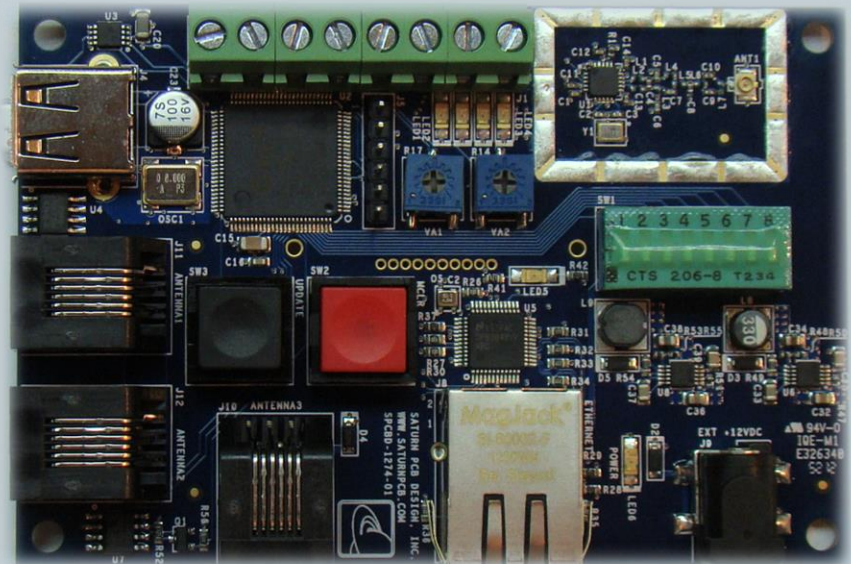


Saturn PCB Design Services Overview

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Saturn PCB Design offers a wide array of services to meet your project needs.

- Printed Circuit Board Design Services
- Electronic Engineering Design Services
- RF Engineering & PCB Design Services
- PCB Manufacturing Services
- PCB Assembly Services
- DFM / DFT / DFX Consulting Services
- RF & HSD Simulation Services

