ABSTRACT OF THE DISCLOSURE

Embodiments provided herein provide for methods and apparatus for detecting, authenticating, and tracking processing components including consumable components or non-consumable components used on substrate processing systems for electronic device manufacturing, such as semiconductor chip manufacturing. The semiconductor processing systems and/or its processing components herein include a remote communication device, such as a wireless communication apparatus, for example radio frequency identification (RFID) devices or other devices embedded in, disposed in, disposed on, located on, or otherwise coupled to one or more processing components or processing component assemblies and/or integrated within the semiconductor processing system itself. The processing component may include a single component (part) or an assembly of components (parts) that are used within the semiconductor processing tool.

[Figure 1B]