

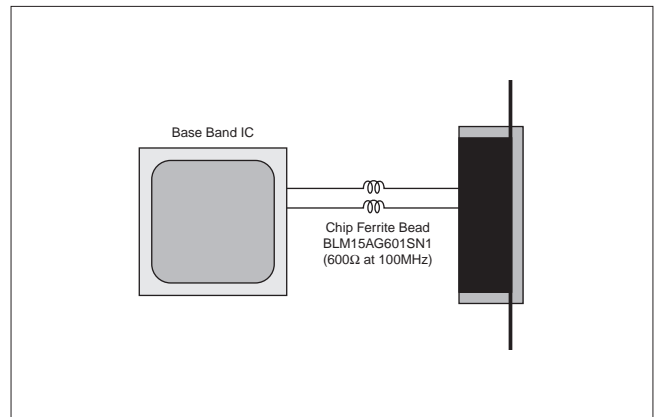
## 10 Example of Noise Suppression in Mobile Phones

### Installing EMI filters on interface section

If noise flows through an interface cable, noise emitted from the cable is diffracted and flows into the antenna, causing BER deterioration. To suppress noise conduction through the interface cable, the BLM15 series chip ferrite bead should be mounted between the base band IC and the cable connector.

For mobile phones with high communication frequency (e.g. PDC1.5, DCS, PCS), using the DLP31 or DLW21 series common mode choke coil, which provides high impedance in this frequency range, offers more excellent noise suppressing effect.

For noise suppression in interfaces, immunity test and transmission wave diffraction preventive measures are required. Therefore, it is necessary to select the optimum EMI filters according to the intended purpose and frequency band.



### Improving the Shielding

Generally, the mobile phone resin case is shielded by conductive plating. As mobile phones have become more functional, the noise level from the base band section has been increased. Therefore, it is important to shield the base band section, as well as the RF section. Mobile phones should be designed to make the contact surface of the case as large as possible, and to reduce high frequency impedance.

Shielding the base band section partially with a metal case or attaching the EMC absorber to the shield contact surface can also intensify the shielding condition.