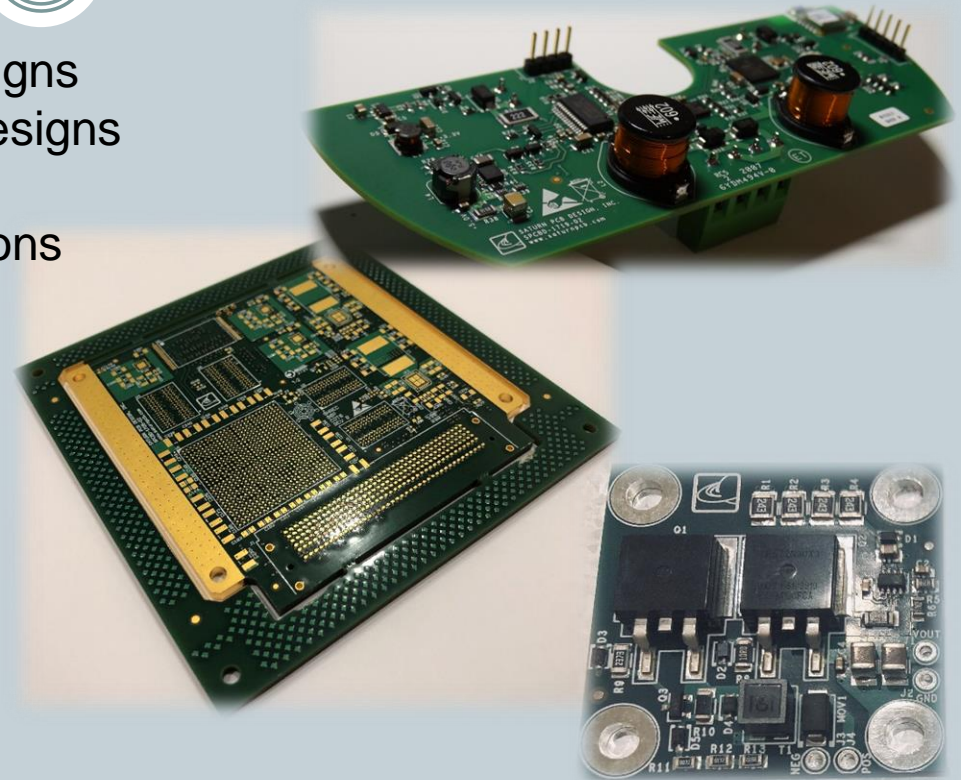




Saturn PCB Design Services Printed circuit board design

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- High speed, multi layer digital PCB designs
- High frequency RF / Microwave PCB designs
- Low level analog PCB designs
- Ultra low EMI designs for MRI applications
- DDR2, DDR3, DDR4 memory designs
- Printed antenna designs
- Complete assembly drawings
- In-Circuit Test data generation
- Pick and place data generation
- Drill, panel and cutout drawings
- Professional fabrication documents
- Autorouting for dense PCB designs

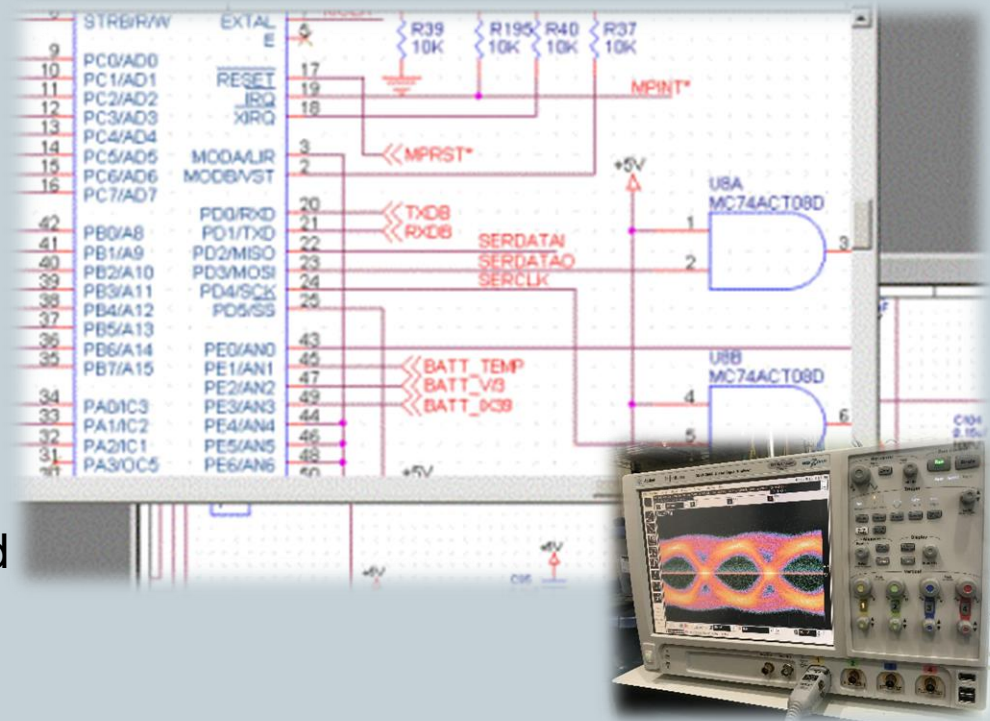




Saturn PCB Design Services Turnkey Electronic Engineering

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- Full turnkey project engineering
- RF circuit design
- Analog circuit design
- Digital circuit design
- DSP design
- FPGA design
- A/D simulation / RF Simulation
- Schematic capture and netlisting
- Software development - PC
- Firmware development – Embedded



