Figure 6: (a) SPWVD of a two-component signal with linear and sinusoidal FMs. (b) 7 s time slice of the SPWVD around \( p = 130 \) s.

The presence of a component is checked by a minimum energy criterion that requires the total energy of the time slice to be larger than a threshold value (here chosen as \( 0.001 \times E_s/(N/\Delta t) \), where \( E_s \) is the signal energy, \( N \) is the signal length, and \( \Delta t \) is the considered time interval of \( C_s(t, f) \)). Once \( C_{sp}(t, f) \) and \( C_{ref}(t, f) \) are obtained, and the presence of the component is detected, the number of components at the