

Control of Rapid Temperature Increases in Heaters

to the Semiconductor Market

Application Notes

High-speed temperature control over increases in temperatures in a heater with rapid temperature increases is possible (increase from 50°C to 300°C within one second, with a function to set the rate at which the temperature increases based on the capacity of the heater).

The key points for this control are fast response time, overshoot control, long term stability, and shorter time for PID adjustment.

Applications

Flip chip bonders

Features and Benefits

High speed sampling

- A sampling rate of 50ms for both the input and output is made possible. The controller not only has a fast renewal cycle, but also ensures stability by incorporating a high-speed thyristor in a well-designed structure.

Setting of temperature increase speed

- Temperature increase speed can be freely adjusted. It can change the temperature increase curve comply with the heater's characteristics.

Highly accurate

- The system improves repetitive accuracy and realizes precision for fast increasing temperature with its heater power voltage compensation function, high resolution of PID parameters, and temperature increase initial variance compensation.

Settings made easy

- Parameter settings can be made easily from the programmable display.

Yamatake Products

High function module type controller: DMC50CH400

Thyristor: PGU310H

Programmable display: EST240Z