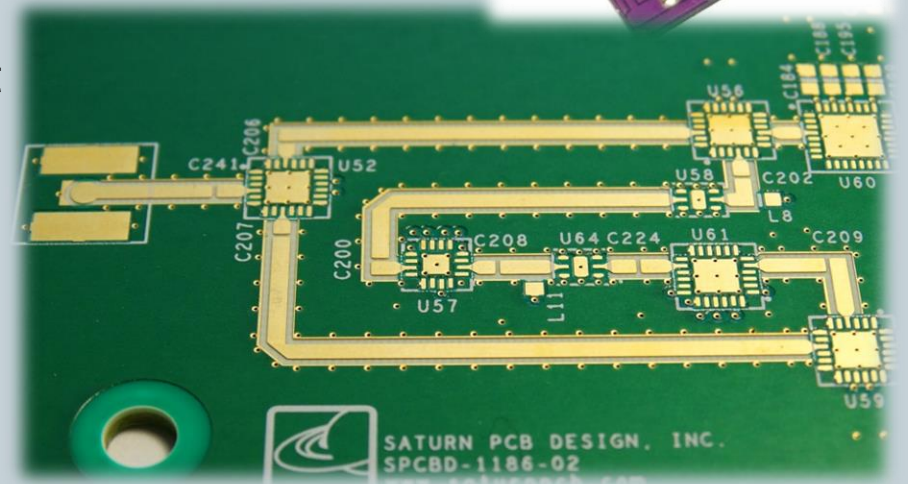
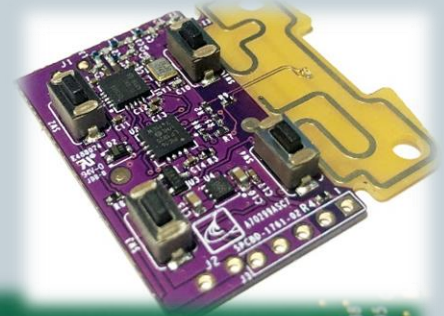
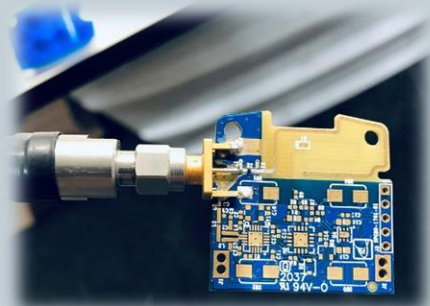


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Saturn PCB Design Services RF Engineering & PCB Design

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- Packet radio transmitters & receivers
- PCB Antenna design. PIFA, Monopole...
- Antenna tuning and impedance matching
- Prototype building
- Bench testing and debug
- Full turnkey production of finished product

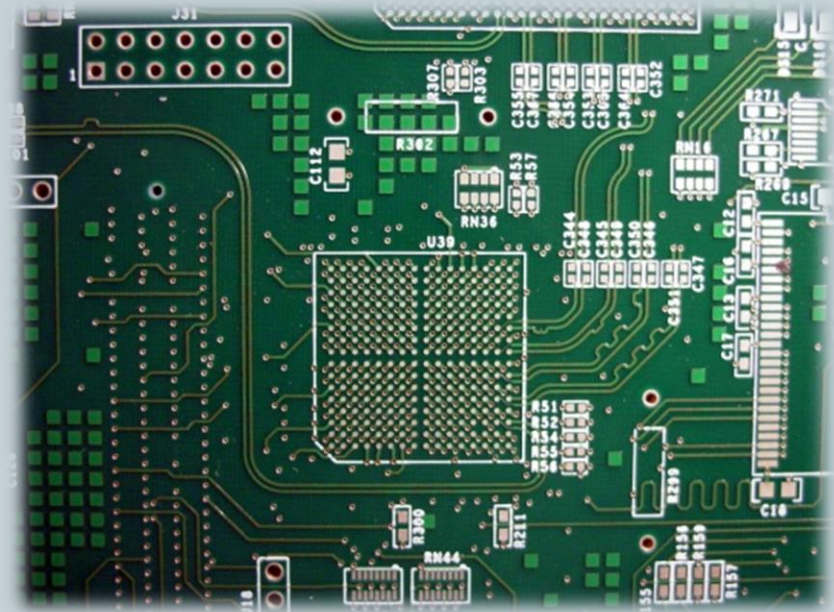




Saturn PCB Design Services PCB manufacturing

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- High quality PCB manufacturing
- Military, aerospace and commercial applications
- Wide array of substrates
- Small prototype runs
- Large scale production runs
- ENIG, Immersion Silver, Lead Free HASL
- Edge plating, plated slots
- Blind / Buried microvias
- Class 3 Manufacturing
- Fast turn times
- Affordable prices!



