

KB1223 12V 2.3Ah



The KB Standard series consists in VRLA batteries - AGM technology (Absorbent Glass Mat), with a design life of 3-5 years and it is designed for general applications such as UPS, telecommunications and electrical applications.



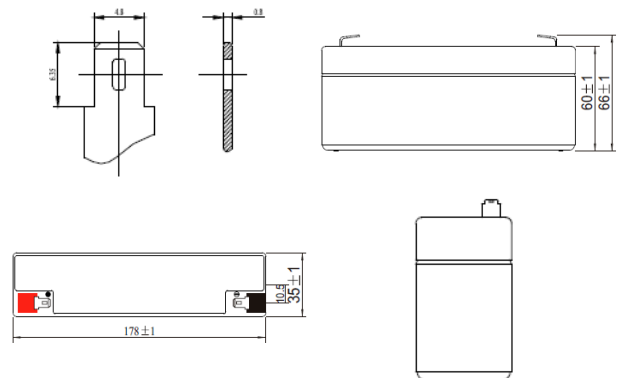
Performance Characteristics

| | | |
|----------------------------------|--|-----------------------------------|
| Nominal Voltage | 12V | |
| Dimensions | Length (mm / inch) | 178 / 7.00 |
| | Width (mm / inch) | 35 / 1.38 |
| | Height (mm / inch) | 60 / 2.36 |
| | Total Height (mm / inch) | 66 / 2.60 |
| Approx Weight | (Kg / lbs) 0.96 / 2.12 | |
| Design Life | 5 years | |
| Terminal | F1 | |
| Container Material | ABS | |
| Rated Capacity | 2.30Ah / 0.115A | (20hr, 1.80V / cell, 25°C / 77°F) |
| | 2.14Ah / 0.214A | (10hr, 1.80V / cell, 25°C / 77°F) |
| | 1.93Ah / 0.386A | (5hr, 1.75V / cell, 25°C / 77°F) |
| | 1.40Ah / 1.40A | (1hr, 1.60V / cell, 25°C / 77°F) |
| Max. Discharge Current | 34.5A (5s) | |
| Internal Resistance | Approx 90mΩ | |
| Operating Temp. Range | Discharge : -20 ~ 60°C (-4 ~ 140°F) | |
| | Charge : -10 ~ 60°C (14 ~ 140°F) | |
| | Storage : -20 ~ 60°C (-20 ~ 140°F) | |
| Nominal Operating Temp. Range | 25 ± 3°C (77 ± 5°F) | |
| Cycle Use | Initial Charging Current less than 0.46A | |
| | Voltage: 14.4V ~ 14.7A at 25°C (77°F) | |
| | Temp. Coefficient: -30mV/°C | |
| Standby Use | Initial Charging Current less than 0.46A | |
| | Voltage: 13.5V ~ 13.8V at 25°C (77°F) | |
| | Temp. Coefficient: -20mV/°C | |
| Capacity affected by Temperature | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 86% |
| Self Discharge | Fully charged Kaise Standard Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. | |

Discharge Constant Current (Amperes) at 77°F (25°C)

| Volts/cell | 5min | 10min | 15min | 30min | 1h | 3h | 5h | 10h | 20h |
|------------|------|-------|-------|-------|------|-------|-------|-------|-------|
| 1.80V | 5.43 | 3.67 | 2.94 | 1.96 | 1.20 | 0.544 | 0.376 | 0.214 | 0.115 |
| 1.75V | 6.43 | 4.15 | 3.25 | 2.09 | 1.26 | 0.563 | 0.386 | 0.218 | 0.116 |
| 1.70V | 7.30 | 4.58 | 3.51 | 2.19 | 1.31 | 0.581 | 0.396 | 0.222 | 0.118 |
| 1.65V | 8.05 | 4.93 | 3.72 | 2.29 | 1.37 | 0.596 | 0.405 | 0.225 | 0.120 |
| 1.60V | 8.45 | 5.13 | 3.87 | 2.35 | 1.40 | 0.610 | 0.413 | 0.229 | 0.121 |

Dimensions and Terminal (Unit: mm (inches))



Applications

- | | |
|----------------------------|---------------------------------------|
| Alarm systems | Marine equipment |
| Cable television | Medical equipment |
| Communications Equipment | Micro processor based office machines |
| Control Equipment | Portable cine & Video lights |
| Computers | Solar powered systems |
| Electronic Cash Registers | Telecommunications systems |
| Electric Test Equipment | Television & Video recorders |
| Emergency lighting systems | Toys |
| Fire & Security | Uninterruptible power supply systems |
| Geophysical equipment | Vending machines |

