Title (en)

MICROSYSTEM FOR RECOGNIZING PREDETERMINED FEATURES OF VALUABLE PAPERS, SECURITY DOCUMENTS, OR OTHER PRODUCTS

Title (de)

MIKROSYSTEM ZUR ERKENNUNG VORBESTIMMTER MERKMALE VON WERTPAPIEREN; SICHERHEITSDOKUMENTEN ODER SONSTIGEN PRODUKTEN

Title (fr)

MICROSYSTÈME POUR RECONNAÎTRE DES CARACTÉRISTIQUES PRÉDÉFINIES DE PAPIERS DE VALEUR, DE DOCUMENTS DE SÉCURITÉ OU D'AUTRES PRODUITS

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2010136418A1] The present invention relates to a microsystem for recognizing predetermined features of valuable papers, security documents, or other products, for example, for reliably recognizing security features on bank notes. The invention further relates to a testing device for testing the authenticity of valuable papers, security documents, or products. The microsystem according to the invention is based on a substrate (01), for example, in the form of a semiconductor chip. On the substrate (01), sensors in the form of at least one diffuse-reflection optical component (02) and one capacitor (03) are arranged directly or indirectly over layers (25) lying therebetween. The diffuse-reflection optical component (02) is used to detect optical characteristics of predetermined features that are arranged on or in the valuable papers, security documents, or other products to be recognized. The diffuse-reflection optical component (02) comprises at least one light source (04) and at least one optical sensor. The light source (04) is used to emit light onto the predetermined features to be recognized. The optical sensor (12) detects the light diffusely reflected by the features. The capacitor (03) is formed by electrodes (21, 22, 23, 24) and is used to detect dielectric characteristics or to measure other electrical characteristics of the predetermined features to be recognized.

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