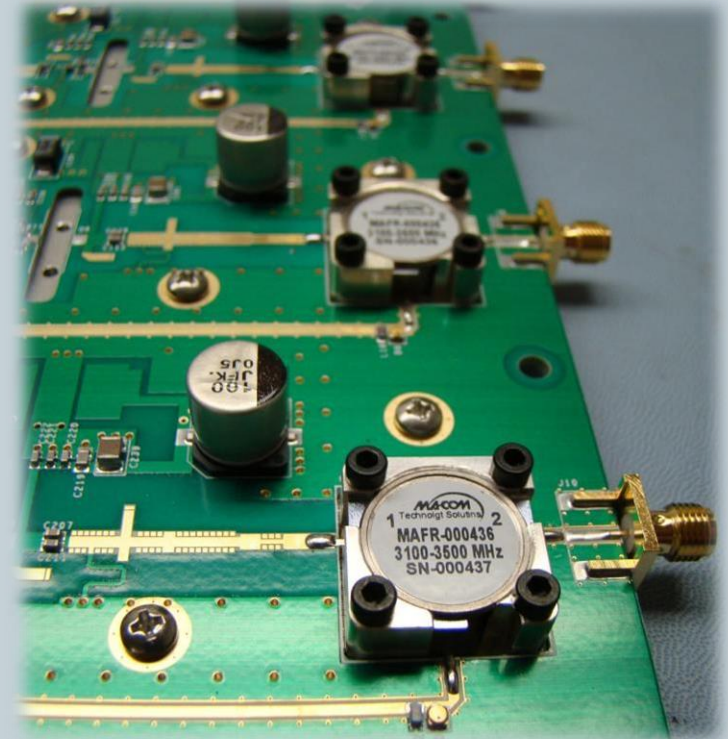


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Saturn PCB Design Services PCB assembly

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- Full turnkey assembly
- Parts procurement and purchasing
- Fast prototype quantities
- Large production quantities
- Lead free PCB assembly
- Automated optical and X-ray inspection
- Full inspection and testing
- Class 3 Assembly

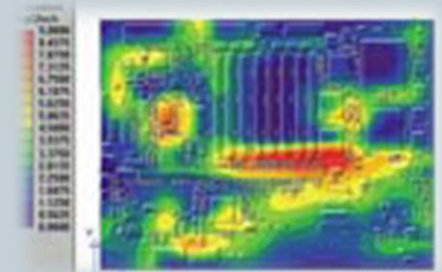
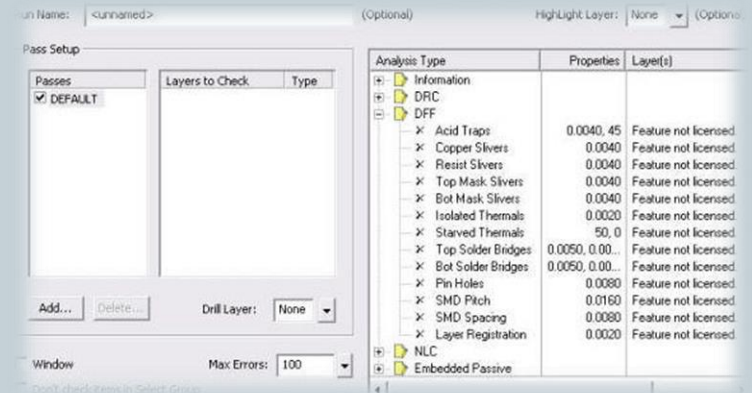




Saturn PCB Design Services DFM / DFT / DFX Consulting

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- PCB DFM review for manufacturing
- PCB DFT review for testing
- Gerber review for manufacturing
- Thermal imaging and simulation

