

ABSTRACT

A semiconductor inspection device 1 includes: a measuring device 7 that supplies power to a semiconductor device S and measures the electrical characteristics of the semiconductor device S according to the supply of the power; an optical scanning device 13 that scans the semiconductor device S with light intensity-modulated with a plurality of frequencies; a lock-in amplifier 15 that acquires a characteristic signal indicating the electrical characteristics of the plurality of frequency components according to the scanning of the light; and an inspection device 19 that processes the characteristic signal. The inspection device 19 calculates a frequency at which the characteristic signal at a scanning position reflecting the electrical characteristics of a first layer L1 in the semiconductor device S and the characteristic signal at a scanning position reflecting the electrical characteristics of a second layer L2 have a predetermined phase difference, corrects a phase component of the characteristic signal at an arbitrary scanning position with a phase component of the characteristic signal at the scanning position reflecting the electrical characteristics of the first layer L1 as a reference, and outputs an in-phase component and a quadrature component of the characteristic signal at the arbitrary scanning position at the calculated frequency.

Fig. 1