



Application notes



Application Note : February 2015

Market involved : Food & Beverage

Product : RF1A23L25

Customer : Coffee machines OEM

Subject : Switching of heaters in boiler tanks

CUSTOMER ISSUE :

A reliable small solid state relay for mounting on coffee machine chassis. The SSR is required to switch a 2 kW /230 VAC boiler heater.

Each machine can have from one to eight heaters that need to be controlled separately. Voltage from the control card is 8 VDC.

The surrounding temperature in the panel reaches approx. 45°C

OUR SOLUTION :

The RF1A23L25, with a control voltage range of 4.25 to 9.0 VDC, rated max. 25 AAC, can be mounted directly on the chassis and fits into the limited space available.

The RF1A23L25 has been tested in the full ON state for 20 minutes until the set temperature of the water was reached and then cycled to maintain the set temperature.

No additional heatsinking was considered necessary.

BENEFITS :

- Space optimisation: a solution that occupies only 30% of the space of a standard hockey puck solution which fits into the limited space available
- Long lifetime of the SSR due to the wire bonding process that ensures less stress on the output chips
- Reliability is ensured through the integration of overvoltage protection on the output
- Conformance to EN 60335-1, necessary for appliances such as coffee machines
- 100,000 cycle test according to UL508. The 100,000 cycle test is required by UL197, which is the UL standard for commercial cooking appliances