

PRECIOUS PLATE



Plating Design Checklist



INDUSTRY SOLUTIONS

Optimize Performance, Slash
Costs, and Master Commodity
Volatility with Selective
Spot Plating



INTRODUCTION

For senior design engineers and technical procurement managers, balancing a zero-defect mandate for mission-critical components with fluctuating material costs is a constant challenge. This plating design checklist is designed to help you transition from inefficient full-surface overall plating to advanced Continuous Selective Spot Plating – minimizing waste while ensuring micron-level precision and reliability.

1. Functional Design and Material Specification

ISOLATE FUNCTIONAL ZONES

Clearly define the critical contact regions versus non-critical structural areas to avoid unnecessary “plating to the average.”

DEFINE THE MATERIAL STACK-UP

Specify multi-metal layers efficiently (e.g., using a nickel under layer as a robust diffusion barrier, topped with gold strictly for contact zones).

ESTABLISH MEASUREMENT STANDARDS

Determine the required thickness tolerance and define the critical Point of Measurement (POM) for thickness verification.

VALIDATE DIMENSIONAL ACCURACY

Ensure the design accommodates Selective Spot Plating tolerances, capable of spot placement accuracy up to $\pm 0.1\text{mm}$.



2. Financial and Supply Chain Control

AUDIT MATERIAL OVERAGE

Assess the financial drain of current batch/rack methods that deposit noble metals heavily on non-functional high-current-density edges.

TARGET COST REDUCTIONS

Set a goal to achieve 30% to 60% savings on precious metal consumption per component by adopting selective deposition.

MITIGATE COMMODITY RISK

Counteract extreme precious metal market volatility (like high gold prices) by strictly managing volume requirements.

3. Operational Speed and ESG Compliance

ACCELERATE THROUGHPUT

Transition away from labor-intensive rack manual masking or batch processes to fast, continuous automated reel-to-reel systems.

ENSURE GLOBAL COMPLIANCE

Align your component finishing strategy with global environmental standards like the RoHS Directives by minimizing hazardous substance usage.





CONCLUSION

Ready to Resolve the Performance vs. Budget Conflict?

Precious Plate specializes in ultra-selective reel-to-reel electroplating engineered precisely to your requirements. We combine surface engineering expertise with continuous automation, guaranteeing that every micron of deposited material serves a functional purpose.

Stop Paying for Wasted Material and Start Optimizing Your Component Design.

Scan the QR code below to discover our high-speed continuous reel-to-reel capabilities online, or call (716) 283-0690 to consult with an advanced surface finishing systems engineer today.



Scan Code to Speak with an
Advanced Surface Finishing
Systems Engineer Today.



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