Certifications

ISO 9001:2008 ISO 14001:2008



Discharge Current vs. Discharge Voltage

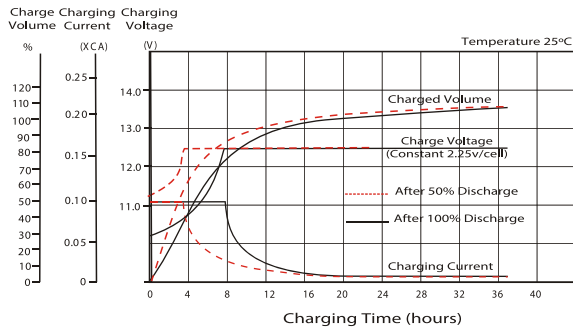
| Final discharge voltage V/CELL | 1.8 | 1.75 | 1.7 | 1.6 |
|--------------------------------|----------------|-------------------------|--------------------------|--------------|
| Discharge current [A] | $I \leq 0.1CA$ | $0.25CA \geq I > 0.1CA$ | $0.55CA \geq I > 0.25CA$ | $I > 0.55CA$ |

Discharge Constant Power (Watts per cell) at 77°F (25°C)

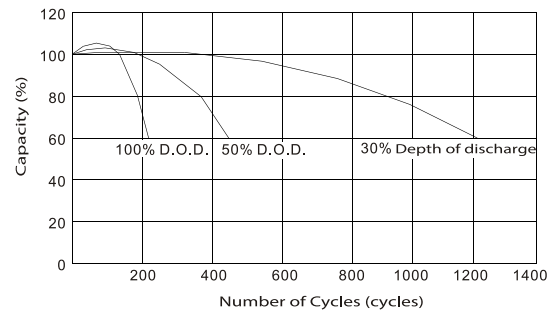
| Volts/cell | 5min | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h |
|------------|------|-------|-------|-------|-------|------|------|------|-------|
| 1.80V | 10.1 | 6.93 | 5.61 | 3.79 | 2.89 | 2.34 | 1.42 | 1.07 | 0.748 |
| 1.75V | 11.8 | 7.76 | 6.13 | 4.02 | 3.05 | 4.45 | 1.47 | 1.11 | 0.764 |
| 1.70V | 13.3 | 8.46 | 6.58 | 4.19 | 3.15 | 2.54 | 1.52 | 1.14 | 0.778 |
| 1.65V | 14.5 | 8.99 | 6.87 | 4.33 | 3.25 | 2.63 | 1.56 | 1.16 | 0.792 |
| 1.60V | 14.9 | 9.24 | 7.08 | 4.41 | 3.29 | 2.67 | 1.60 | 1.18 | 0.803 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

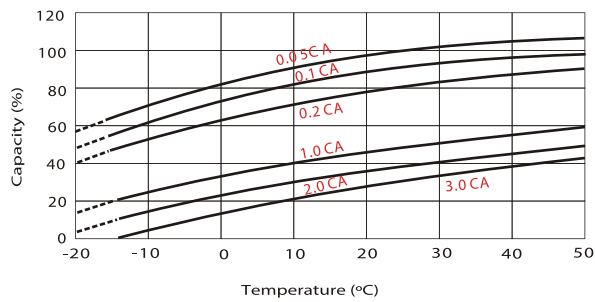
Charging Characteristics (float use)



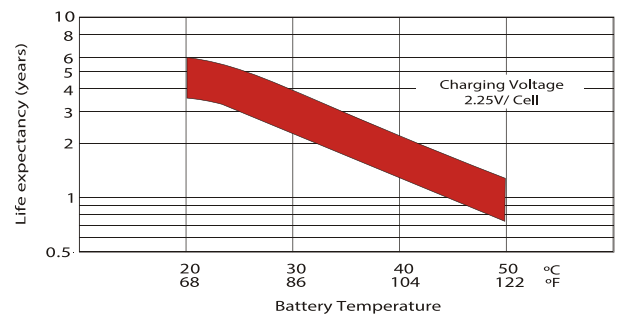
Cycle Life in Relation to Depth of Discharge



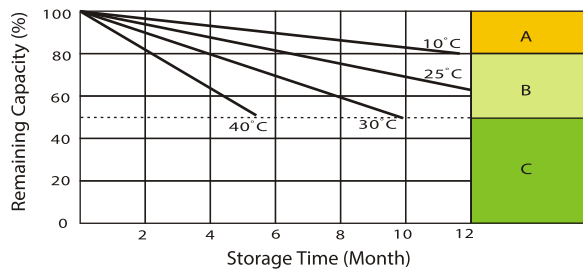
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics



- A** No supplementary charge required
(carry out supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
 2. Charged for above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.
 3. Charged for 8-10 hours at limited current 0.05 CA.
- C** Supplementary charge often fail to recover the capacity.
The battery should never be left standing till this is reached.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.

