Portable tracking module(GPS+GPRS) design files released

Background

Quick-teck engineers designed a type of personal tracking module in 2009. This product had been sold as an OEM module in China and other Far East countries from then. The total shipment volume reached 210,000 by then end of Aug 2012.

Quick-teck decided to put all related design and manufacturing files into the public as this product has gone into End of Life process (EOL) in 2012. We hope these documents can be useful to some companies who have similar requirements.

Terms of using these files

All these released files were used as the manufacturing data for the last batch production. We try to ensure them as accurate as possible. However we don't take any reasonability for using them. You're using them at your own option.

Please use this document with peace of mind. These files are not the output of a design service we provided to our customer. We have the intellectual property (IP) right for this design. Electronics design is one of the services we provide. For this service, we sign non-disclosure agreement (NDA) with client. And all design data will be protected and never be disclosed.

We don't provide free consult and re-design services based on this product. Don't ask us any technical questions about this. If so, extra engineering charge will be applied.

We don't provide these design files to individual. Company customer need to use a registered company's email to request these design files. Please send your email to info@quick-teck.co.uk for your request.

Product features

76.5x58.5x4.1mm, double side PCB;

Weight: 17.6g;

Supply voltage: 12V(+/-10%)@0.5A;

Power consumption: 0.43W (typ.);

Operation temperature: -40 °C to +85 °C;

SPI interface, USB interface ready;

Production material cost: 39.5USD.

Specifications for data transfer via GPRS

Quad-Band 850/900/18001900MHz;

PBCCH support.

SMS cell broadcast;

Text and PDU mode;

Non transparent mode;

Integrated TCP/IP stack;

AT cellular command interface.

Specification for GPS

Tracking sensitivity: -160 dBm;

Cold starts sensitivity: -143 dBm;

Time-To-First-Fix

- Cold starts: 30s (typ.);
- Hot starts: 1s (typ.);

Horizontal accuracy: <2.5m CEP.

Up to 42 channels, GPS L1 C/A code.

