Electromagnetic interference shielding characteristics of carbon-bearing porous anodic alumina

ABSTRACT

Electromagnetic interference shielding characteristics of carbon-bearing porous anodic alumina formed in a solution of oxalic acid were investigated in the frequency range of 8.2–12.4 GHz (X-band). Minimum value of reflective coefficient (–9.1 dB) and maximum value of EMR attenuation (3.7 dB) was reached after heating of the samples at 500 °C. Heating of the samples at temperatures of 600–800 °C results in decrease in EMR attenuation. The obtained data allow considering carbon-bearing anodic alumina as promising materials for designing of composite shields of EMR.