

عنوان مقاله:

Sun Sensor with Multi-Aperture Mask Design for Satellite in Space Application

محل انتشار:

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خلاصه مقاله:

Sun sensors are used to measure the orientation of the satellite in orbit using the sun as a reference. The sensor determines the sun line orientation in the sensor frame from the measurement of the sun position on the focal plane. It exploits CMOS technology and an original optical mask design with multiple apertures. This allows simultaneous multiple acquisitions of the sun as spots on the focal plane. The sensor can be operated either with a fixed or a variable number of sun spots, depending on the required field of view and sun-line measurement precision. This paper includes the preliminary design of a sun sensor, the design and implementation of an automatic testing system and a preliminary characterization of the most important components

کلمات کلیدی:

CMOS image sensor; Digital sun sensor; mask; Centroiding algorithm; Incident angle

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