

ABSTRACT

PASSIVE CAPACITIVELY-COUPLED ELECTROSTATIC (CCE) PROBE ARRANGEMENT FOR DETECTING IN-SITU ARCING EVENTS IN A PLASMA PROCESSING CHAMBER

An arrangement for detecting in-situ arcing events within a processing chamber of a plasma processing system during substrate processing is provided. The arrangement includes a probe arrangement, which is disposed on a surface of the processing chamber and is configured to measure at least one plasma processing parameter. The probe arrangement includes a plasma-facing sensor and a measuring capacitor, wherein the plasma-facing sensor is coupled to a first plate of the measuring capacitor. The probe arrangement also includes a detection arrangement that is coupled to a second plate of the measuring capacitor, wherein the detection arrangement is configured for converting an induced current flowing through the measuring capacitor into a set of digital signals, which is processed to detect the in-situ arcing events.

FIG. 1