3D view of module

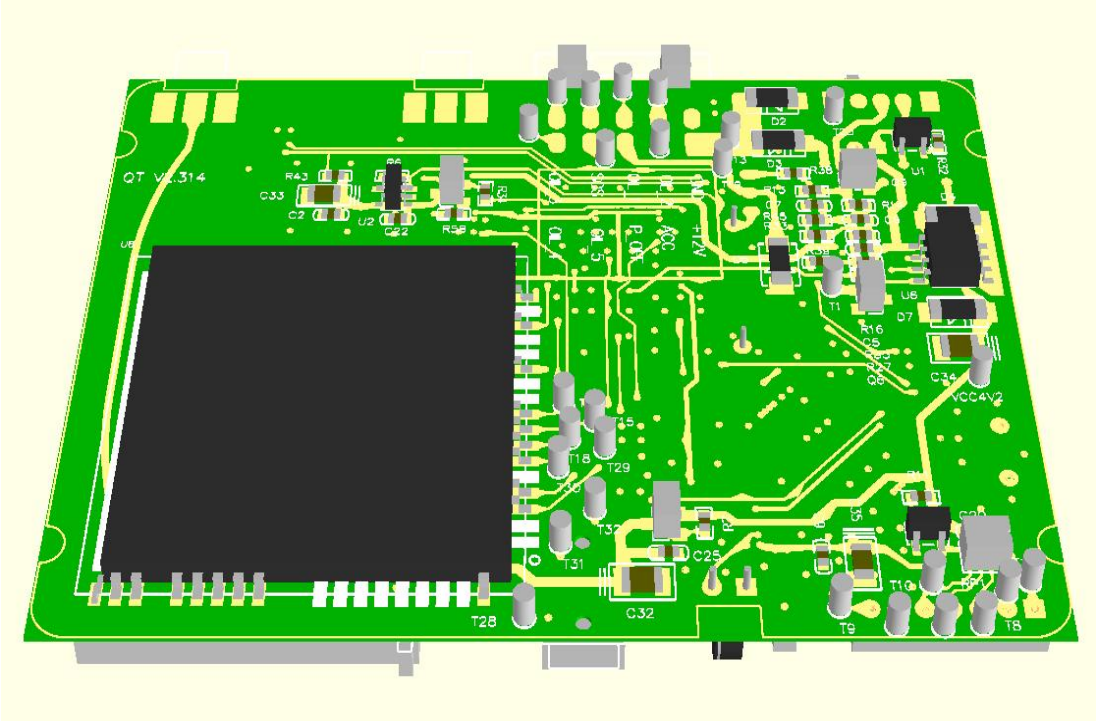


Figure 1 Top view

