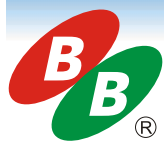




Measures Technology Values Innovation



VRLA Rechargeable Battery

HR4.2-12

FEATURES

- Maintenance Free (topping up not required)
- Non - spillable (no free acid)
- Low Self Discharge, less than 3% per month
- Both Vertical & Horizontal installations
- Excellent High Rate performance, 30% higher power for 5 to 15min discharge
- Absorbent Glass Mat technology for efficient gas recombination
- Its design life is up to 6 years in floating application
- Reliable Safety Valve in each cell

APPLICATIONS

- UPS
- Laboratory Equipment
- Power Boosters
- R/C cars & planes
- Emergency Lighting

SPECIFICATIONS

| | | |
|-----------------------------|------------------------------------|------------------------|
| Nominal Voltage | 12V | |
| Nominal Capacity | 10 Hour Rate (0.4A, 10.5V) | 4.0 Ah |
| | 15 Min Rate (101W, 9.6V) | |
| | 10 Min Rate (132W, 9.6V) | |
| Approx. Weight | 1350g(2.98lbs.) | |
| Terminals | T2 (Faston Tab 250) T1 is optional | |
| Max. Discharge Current | 60 A (5 sec.) | |
| Max. Charge Current | 1.2 A | |
| Operating Temperature Range | Charge | 0°C~40°C(32°F~104°F) |
| | Discharge | -20°C~50°C(-4°F~122°F) |
| | Storage | -20°C~40°C(-4°F~104°F) |
| Self Discharge | < 3% per month (25°C) | |
| Internal Resistance | ≤ 42mΩ (Fully Charged) (25°C) | |



CONTAINER MATERIAL

- Standard: ABS(UL 94-HB)
Model Name: HR4.2-12
- Optional: Flame Retardant ABS (UL 94-V0)
Model Name: HR4.2-12FR

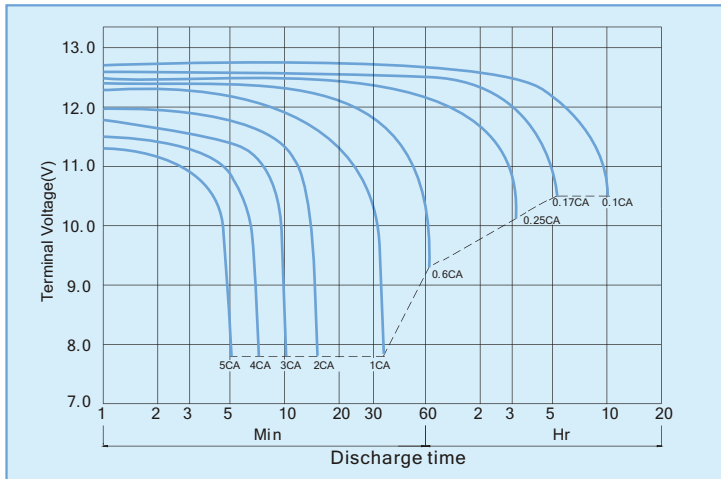
- IEC 61056-1
- JIS C 8702-1
- GB/T 19639.1

| OUTER DIMENSIONS mm(inch) | Length (L) | Width (W) | Container Height (H) | Total Height (TH) |
|---------------------------|------------|--------------------|----------------------|-------------------|
| | | 140±1.5(5.52±0.06) | 38.5±1.5(1.52±0.06) | 94±1.5(3.70±0.06) |

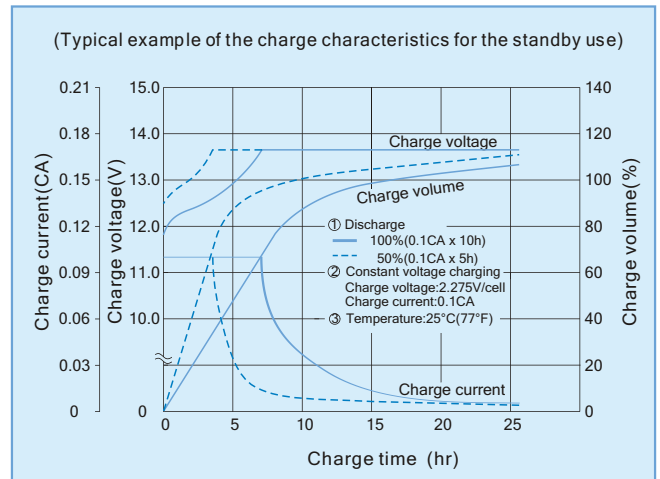
TERMINAL TYPE

- Terminal T1
- Terminal T2

HR4.2-12 (HR4.2-12FR) discharge characteristics (25°C/77°F)



