DESCRIPTION OF CIRCUITRY SUPPRESSING SPURIOUS AND HARMONIC EMISSIONS

PRODUCT FCC ID: P7QRHV-1

Circuits for suppression of spurious radiation

All functional RF blocks are mounted on a single multilayer printed wire board (PWB). This board also contains the Master Controller Unit (MCU) and Digital Signal Processing (DSP) functions. All components are SMD type and mounted using reflow soldering. To ensure reliability, many of the shields are permenantly soldered during the component soldering process. The Printed Wire Board contains two common ground planes and common supply voltage plane. All other layers are signal layers with the unused areas acting as a ground plane. Layout design has been completed according to EMC/EMI guidelines.

Shielding consists of:

- Metal shields fitted to *both* sides of the circuit board, and enclose all major radiating components. This includes the PA and surrounding upperband components, but excludes the display.
- Much of the phone casing is laminated onto stainless steel or other metals, which act as additional secondary shielding.

Additional Filtering measures:

- Engine I/P and O/P lines are fitted with additional filtering components where appropriate.
- System connector to accessories is filtered by using passive components

Power Limiting

The desired transmitted power is adjusted by a power control loop. The loop contains RF detector, loop filters, diode rectifier and an error amplifier.

Active components for the power control are N102, V105 and N100.