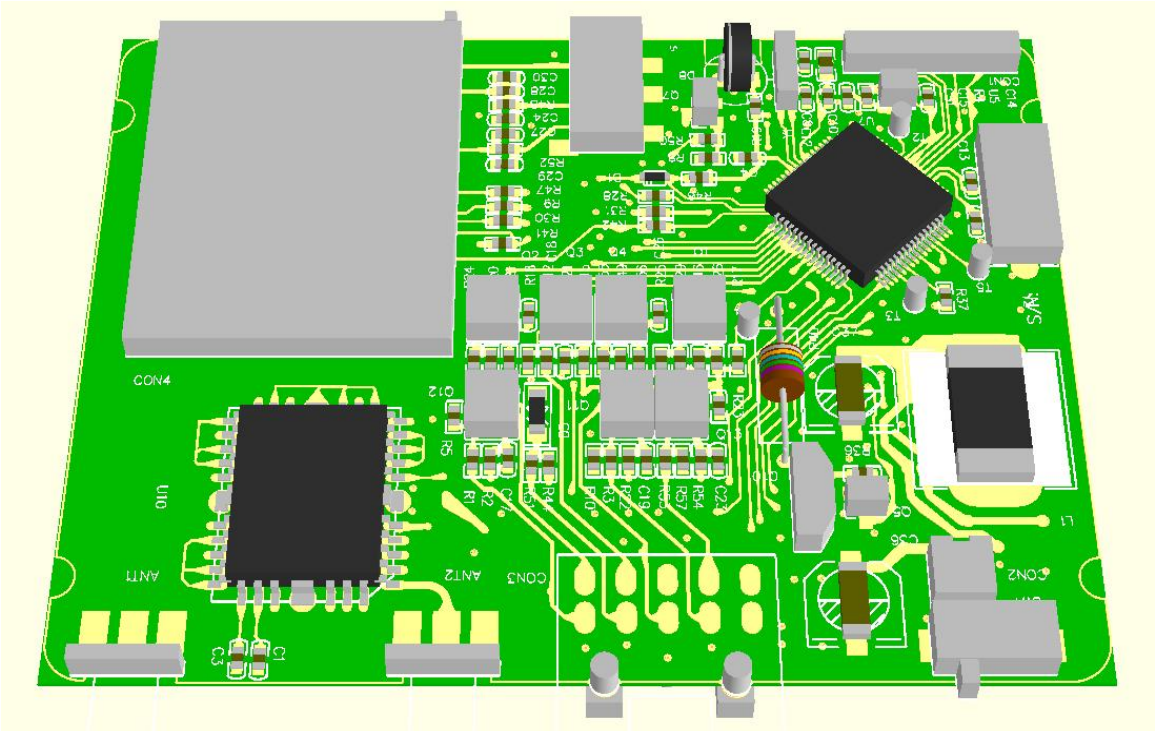


Figure 2 Bottom side view

PCB layout

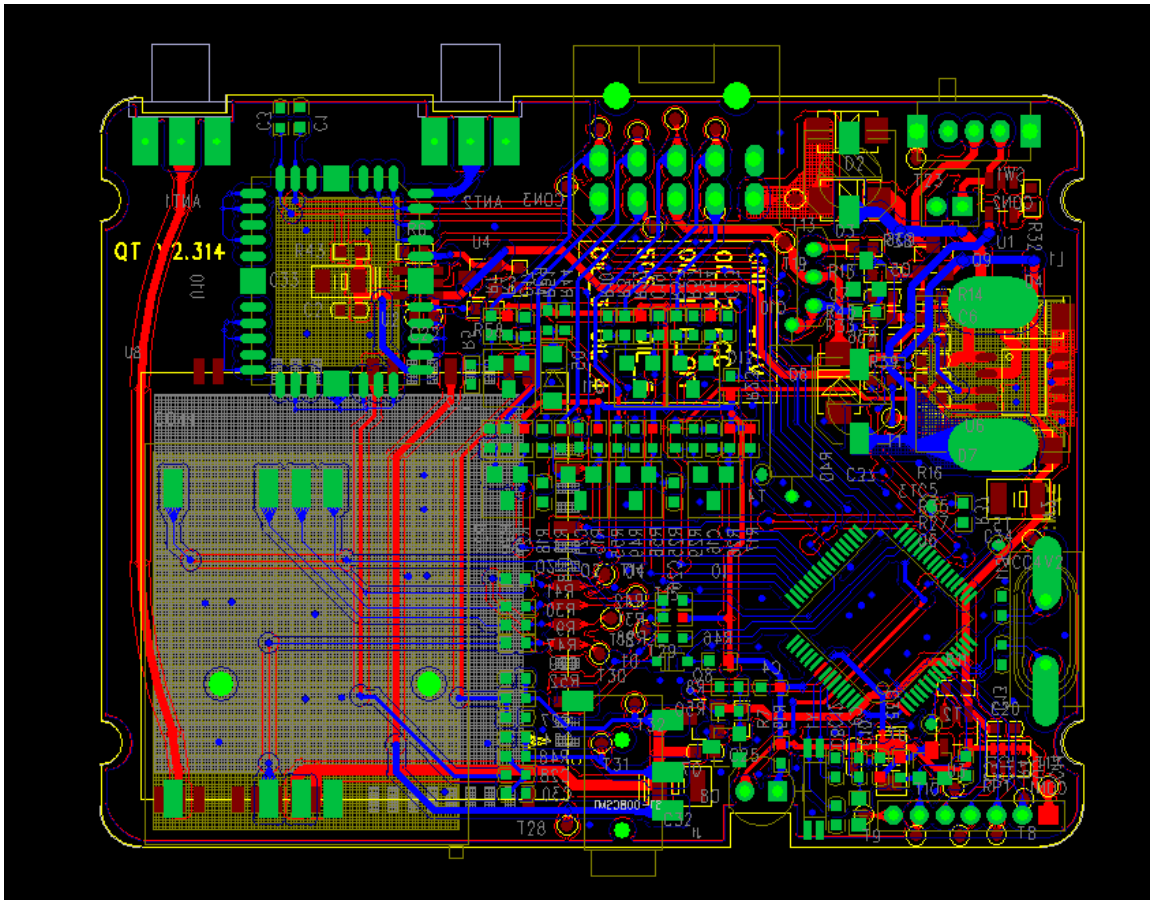


