

VRLA Battery Characteristics - Over-discharge

Compared to the alkaline battery, the VRLA battery is very sensitive to over-discharge. Over-discharge results in failure to recover normal capacity, reduced capacity, or shortened service life. Over-discharge also occurs by leaving the battery in a discharged state. The CSB Battery overcomes this problem. If our battery is over-discharged and left standing in a discharged state for several days, it can recover its original capacity when charged. However it is necessary to avoid over-discharge situations as much as possible.

Figure 1 shows an example of the charge characteristics after over-discharge and leaving the battery in a discharged state

Precautions:

- (1) The original capacity can be recovered after two or three consecutive over-discharges or leaving the battery in a discharged state. Beyond this limit, the battery may not recover to its original capacity.
- (2) Always perform constant-voltage charging with a 2.45 V/cell with maximum current of 0.3CA. The charge voltage range between 2.275 V/cell may not be enough to recover to the capacity above. In this case, repeat charge and discharge two or three more times. Figure 1 shows an example of the charge characteristics after over-discharge and leaving the battery in a discharged state. As this figure shows, the charge current remains unchanged during the initial period of charge, this is not considered abnormal.

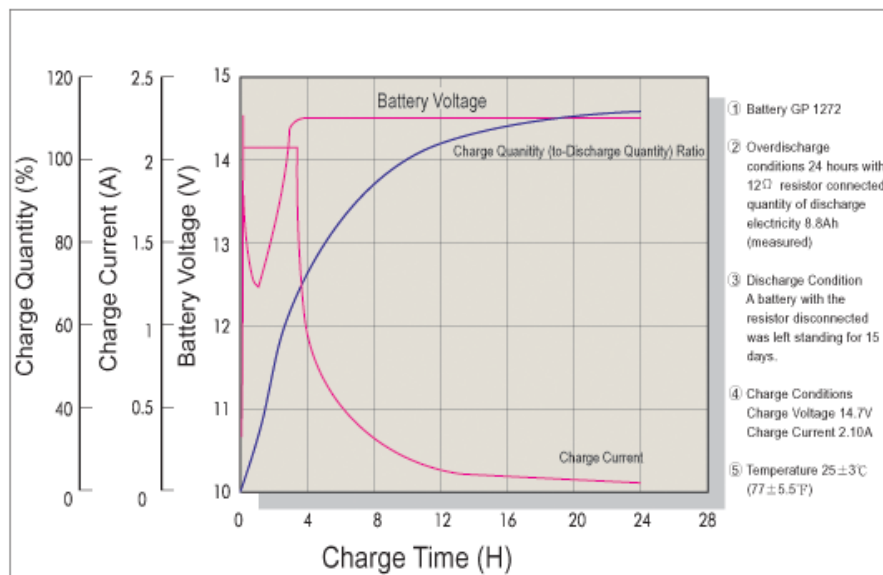


Figure 1: An example of the charging characteristics after over-discharge and leaving the battery in a discharged state