

**SUPERCONDUCTIVE PARALLEL JUNCTIONS ARRAYS FOR SUBMM-WAVE
LOCAL OSCILLATOR APPLICATIONS**

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We are developing Submillimeter-wave fully Integrated superconducting Receivers (SIRs) based on SIS mixer and SIS Multijunction operating as local oscillator. In deed, Multijunction-based FFOs may be an interesting alternative to LJJ-based FFOs in SIRs, allowing wide LO tunability, wide impedance matching bandwidths, and increased design flexibility and control of technological parameters. In this paper, we will present a numerical study of the Josephson electrodynamics in this kind of device and measurement results of output power from 5 junction array with current density of ~ 10 kA/cm² at submm-wave frequencies.