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Title:Planar system for recording submillimeter radiation

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Abstract:This paper shows that implementing a system for the reception and detection of submillimeter radiation on the basis of open planar microresonance structures in the form of apodized dielectric gratings with a fill factor that varies according to a linear law, connected through an impedance transformer with a low-barrier zero-bias Schottky detector diode, makes it possible to achieve  $\bullet$  losses to reflection of  $-26.5$  dB,  $\bullet$  a standing-wave factor of 1.1,  $\bullet$  conversion efficiency 98.6%, with an NEP of  $8.05 \times 10^{-12}$  WHz<sup>-1</sup>.  $\&copy;$ ; 2012 Optical Society of America.

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