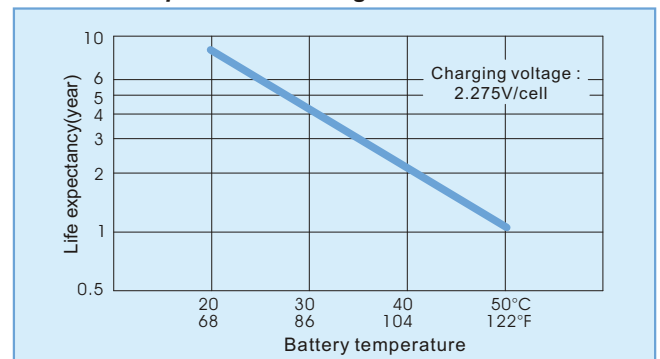
Battery Charging Characteristics



Charging Procedure

| Application | Charging method | Charging Voltage at 25°C (V/cell) | Temperature compensation coefficient of charging voltage (mV/°C/cell) | Max. charging current (CA) | Charging time 0.1CA, 25°C (h) | | Temp (°C) |
|--------------------------|---|-----------------------------------|---|----------------------------|-------------------------------|---------------|--------------------|
| | | | | | 100% discharge | 50% discharge | |
| For standby power Source | Constant voltage & Constant current charging (with current restriction) | 2.25~2.30 | -3 | 0.3 | 24 | 20 | 0~40 (32~104°F) |
| For cycle service | | 2.40~2.50 | -4 | 0.3 | 16 | 10 | |

Effect Of Temperature On Long Term Float Life



Constant power discharge characteristics at 25 °C/77 °F Unit: W

| F.V. (V/cell) \ Discharge Time | 5 Min | 10 Min | 15 Min | 20 Min | 30 Min | 40 Min | 50 Min | 60 Min | 120 Min |
|--------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|---------|
| 1.80V | 156.2 | 112.4 | 88.9 | 75.9 | 57.6 | 44.3 | 36.7 | 32.3 | 17.8 |
| 1.70V | 186.7 | 125.5 | 96.6 | 80.3 | 60.0 | 46.0 | 37.9 | 33.1 | 18.2 |
| 1.60V | 200.0 | 132.0 | 101.0 | 83.3 | 61.4 | 47.1 | 38.7 | 33.6 | 18.4 |
| 1.50V | 205.7 | 134.5 | 103.2 | 84.7 | 62.2 | 47.7 | 39.1 | 33.9 | 18.5 |
| 1.40V | 209.5 | 136.3 | 104.3 | 85.4 | 62.7 | 47.9 | 39.4 | 34.2 | 18.6 |
| 1.30V | 211.4 | 137.5 | 105.2 | 85.9 | 63.0 | 48.2 | 39.6 | 34.3 | 18.7 |

Constant current discharge characteristics at 25 °C/77 °F Unit: A

| F.V. (V/cell) \ Discharge Time | 5 Min | 10 Min | 15 Min | 20 Min | 30 Min | 40 Min | 50 Min | 60 Min | 120 Min |
|--------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|---------|
| 1.80V | 14.2 | 9.9 | 7.69 | 6.56 | 4.88 | 3.73 | 3.07 | 2.70 | 1.48 |
| 1.70V | 17.0 | 11.0 | 8.36 | 6.94 | 5.09 | 3.87 | 3.17 | 2.76 | 1.52 |
| 1.60V | 18.2 | 11.6 | 8.74 | 7.21 | 5.20 | 3.96 | 3.24 | 2.80 | 1.53 |
| 1.50V | 18.7 | 11.8 | 8.93 | 7.32 | 5.27 | 4.01 | 3.27 | 2.83 | 1.54 |
| 1.40V | 19.1 | 12.0 | 9.03 | 7.39 | 5.31 | 4.03 | 3.30 | 2.85 | 1.55 |
| 1.30V | 19.2 | 12.1 | 9.10 | 7.43 | 5.34 | 4.06 | 3.32 | 2.86 | 1.56 |

All data and artworks shall be changed without prior notice, BB reserves the right to explain and update the information contained herein.

A/0 REV. Dec. 2014

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