Figure 3 PCB layout

Assembly drawing

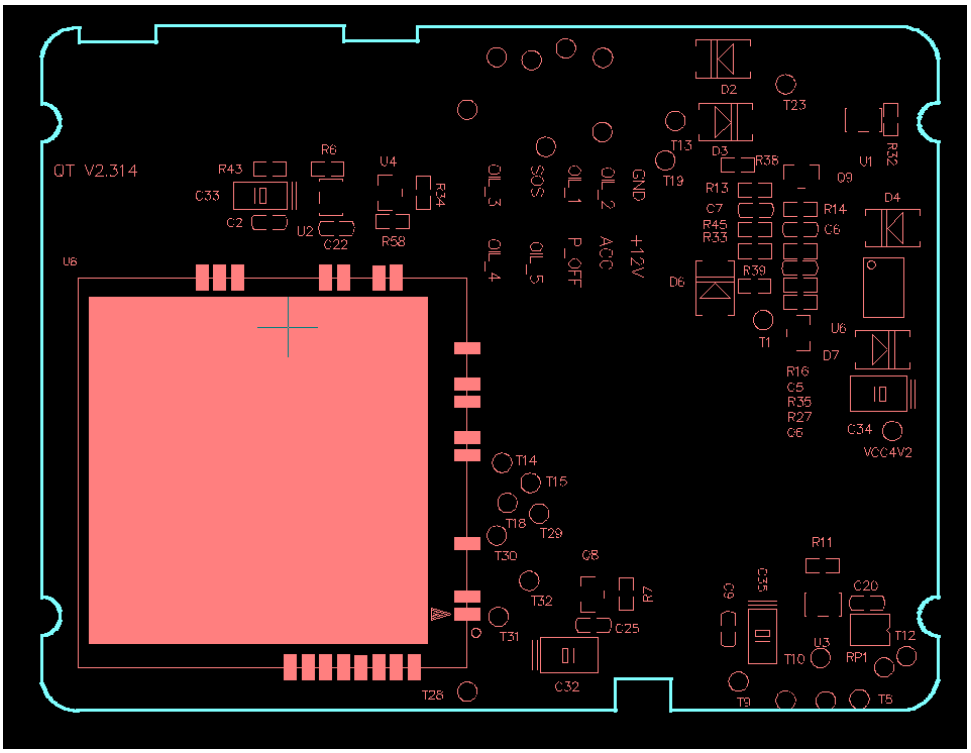


