



Figure 120: Reception of multiple packets

8.17.8 Received signal strength indicator (RSSI)

RADIO implements a mechanism for measuring the power in the received signal. This feature is called received signal strength indicator (RSSI).

The RSSI is continuously measured and the value filtered using a single-pole IIR filter. After a signal level change, the RSSI will settle after approximately `RSSISETTLE`.

Sampling the received signal strength is started by using the `RSSISTART` task. The sample can be read from the `RSSISAMPLE` register.

The sample period of the RSSI is defined by `RSSI_PERIOD`. The `RSSISAMPLE` will hold the filtered received signal strength after this sample period.

For the RSSI sample to be valid, RADIO has to be enabled in RX mode by triggering the `RXEN` task and the reception has to be started with the `READY` event followed by `START` task.

8.17.9 Interframe spacing (IFS)

Interframe spacing (IFS) is defined as the time in microseconds between two consecutive packets, starting from when the end of the last bit of the previous packet is received, to the beginning of the first bit of the subsequent packet that is transmitted.

RADIO can enforce this interval, as specified in the `TIFS` register, as long as the `TIFS` register is not specified to be shorter than the RADIO peripheral's turnaround time (meaning the time needed to switch off the receiver and then switch on the transmitter). The `TIFS` register can be written any time before the last bit on air is received.

This timing is illustrated in the following figure.