

GPS-Tracker

Application Note



Energy for GPS-Tracker

Protection of property be it a car or a solar energy harvester installation is becoming an important factor due to increasing crime rates all over the world. New developments like small and independent GPS tracker with a GSM or GPRS modem and built in antenna provide perfect solution for better protection and faster reaction to stolen goods tracking.

Battery challenge

In case the Tracker is not **continuously connected to main power** or powered by **energy harvesters like solar cells or aerogenerators**, there is a need for **reliable and environmentally independent energy storage** device. Charging and discharging at **extreme temperatures and humidity** conditions are needed with **high peak discharge curenfts** for the Modem, while voltage and supply currents must be individually adaptable.

Technical solution

Varta Microbattery offers airtight sealed rechargeable **Ni-MH button cells** that are specially dedicated to be used in a temperature range from **-20°C to + 85°C** out of the **Powerful85 family**.



Characteristics	Battery 3/V500 HT
Voltage	3.6 V
Capacity	500 mAh
Peak current	1.5 A
Discharge temperature	-20°C to +85°C
Size	72,5 mm x 35 mm x 7 mm
Weight	46 g
Additional features	Temperature Sensor, Short Circuit Protection, Connector

GPS Tracker Battery

VARTA Microbattery's Ni-MH High Temperature, High Current Batteries (Powerful85 family) offer rechargeable battery solutions with reliable power for supplying **independent electronic GPS Tracker**. Recommended configurations: 3/V500HT, 4/V500HT or other versions where size and voltage can be adjusted to customer's needs.

- wide temperature range **-20 to +85°C**
- long lifetime – up to **3 years @ 45°C**
- high reliability – by fully automated cell production in Germany
- high discharge current (Powerful85 family)
- design flexibility on voltage level from **1.2V to > 4.8V**
- design flexibility on battery shape **side-by-side or stacked**
- simple charging system **continuous charging possible**
- **UL recognized cell, ROHS compatible**
- **Halogen and Perchlorate free**
- **environmentally friendly Ni-MH technology**