

-----New product announcement, released for mass production-----

Get the fastest TTFF\* with GPS LNA that use proven QUBiC4X SiGe:C

\* TTFF = Time-To-First-Fix

#### NXP GPS LNA BGU7005

Manufactured in NXP's breakthrough QUBiC4X SiGe:C process technology and available in the industry's smallest package, this highly integrated GPS LNA reduce cost while delivering better sensitivity, greater immunity against jamming signals, and higher linearity.

#### Features BGU7005

- ❑ Requires only 4 external components (including decoupling) to build complete GPS front-end.
- ❑ Small, 6-pin SOT886 leadless package (1.45 x 1.0 x 0.5 mm)
- ❑ Requires only one external matching component
- ❑ Low current consumption (5 mA)
- ❑ Low noise figure (NF): 0.9 dB at 1.575 GHz
- ❑ High insertion power gain: 16.5 dB with jammer / 17.5 dB without jammer @ 1.575 GHz
- ❑ 16.5 dB zonder jammer / 17.5 dB met jammers (zie datasheet).
- ❑ Low current consumption in power-down mode (<1  $\mu$ A)
- ❑ ESD protection on all pins
- ❑ Supply voltage: 1.5 to 2.85 V, optimized for 1.8 V
- ❑ Proven, robust QUBiC4X SiGe:C process technology (fT = 110 GHz)

This LNA, designed for GPS receiver applications, is produced in NXP's industry-leading QUBiC4X process, a 0.25- $\mu$ m SiGe:C technology. It has very low noise figures and superior linearity performance, so it helps to improve overall sensitivity, which in turn leads to faster Time-To-First-Fix (TTFF) and better tracking.

The proven QUBiC4Xi process improves overall RF performance and means the LNA is less expensive and offers higher, more flexible performance than GaAs counterparts.

It restores sensitivity, provides greater immunity against out-of-band cellular signals, reduces filtering requirements, and lower overall cost. It can be placed close to the GPS antenna, minimizing the noise figure. Additional gain amplifies the GPS signal and raises the on-board signal-to-jammer ratio.

The GPS receiver can be put close to the primary phone antenna, for the best GSM/UMTS performance, while the GPS antenna can be placed far away. This improves antenna-to-antenna isolation and results in higher performance.

#### Product information & datasheet

[http://www.nxp.com/#/pip/pip=\[pip=BGU7005\\_1\]|pp=\[t=pip,i=BGU7005\\_1\]](http://www.nxp.com/#/pip/pip=[pip=BGU7005_1]|pp=[t=pip,i=BGU7005_1])

#### Application information

[http://www.nxp.com/#/aip/aip=\[aip=479,ip=BlockDiagram\]|pp=\[t=aip,i=479\]](http://www.nxp.com/#/aip/aip=[aip=479,ip=BlockDiagram]|pp=[t=aip,i=479])

#### Literature

[http://www.nxp.com/acrobat\\_download/literature/9397/75016740.pdf](http://www.nxp.com/acrobat_download/literature/9397/75016740.pdf)

[http://www.nxp.com/acrobat\\_download/literature/9397/75016677.pdf](http://www.nxp.com/acrobat_download/literature/9397/75016677.pdf)

RF Manual: [www.nxp.com/rfmanual](http://www.nxp.com/rfmanual)

*NOTE: NXP offers 2 demo boards of the BGU7005: one generic and one front-end. Order via you NXP representative.*