HONEYWELL T8665C
Circuit Description

The radio circuit consists of three sections: the transceiver, an RSSI detector and the controller. Referring to schematic RS1A:

Transmit Mode

Ports B3 and B4 of the controller, U1, are used to control the state of the transceiver, U3.   In the sleep state, the control pins of U3 (RL0 and RL1) are both low.

To enable transmit; U1 pulls RL0 high through B3. Data pulses are output from port B1 and applied to the TXMOD input of U3 (pin 8) through resistor, R6. The RF output from U3 appears at pin 20 and is coupled to the antenna through the matching network, L1, L2.

Receive Mode

To enable receive, U1 pulls RL0 and RL1 high through ports B3 and B4, respectively. Demodulated data appears at the RXDATA output (pin 7) of U3 and is input to the controller on port B2 (pin 23).

The baseband signal appearing at BBOUT (pin5) of U3 is applied to the positive input of opamp, U2:A, through capacitor, C6. The opamps and their supporting components constitute a peak detector used to develop an RSSI voltage. This is voltage appears at the output of U2:B and is input to the controller on port A0 (pin 2). The RSSI is used to asses the system operating margin.