

19. Thermal Switch Setup (MEL 2306)

This setup is built to measure the performance of a millimeter-scale liquid metal thermal switch integrated with GaN devices mounted on a PCB circuit. Two HP6033A DC Power Supplies provide high power input to GaN devices. The Polyscience Chiller 1D1340767 cools down the whole thermal switch device. The Agilent E3620A Dual Output DC Power Supply provides constant gate voltage for GaN devices. Two Agilent 34410A DMMs together with Current Shunts measure the current through and the voltage over GaN devices. Then GaN junction temperature is calculated from the current and voltage. The FLIR Infrared Camera takes thermal images of the PCB. The laptop processes the temperature information and gets real time temperature data.

