

ABSTRACT

SIGNAL TRANSMISSION CABLE WITH A NOISE ABSORBING HIGH
LOSS MAGNETIC FILM FORMED ON A SHEATH OF THE CABLE

In a signal transmission cable (10) comprising a conductor portion for transmission of signals and an insulator sheath (14) covering the conductor portion, a high loss magnetic film (15) is formed on at least one part of the outer surface of the insulator sheath. The high loss magnetic film has the maximum complex permeability $\mu''_{\max}$ in a frequency range of 0.1-10 gigahertz (GHz). An example of a magnetic composition of the high loss magnetic film is a M-X-Y magnetic composition comprising M, X and Y, where M is a metallic magnetic material consisting of Fe, Co, and/or Ni, X being element or elements other than M and Y, and Y being F, N, and/or O, said M-X-Y magnetic composition having a concentration of M in the composition so that said M-X-Y magnetic composition has a saturation magnetization of 35-80% of that of the metallic bulk of magnetic material comprising M alone.

Figure 1