Cellular Engine TC35
The extra compact module for voice and data transmission

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General note

With respect to any damages arising in connection with the described product or this document, Siemens shall be liable according to the General Conditions on which the delivery of the described product and this document are based.

This product is not intended for use in life support appliances, devices or systems where a malfunction of the product can reasonably be expected to result in personal injury. Siemens AG customers using or selling this product for use in such applications do so at their own risk and agree to fully indemnify Siemens for any damages resulting from illegal use or resale.

Applications incorporating the described product must be designed to be in accordance with the technical specifications provided in these guidelines. Failure to comply with any of the required procedures can result in malfunctions or serious discrepancies in results.

Furthermore, all safety instructions regarding the use of mobile technical systems, including GSM products, which also apply to cellular phones must be followed.

Subject to change without notice at any time.
1 Introduction

Further to the "DSB35 Support Box User's Manual" and the "TC35 Hardware Interface Description", this document provides additional information on powering down TC35 and using the DSB35 Support Box while TC35 is battery operated.

If do not use the TC35 module in conjunction with a DSB35 Support Box you can skip this Application Note.

Specifications are subject to change without notice. This product is an original Siemens product protected by US, European and other patents.

1.1 References

DSB35 Support Box User' Manual
TC35_HW_Interface_description
2 Function of status LEDs during TC35 Power Down mode

When you power down the TC35 connected to the DSB35 Support Box you will notice that the DCDO LED on the box board is on. This is due to a high-impedance reverse voltage floating from the DSB35 Box to an overvoltage protection diode (clamp diode) on the TC35 module.

The TC35 will not be affected. The LED status has no specific relevance as the TC35 module is not active. Once the TC35 is powered up, the voltage will be set to the required level, with the DCDO LED showing the right status.

Note: No problems will occur regarding the SYNC signal. The LEDs will go on when the associated signals on the ZIF connector are low.

3 Battery mode

While the DSB35 Support Box is configured for running the TC35 module in battery mode and there is indeed a battery plugged to the TC35, the DSB35 Support Box must be powered from a special laboratory power pack. This is necessary since the box cannot be powered from the battery.

Unless the box is fed from the laboratory power pack, power will be supplied to the box over the TC35 module's V_DD line, once the TC35 is started. This effect is due to overvoltage protection diodes. Consequently, the battery will be discharged. However, you can rest assured that no damage will be caused to the TC35 module.

If the TC35 module is in Power Down mode the box will not be supplied over the V_DD lines. But once power supply is disconnected, overvoltage protection diodes will again become effective, powering up the module. This will cause the effect described above, i.e. the battery would be discharged as well.

Note: Before using the TC35 module in battery mode be sure the DSB35 Support Box has a power supply of its own, no matter whether TC35 is on or off.