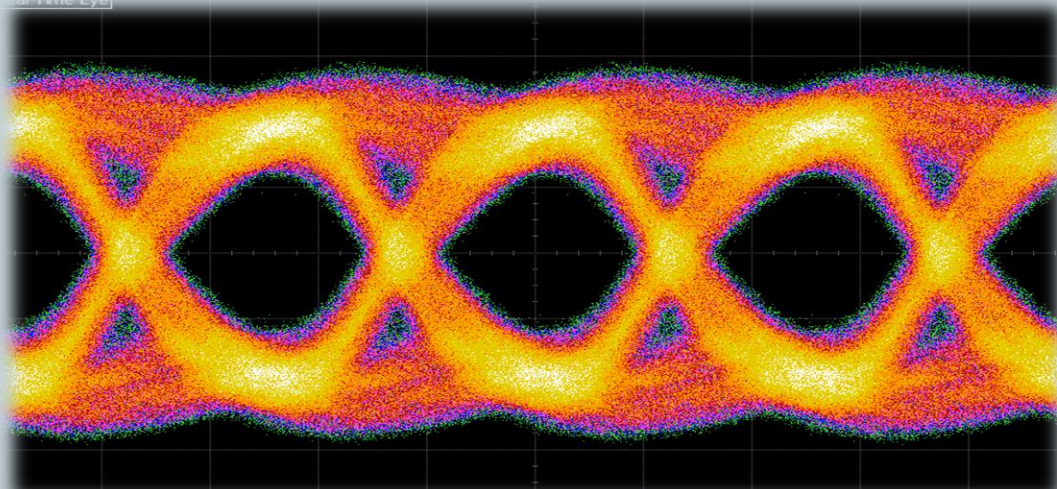
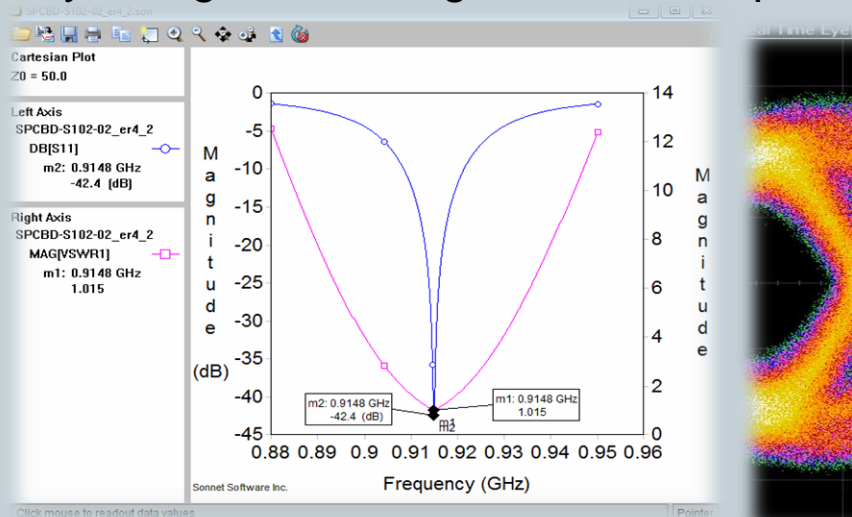




Saturn PCB Design Services RF / HSD Simulation

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- RF Simulation and testing
- HSD Simulation using Hyperlynx
- Return loss, port Zo & VSWR results
- Eye diagram and signal oscilloscope view





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Why choose Saturn PCB Design?

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With over sixty years experience, our team can be your complete design outsourcing partner and meet all of your project needs.

We are considered one of Florida's top PCB design and turnkey electronic engineering service companies. Our specialties include PCB design, RF circuit design, digital circuit design including DSP and FPGA and low level analog circuit design. We offer competitive rates, quick turnaround times and a personal commitment to meet your design needs.

Though located in Florida, customers worldwide trust us with their projects due to our well documented work flow structure and high level of communication. Please feel free to contact us at any time to discuss how we can help you.



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Communication is key to success!

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Saturn PCB Design prides itself of its high level of design communication via various channels.

Phone: Our main phone number is 407-340-2668, please feel free to call at any time during normal business hours to discuss your project.

E-mail: Please email us as often as you wish with questions and / or comments regarding your project. Email us at sales@saturnpcb.com

On-Line Meeting:

www.gotomeeting.com – When needed, Saturn PCB Design, Inc. will set up an online meeting resource for real-time design review.

