



EECO-Green™

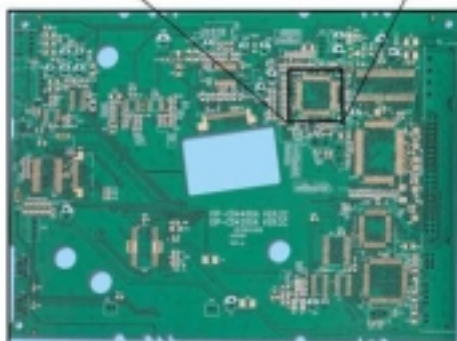
SILVER-THROUGH-HOLE Technology for Lead-Free Double-Sided Printed Circuit Boards



Complex Double-sided PCB for DVD with over 850 Silver-Through-Hole connections.



Close-up detail of power-supply PCB (below) showing 16 mil (0.4mm) pitch pads and STH's.



STH Double-sided PCB for power supply.

EECO-Green™ is our advanced, Lead-Free, Silver-Through-Hole (STH) technology for double-sided Printed Circuit Boards.

Our STH process forces a thick-film silver-conductive paste through drilled holes replacing conventional Plated-Through-Holes (PTH). Pioneered and perfected by EECO over years of R&D, EECO-Green™ STH requires fewer production steps than PTH, and by avoiding harsh production-process chemistries, allows less expensive PCB laminates, e.g., FR1 (UL-94V0) to be used.

Our standard PCB's are finished with lead-free OSP (Organic Solderability Preservative). OSP-finished PCB's are fully compatible with all current assembly processes, including standard tin/lead wave-solder, lead-free solders and SMT pastes, as well as mixed assembly techniques.

Contact us now to learn how EECO-Green STH technology can substantially lower your PCB costs and improve your assembly yields.

Factory Capability:

Item	Standard Capability*
PCB	Double-sided, Single-sided
Max. Panel Size	20" X 15" (500mm X 380mm)
Board (Laminate) Thickness*	0.095" Max. (2.4mm Max)
Best Line/Spacing Parameters	0.008" lines/0.008" spaces (0.20mm/0.20mm) Min.
Feature to Edge Tolerance	± .008" (0.20mm)
Profile Tolerance	± .008" (0.20mm)
Registration Tolerance	± .006" (0.15mm)
Solder Mask	Two-part Epoxy (Heat cured) Peelable mask (Infrared compatible)
Board Finishes	Organic Solderability Preservative (Entek) Carbon Ink over Copper
Component Notation	White/Black (Heat cured) Yellow (Heat cured)
Quality System	ISO 9002 registered UL Listed

*Contact factory for special requirements.

Special Processes:

Item	Benefit
Advanced Silver-Through-Hole Technology	Replaces costly Plated-Through-Hole technology
Silver over Dielectric Jumper	Save layer count on PCB
Carbon over Dielectric Jumper	Save layer count on PCB
Carbon Ink Overprint	Cost effective protection for shorting pads, EMI/EMC screens, etc.
Silver/Carbon Inks on Mylar (polyester)	Thick-film Flexible Circuits
Organic Solderability Preservative (OSP)	Lead-free, flat pads for SMT
Fully automatic etching line with advanced Cupric-Chloride chemistry	Consistent traces PCB to PCB

Fabrication Data Inputs:

Type	Preferred	Usable
Gerber Electronic Files	RS-274-X or RS-274 D	
Print files	HPGL (Hard copy preferred)	Gerber, DXF
Drill files	Excellon, ASCII	Gerber, Trudrill
Test data	IPC-D-356	Mentor neutral, Cadence
Aperture List	Standard Wheel/D-code list	IPC-D-350, ASCII
Units	English, Metric	

APPLICATIONS:

- Computer Peripherals
- Mobile Communications
- Medical Electronics
- RF Remote Controls
- Hand-Held Audio /Visual Electronics
- Security & Access Controls
- Consumer Electronics

EECO-Green™ PRINTED CIRCUIT BOARDS



EECO's State-Of-The-Art PCB factory in the Shenzhen area of Mainland China, is an environmentally aware, UL listed, ISO 9002 registered facility. Developed from EECO's 25 years of successful experience in Taiwan, our STH PCBs feature an advanced thick-film silver-conductive paste silk-screen process.

Our modern machinery includes custom-designed, fully-automated etching lines, as well as a full complement of Printed Circuit Board testing equipment. We currently provide attractive low-cost, high-volume production of double-sided and single-sided Printed Circuit Boards, manufactured to the highest quality standards.

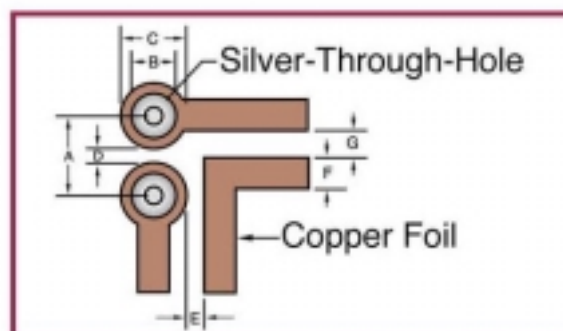
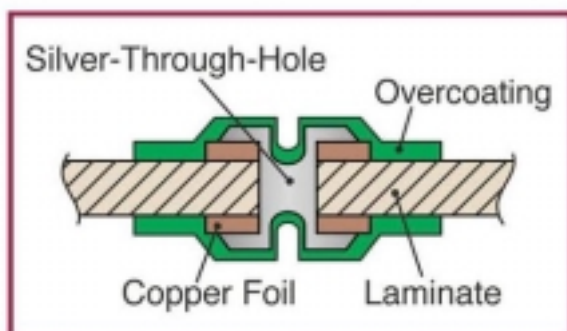
Specifications:

Item	Specification (Standard)*
Board Material	FR-1, CEM-3 (UL 94V0)
Copper Thickness (Typical)	1 oz.
Board Thickness	0.031", 0.062" (0.8mm, 1.6mm)
Standard Line/Spacing Parameters**	0.010" lines/0.010" (0.25mm/0.25mm) Min.
Through-Hole Voltage	Max. 50V DC
Through-Hole Resistance	Max. 100 mΩ/STH hole
Rated Current***	Max. 300 mA /STH hole
Insulation Resistance	Min. 10 ⁹ Ω

* Other laminates available - contact factory.

** 0.008" lines/0.008" spaces (0.20mm/0.20mm) available.

*** Use multiple silver-through-holes in parallel for greater current-carrying capacity.



STH Design Guidelines:

Mark	Description	Dimensional Guidelines							
		inches	mm	inches	mm	inches	mm	inches*	mm*
A	Hole Pitch	0.050	1.25	0.060	1.50	0.080	2.00	0.100	2.50
B	Through-Hole Diameter (Typical)	0.020	0.50	0.020	0.50	0.020	0.50	0.020	0.50
C	Copper Land Diameter (Min.)	0.038	1.00	0.045	1.20	0.060	1.50	0.080	2.00
D	Space Between Copper Lands	0.010	0.25	0.012	0.30	0.020	0.50	0.020	0.50
E	Space Between Copper Land and Copper Line (Min.)	0.010	0.25	0.012	0.30	0.020	0.50	0.020	0.50
F	Copper Line Width (Min.)	0.008	0.20	0.008	0.20	0.008	0.20	0.010	0.25
G	Space Between Copper Line (Min.)	0.008	0.20	0.008	0.20	0.008	0.20	0.010	0.25

* Preferred design rules for STH double-sided PCB's.

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