

AGM Battery Performance

Max Charge/Discharge Currents	Peak (5 seconds)	Peak (10 seconds)	Max Continuous
Charge	1C20Hr	0.75C20Hr	0.25C20Hr
Discharge	15C20Hr	10C20Hr	0.5C20Hr

"Float" or "Stand-By" Service: Hold a constant voltage source of 2.25vpc to 2.30vpc continuously. When held at this voltage, the battery will seeks its own current level and maintain itself in a fully charged condition.

Cyclic Application: Limit initial currents to 0.25C20 ampere. Charge until battery voltage (under charge) reaches 2.4 to 2.45vpc. Hold at 2.40 to 2.45vpc until current drops to under 0.01C20 ampere. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

Temperature Coefficient: Adjust Charging Voltage to +/- 0.005vpc/C, 0.003vpc/F from 25°C/ 77°F.

Discharge Characteristics: During discharge, the voltage will decrease. The graph below illustrates the decrease in voltage for different discharge rates and ambient temperatures.



SHELF LIFE & STORAGE:

Self-Discharge Characteristics: Low internal resistance and chemistry in the electrodes ensure a low self discharge rate and longer shelf life. If maintained at 20°C, approximately 60% of the nominal capacity remains after one year of storage. Due to the self-discharge characteristics of this type of battery, and in order to prevent sulfation and permanent loss of capacity, it is important to charge the battery within 6 months of storage.





BATTERY LIFE:

Life Characteristics in Stand-by Use: The float service life, or life expectancy under continuous charge, depends on the frequency and depth of discharge, the charge voltage and the ambient temperature.



Life Characteristics in Cyclic Use: The number of charge/discharge cycles depends on the capacity taken from the battery (a function of discharge rate and depth of discharge), operating temperature and the charging method.



TEMPERATURE:

Temperature Effects on Capacity: Actual capacity is a function of an ambient temperature and rate of discharge. At 20°C (68°F) rated capacity is 100%. The capacity increases slowly above this temperature and decreases as the temperature falls. At any ambient temperature, the higher the rate of discharge, the lower the available capacity.



Temperature Effects on Float Life: The float life of a battery decreases as temperature increases (ie. if temperatures are well above 20°C - 25°C (68°F - 77°F)). Float life of a battery is largely dependent on temperature condition, as well as charge voltage and discharge current.

