



Advanced Plating Technologies

Input Data for Electroplating Simulation

It is important to provide specific information for us to properly quote engineering services that meet your objectives for plating optimization. Please find below a list of required input parameters to set up computer modeling and electroplating simulations. If necessary, we can provide on-site consulting services to help you better understand critical input data related to equipment set-up and specific plating bath characteristics.

1. Plating Tank Set Up and Cathode Configuration:

- Plating tank geometry
- Plating rack configuration
- Anode number, size and placement
- Plating solution movement characteristics, the relative positioning of equipment for agitation/filtration, including locations of inlets and outlets
- Size and dimension of existing current thieves and/or shields if used.
- Other obstacles that could possibly affect current flow

- If possible, please provide additional CAD import/export information such as CAD files associated with the parts to be plated. If there are existing files please provide their names and file extensions or related engineering associations. Workpieces with complex geometry should be associated to a CAD file in STEP/IGES format.
- For rack plating, the exact position of the workpiece(s) on the rack is to be specified.
- Since plating tank configuration is to be optimized there are practical limits that must be provided such as the minimum anode/cathode spacing available and other possible geometry limitations.

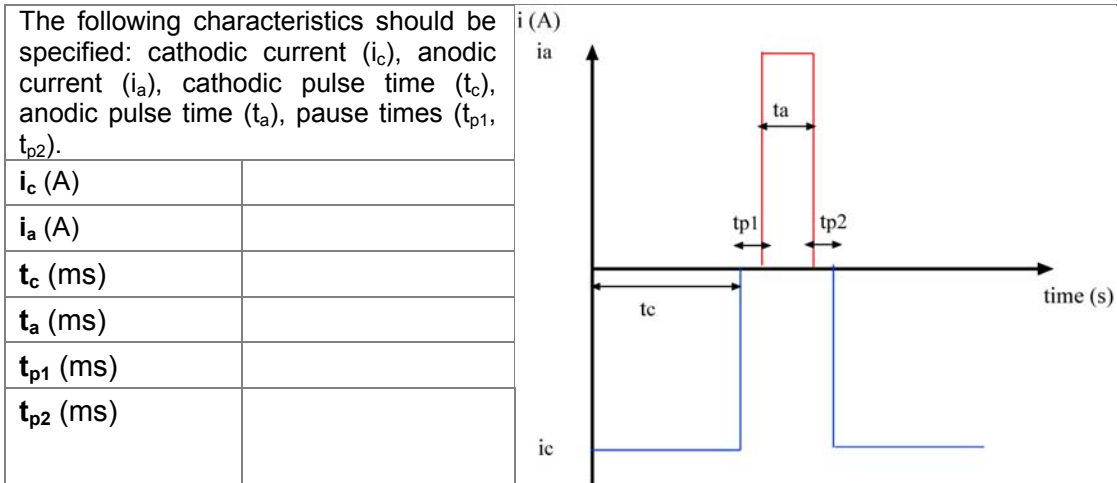
2. Plating Current Source(s)

- Please provide nominal output voltage and amperage for the existing power sources, including capability to use of side-to-side rectification.

Type (current/potential)	Nominal output (V/A)	Operational output (V/A)
Source 1		
Source 2		

2. Plating Current Source(s) - continued

- If pulsed power supplies are to be used please provide detailed information on the duty cycles, including cathode current, anode current, pulse time and any current pause times employed in the cycle.



- Please provide information on the types and construction of the connections between the power source(s) and plating tank set up, including the distance of the connection run(s), number of connection joints, position(s) of the connections and the connection materials, i.e. copper, aluminum etc.
- Current density, plating voltage and normal process times.

3. Plating Bath Information

- Please provide bath composition including additives, concentration of the components, bath pH, operating temperature, relative conductivity, viscosity and density.
- If possible please provide information on the current density overvoltage potential as measured by a rotating electrode such as provided by an ECI CVS unit.

4. Plating Deposit Thickness Information

- Plating thickness uniformity is one of the key goals of plating optimization via computer modeling and simulation.
- Please provide as much information as possible on the existing plating thickness distribution and then provide a target value for improvement, e.g. minimum allowable thickness on any part of the cathode and maximum that is presently tolerated.

5. Plating Solution Flow Rates

- Plating Solution Flow Rate for inlet(s) and outlet(s) in lph or gph

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