Figure 4 Top side drawing

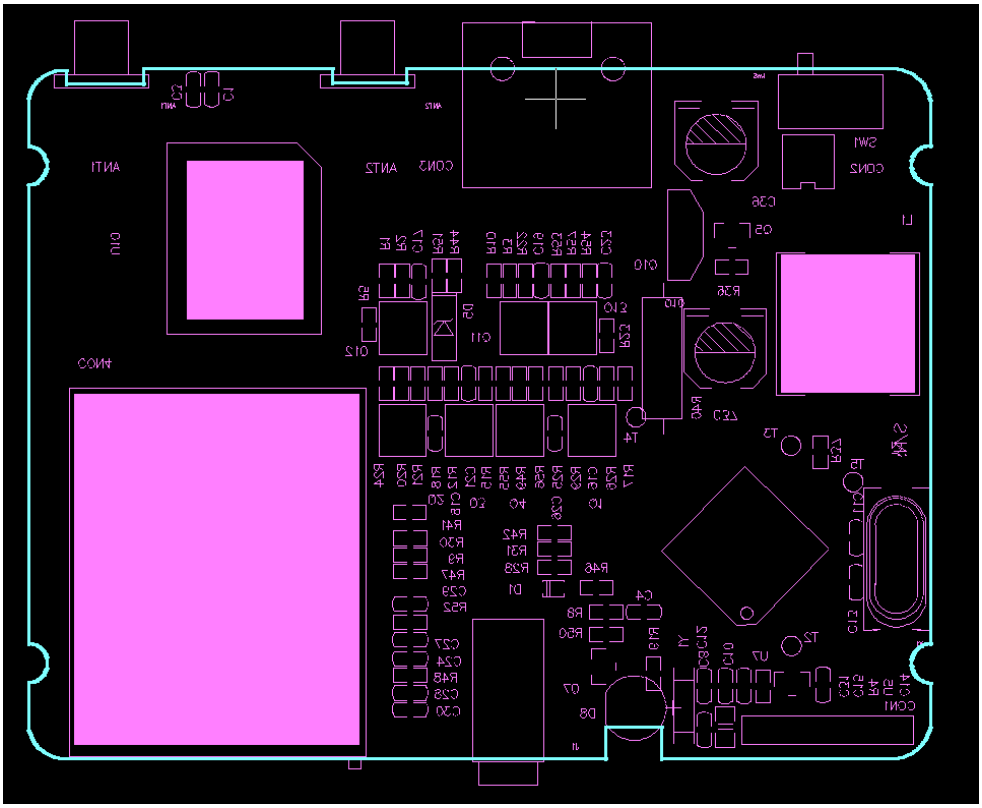
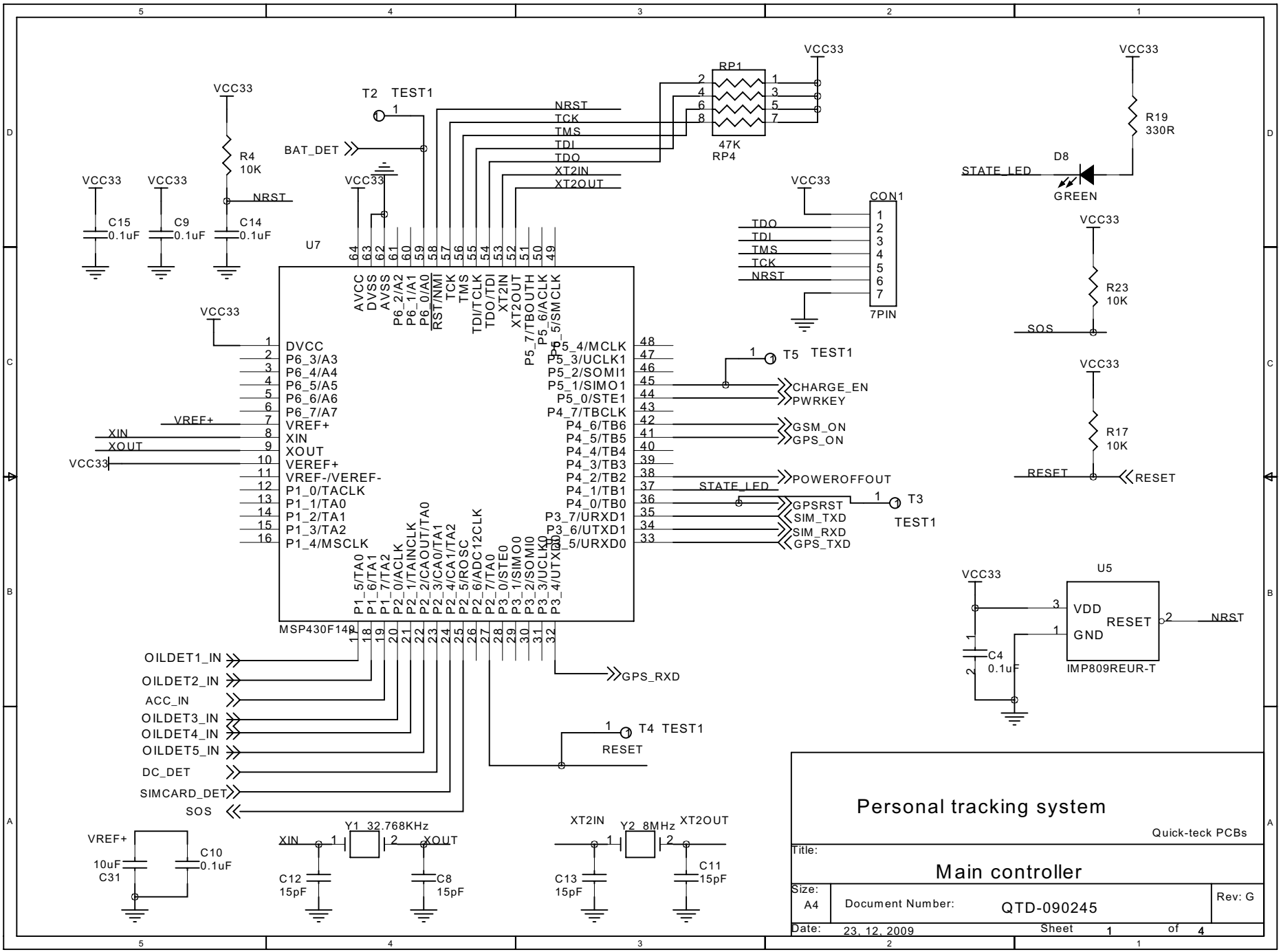


