

Soldering

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Soldering Aluminum to Aluminum or Copper:.....(the secret is in the flux)

1. Clean the surface to be soldered.
2. The flux must be fluid and effective in absorbing oxides and other contaminants that might be present at the soldering temperatures. It must also prevent re-oxidation of the surface that has been cleaned. These must be a thin continuous layer of flux for the solder to adhere.
3. The process:
 - Cover the area you will be soldering with a layer of flux about 1/32 of an inch thick. We recommend A754-0001 Flux.
 - Heat the fluxed area and when the flux starts to bubble, apply the solder to tin the surface. In the case of aluminum, both surfaces must be tinned. It is beneficial to do the same thing for copper.
 - Stack the two tinned surfaces together and heat with your soldering device. The two tinned surfaces will flow together producing a good solder joint. No additional solder is required. Excess force is not necessary to hold this junction together.

Soldering:

Make the solder run to the heat or you are in danger of making a cold solder joint.

Solder Temperature:

You want the melting point and the liquid temperature as close together as possible and the temperature the solder flows at as high as possible. We recommend 448 degrees Fahrenheit.

Heat Sinks:

Use hemostats, which are available from most fishing/tackle shops or A304-7770-1 Heat Block to keep the heat from destroying other diodes. After soldering, always retest the components, (diodes, regulators, and chips).

Soldering Pots:

If they run to hot, excess dross will form. Find the correct temperature and keep it there. Keep the top of the solder clean or you are asking for a bad solder connection.