

## ABSTRACT

ELECTRONIC COMPONENT COMPRISING A METALLIC CASE  
PROVIDED WITH A MAGNETIC LOSS MATERIAL

In an electronic component (11) comprising an electronic circuit or a circuit element in a metallic case comprising a case (13) and a cover (39), a magnetic thin film (51) made of a magnetic loss material is provided on at least one part of an inner wall surface of the metallic case. In the magnetic loss material, its composition is represented by M-X-Y, wherein M denotes at least one of Fe, Co and Ni, X denotes at least one of elements other than M and Y, and Y denotes at least one of F, N and O. The maximum value  $\mu''_{\max}$  of an imaginary part  $\mu''$ , which is an imaginary number component of a complex permeability of the magnetic loss material, exists within a frequency range from 100MHz to 10GHz. A relative bandwidth bwr is not greater than 200% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of  $\mu''$  is 50% of the maximum  $\mu''_{\max}$  and normalizing the frequency bandwidth at the center frequency thereof. It is possible to provide an electronic component comprising a metallic case, which contains a high-speed operation type of semiconductor device and/or an electronic circuit and in which undesired radiation is reduced.

Figure 1