Figure 5 Bottom side drawing

Schematic



Personal tracking system

Quick-teck PCBs

Title: Main controller

Size:	Document Number:	Rev:
A4	QTD-090245	G

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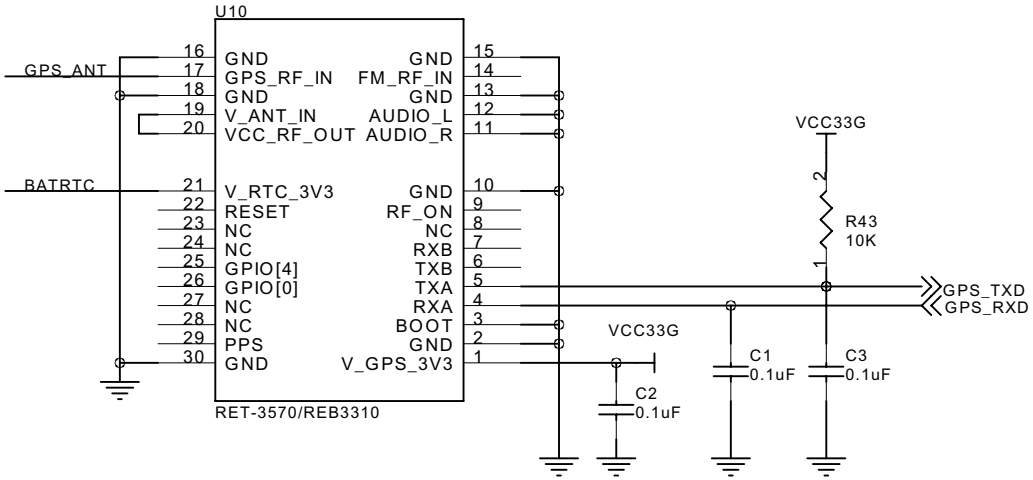
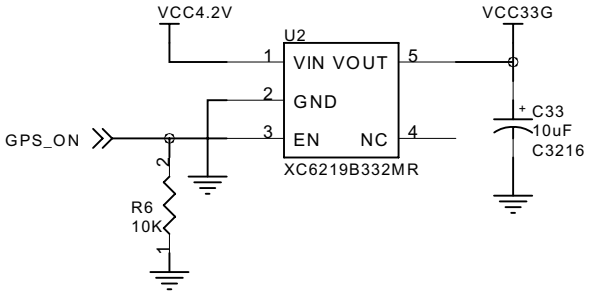
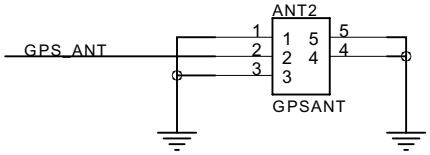
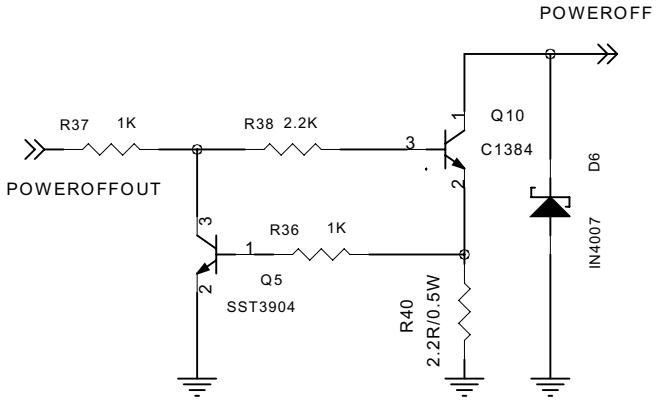
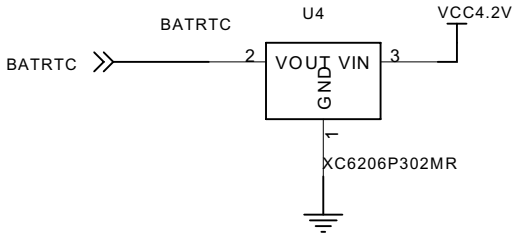








