

## **ABSTRACT**

*Thermal Resistance can be one aspect that can affect the heat dissemination process especially on Heat Sink Fan. Thermal Resistance value and its effect on Heat Sink Fan performance is not free from the heat that is charged to the Heat Sink Fan.*

*This study aims to determine and analyze the influence of heat load on Thermal Resistance on Heat Sink Fan by testing 5 different Heat Sink Fan. To obtain the relationship of heat load effect with Thermal Resistance on Heat Sink Fan and get Heat Sink Fan which is most effective at disseminating and discharging heat, the test is done by varying the output of heat source which is charged to the system by increasing the voltage bit by bit by using dimmer and the source of calor is a TEC 12706 thermoelectric module. From this experiment, the heatsink fan with the lowest thermal resistance is  $0.064 \text{ }^{\circ}\text{C} / \text{W}$  and the highest thermal resistance is  $0.164 \text{ }^{\circ}\text{C} / \text{W}$ , the higher the heat load, the lower thermal resistance. This is caused by temperature differences due to an increase in temperature on the surface of the heat sink fan which affects the heat transfer rate ( $q$ ) so that an increase in heat transfer of convection and the thermal resistance value becomes small.*

*Keyword : Thermal Resistance, Heating load effect, Heat Sink Fan*