Investigating the source regions of solar type III radio emissions, this thesis focuses on understanding the generation and properties of Langmuir waves. Beginning with an introduction to solar wind dynamics and kinetic plasma theory, we lay the theoretical groundwork for numerically solving the hot plasma dispersion relation. Utilizing observational electron velocity distribution data collected by the Solar Orbiter spacecraft, we develop models of the electron velocity distribution function. We explore the stability of the electron distributions using the ALPS dispersion relation solver. We investigate the properties of observed electric waveforms by performing a Hilbert transformation, revealing the presence of multiple wave modes and their frequency distributions. This thesis contributes to our understanding of the mechanisms underlying the generation of type III radio emissions in the solar wind, particularly studying the growth of Langmuir waves.