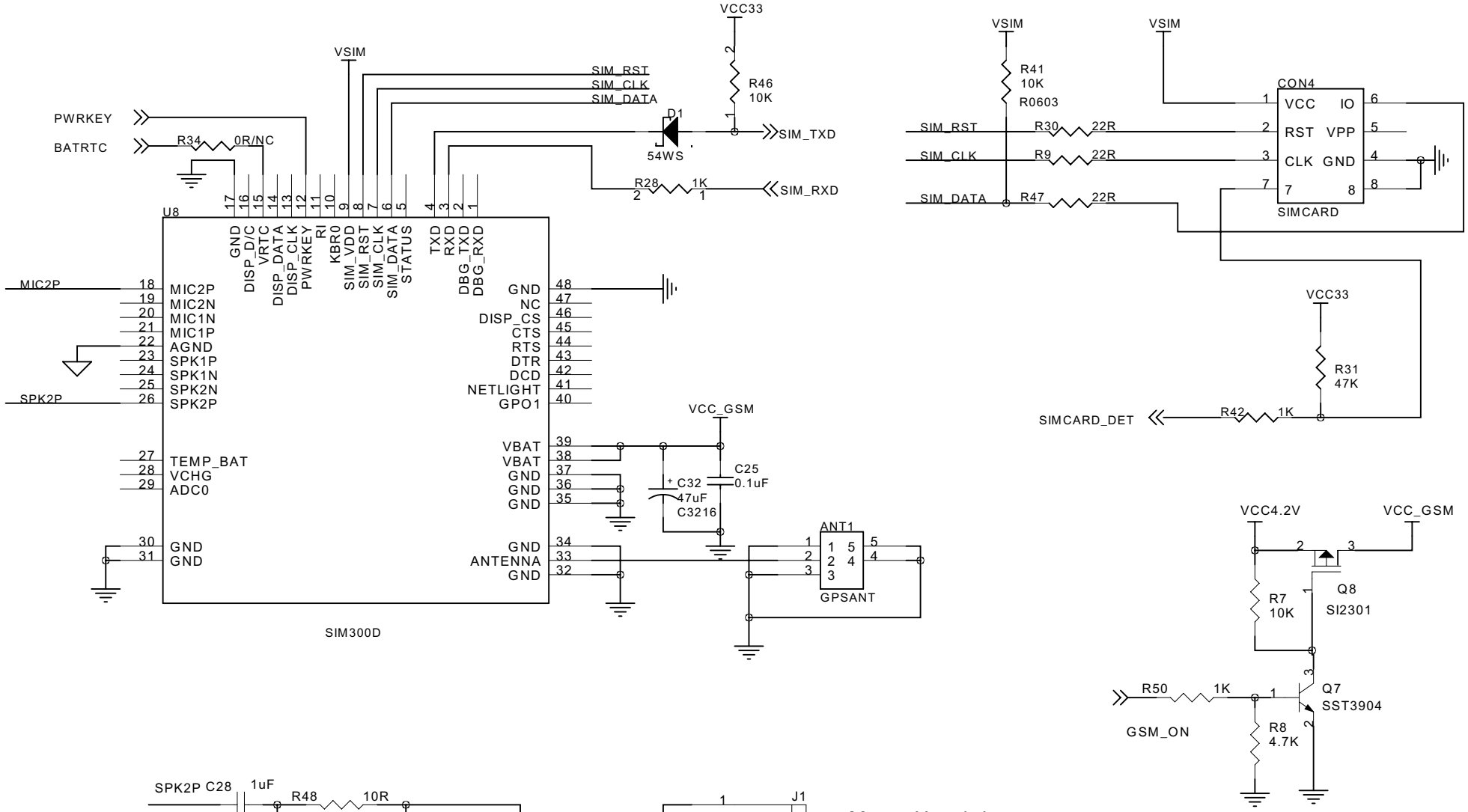


Personal tracking system

Quick-teck PCBs

Title: GPS Model

Size: A4	Document Number: QTD-090245	Rev: G
Date: 23, 12, 2009	Sheet 2 of 4	



Mono Headphones
& MIC 2.5mm

Personal tracking system

Quick-teck PCBs

Title: GPRS & SIM card

