

Appendix I

Description for Temperature Shutdown

There are two thermostats/temperature sensors located internal to the device. One is located at the top portion of the device for high temperature shutdown. The other is at the bottom of the device for low temperature shutdown. If the temperature exceeds the specification of -40°C to $+52^{\circ}\text{C}$ the thermostat of the HPA limit is then enabled. The circuit of the HPA is triggered and the DC supply to the FET devices is turned off. In addition to the thermostats in RF and Digit boards have thermal protection as well. This is accomplished by a thermistor/temperature sensor circuit located on the RF circuit board. Specifically, it is located in the path of convective airflow that passes through the module and ahead of any sources of localized heat dissipation. The temperature at this location is representative of the average ambient air temperature core unit. The reading from the temperature sensor circuit is fed back to the Digit board and measured with an ADC which is controlled by software. If the temperature exceeds the specification of -40°C to $+52^{\circ}\text{C}$, the digit board will send a signal to the RF board that will disable the RF board and PA.