

Superconductor Technology for Improving the Quality of Wireless

Kyunglim Lee

Rftron laboratory, Seoul, Korea

We presented a high temperature superconducting (HTS) filter sub system, specially considered for the improving the quality of wireless. The properties of the HTS filter sub system have low noise figure and sharp skirt as compared to conventional system. These improvements are expected to provide expanded coverage area and increased capacity. The HTS filter was designed a quasi-elliptical function structure using spiral-meander resonator, gives flexible adjustment of the skirt properties and the transmission zero. The miniature HTS filter for DCS was obtained an excellent selectivity and sensitivity combined with a cryo-cooled low noise amplifier. They significantly reduce the effective noise factor of a cellular base station receiver.

Keywords: HTS rf filter, filter sub-system