

Spectrum Analysis Testing of KIRAMEK RF Blocking Pouch

Figures 1~3 at right show spectrum analyzer test results of a SMART-key fob.

The easily detectable -59.51dBm signal shown in **Figure-1** was measured from a hand-held Fob not inside any pouch, in close proximity to a wide-band antenna attached to a calibrated HP spectrum analyzer. (Note the amplitude scale is Log10 at a reference level of -30dBm.)

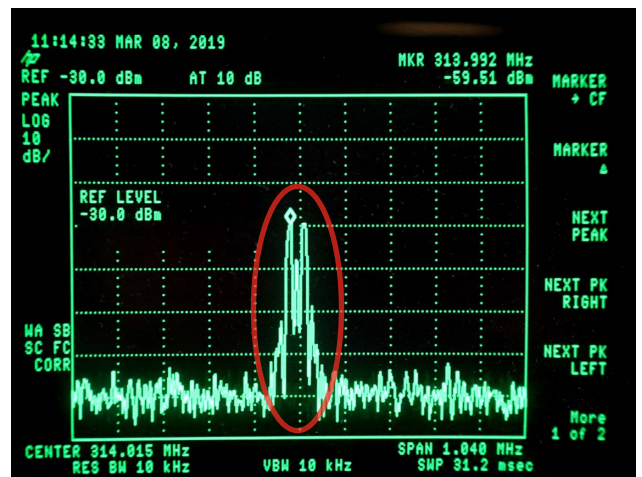


Fig.1: SMART-key Fob signal measured outside pouch.

A weaker but still very detectable signal is shown **Figure-2**. That signal was detected from a Fob enclosed in a cheap no-brand pouch, measured the same distance from the antenna as the Fob in Figure-1. This weak signal was not always detected in our testing of this pouch, but the signal appeared occasionally when the pouch flap was not perfectly secured or when a keychain inside the pouch was partly coming out of the pouch, thereby acting as an antenna. Not all cheap pouches will have the same result, but the test results of this cheap pouch is cause for concern. (Amplitude scale was changed to Linear and set to a reference level of -80.1dBm in order to better see the weak -91.59dBm signal against noise.)

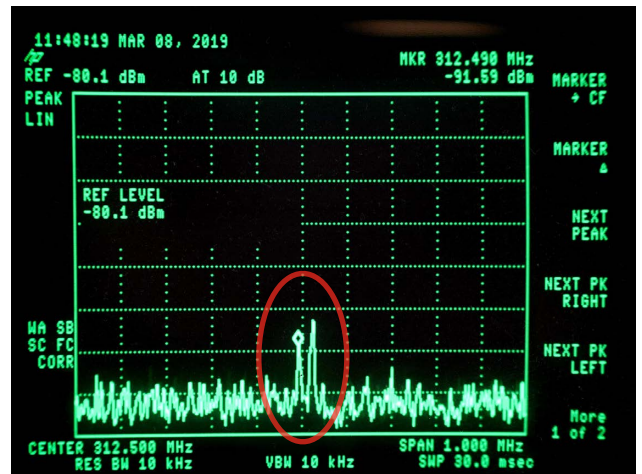


Fig.2: SMART-key Fob signal measured inside a cheap RF blocking pouch commonly found on Amazon.

Figure-3 shows the test results of a Fob enclosed in the RF Blocking Pouch from KIRAMEK. Although we tested in the same manner as the cheap no-brand pouch, after repeated tests ***we could not detect any signal above background noise***, showing that our pouch effectively and reliably blocks the Fob's signal. Also, our pouch's keychain does not attach inside the RF blocking pocket and therefore can never act as an antenna to leak the Fob's signal.

The micro wire mesh woven into RF blocking pouches is a Faraday Cage. The density of those wires along with the way the pocket is sewn impact the pouch's RF blocking effectiveness.

In short, our KIRAMEK RF Blocking Pouch blocks all RF unless the flap is left open.

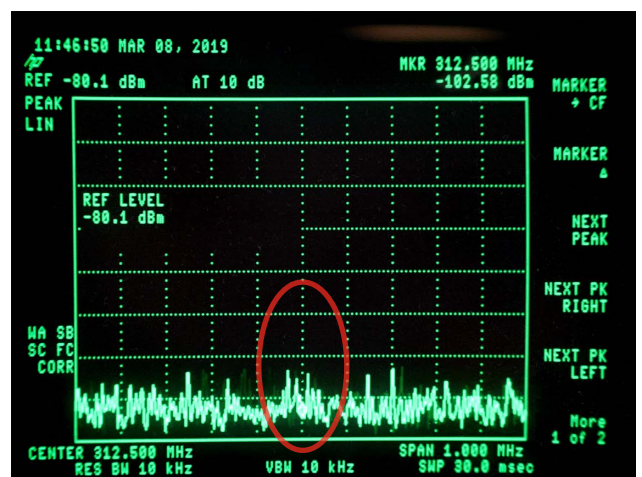


Fig.3: SMART-key Fob signal measured inside our KIRAMEK RF Blocking Pouch with same test conditions as Fig.2.