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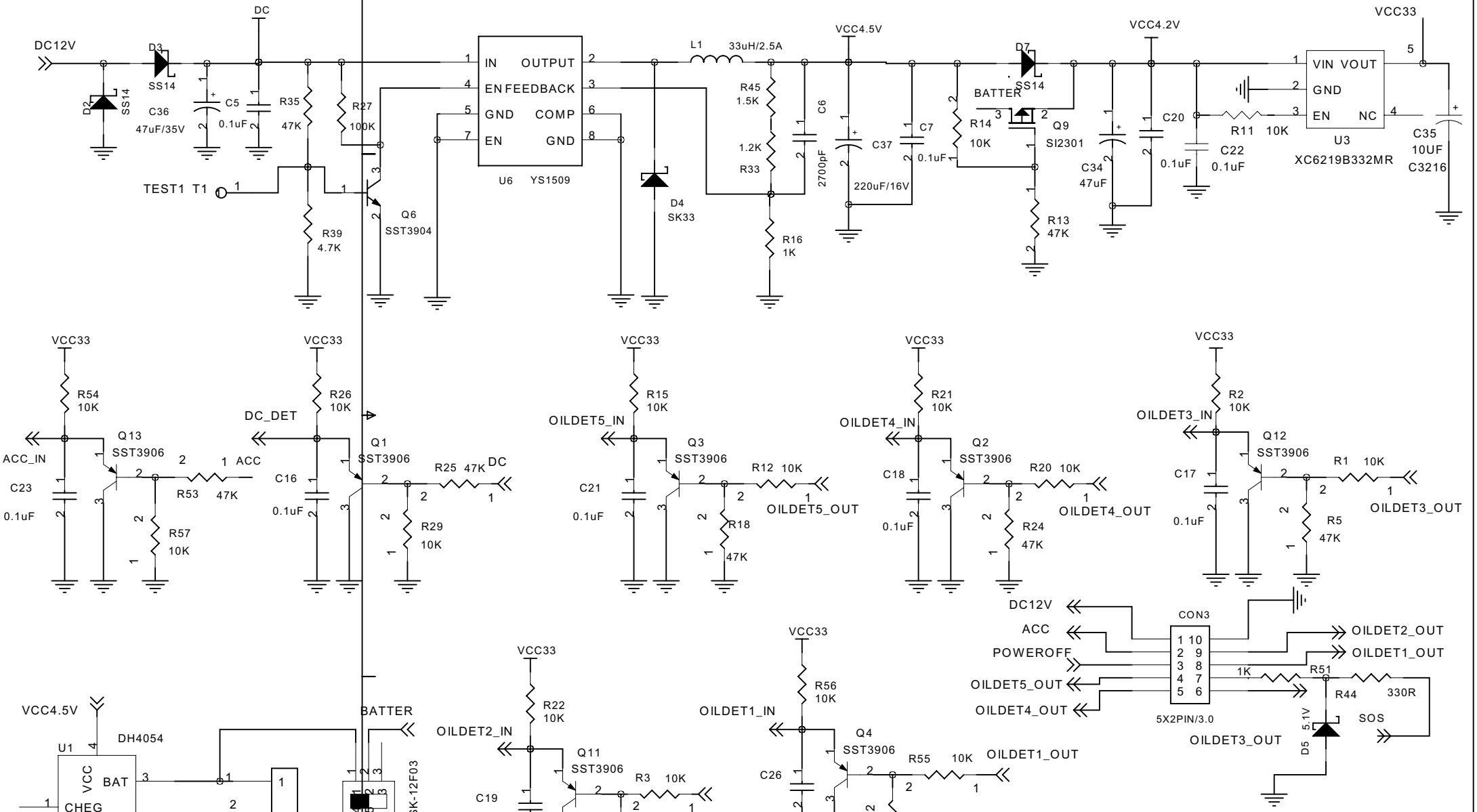

Personal tracking system

Quick-teck PCBs

Title: Power Supply

Size:	Document Number:	Rev:
A4	QTD-090245	G

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