

# Fabrication of Portable HSDPA USB Dongle

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## Abstract

The construction of portable HSDPA USB dongle is studied. Of course, data service such as GPRS and EDGE are also supported. In the multi-mode operation of GPRS & EDGE exit GSM850, EGSM, GSM1800 and GSM1900. For WCDMA & HSDPA, Band I, II, and V are treated in our dongle. So, the dongle must fulfill the requirements for multi-mode and multiband services. The power regulator with LDO is indicated to have the heat problem and leads to adjacent channel leakage ratio (ACLR) fail even drop the call. Change LDO to Bulk can overcome the temperature rising, but produce switching noise, which will cause the in-band noise and sensitivity degradation. The solutions to the wireless in-band noise are proposed. Also the transient peak current for GSM transmitter is solved.

Keyword : HSDPA, LDO, Bulk, ACLR, multi-mode.