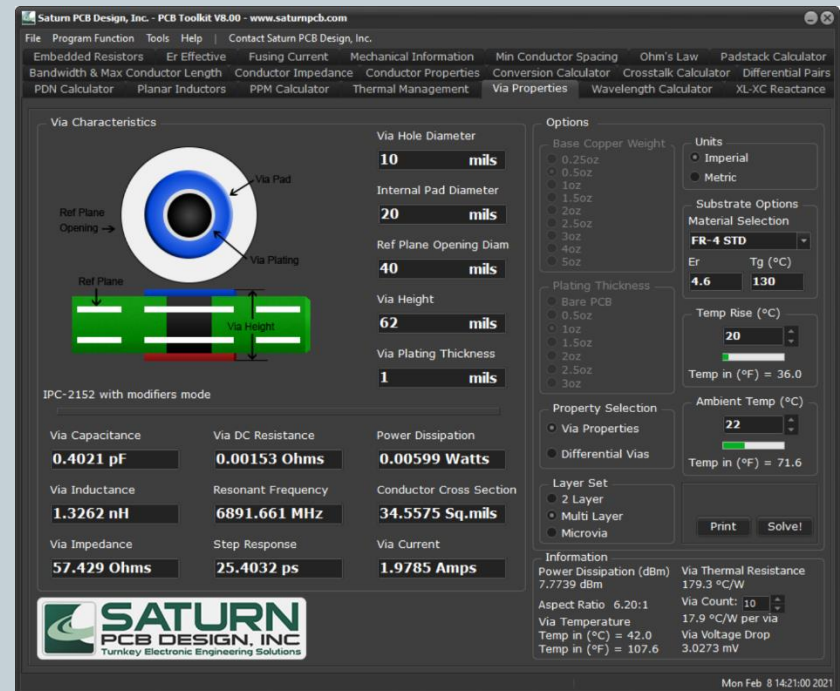
Saturn PCB Design, Inc. Custom Software

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The Saturn PCB Toolkit is a free tool to help designers and engineers determine and meet PCB characteristics such as impedances and maximum currents for vias and conductors.

Please feel free to download our software at:

www.saturnpcb.com



The screenshot displays the Saturn PCB Design, Inc. PCB Toolkit V8.00 software interface. The main window is titled "Via Properties" and shows various parameters for a via. The "Via Characteristics" section includes a diagram of a via with labels for "Via Pad", "Via Plating", "Ref Plane Opening", "Ref Plane", and "Via Height". The "Via Hole Diameter" is set to 10 mils, "Internal Pad Diameter" is 20 mils, "Ref Plane Opening Diam" is 40 mils, "Via Height" is 62 mils, and "Via Plating Thickness" is 1 mils. The "Options" section includes "Base Copper Weight" (0.25oz), "Units" (Imperial), "Substrate Options" (FR-4 STD), "Er" (4.6), "Tg (°C)" (130), "Plating Thickness" (Bare PCB), "Temp Rise (°C)" (20), "Temp in (°F)" (36.0), "Property Selection" (Via Properties), "Layer Set" (2 Layer), and "Ambient Temp (°C)" (22). The "Information" section shows "Power Dissipation (dBm)" (7.7739 dBm), "Via Thermal Resistance" (179.3 °C/W), "Aspect Ratio" (6.20:1), "Via Count" (10), "Via Temperature" (17.9 °C/W per via), "Temp in (°C)" (42.0), "Via Voltage Drop" (3.0273 mV), and "Temp in (°F)" (107.6). The Saturn PCB Design, Inc. logo is visible at the bottom left of the software window.

Parameter	Value
Via Hole Diameter	10 mils
Internal Pad Diameter	20 mils
Ref Plane Opening Diam	40 mils
Via Height	62 mils
Via Plating Thickness	1 mils
Via Capacitance	0.4021 pF
Via DC Resistance	0.00153 Ohms
Power Dissipation	0.00599 Watts
Via Inductance	1.3262 nH
Resonant Frequency	6891.661 MHz
Conductor Cross Section	34.5575 Sq.mils
Via Impedance	57.429 Ohms
Step Response	25.4032 ps
Via Current	1.9785 Amps



SATURN
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Saturn PCB Design, Inc. Contact Information

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Contact us today for a free PCB design quote or turnkey engineering solution.

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