ABSTRACT

An article surveillance security system with self-alarm operates at 6 through 10 MHz as a central frequency, receives a swept low level radio wave within ±5 through 15% from the central frequency, and sounds the alarm. It includes a tuning circuit (1) tuning to the central frequency, and a differential amplifier (2) for amplifying and detecting the output of the tuning circuit. The load resistance (R1) of the differential amplifier is set to 3 through 5 MΩ, and the operating current of the differential amplifier is set to 3 μA or less. The base-emitter of the amplification/detection transistor (Tr1) of the differential amplifier are connected to the base-emitter of another diode-connected transistor (Tr2) to stabilize a bias drift by temperature. Thus, a receiving circuit of an article surveillance security system with self-alarm (tag) is realized with ability having a power supply of approximately four-year durability, stably operating with a very low level radio wave at 8.2 MHz, and suppressing external noise, especially a malfunction at a frequency band of a mobile telephone.



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