

NP12-45Ah

Valve-regulated lead-acid battery



GENERAL PURPOSE SERIES

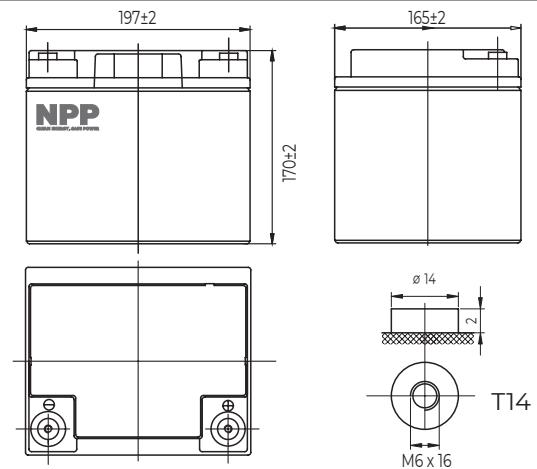
Characteristics

| | | |
|--|------------------------|-------------------------|
| Nominal voltage | 12V (6 cells per unit) | |
| Nominal capacity at 10 hours rate/10.8V (25°C) | 45Ah | |
| Capacity (25°C) | 3 Hours rate/33V | 33Ah |
| | 1 Hour rate/10.5V | 25Ah |
| Terminal type | T14 | |
| Torque | 5.1±0.6N.m | |
| Approx. internal resistance (25°C) | 7.5mΩ | |
| Dimensions | Length | 197±2mm (7.76inch) |
| | Width | 165±2mm (6.50inch) |
| | Height | 170±2mm (6.69inch) |
| | Total height | 170±2mm (6.69inch) |
| Design Life (stand-by) | JIS at 25°C | 10 years |
| | Eurobat at 20°C | 10/12 years |
| Weight | 13.80kg (30.40lbs)±3% | |
| Nominal operating temperature | 25°C±3 (77±5°F) | |
| Operating temperature range | Discharge | -15°C~50°C (5°F~122°F) |
| | Charge | -10°C~50°C (14°F~122°F) |
| | Storage | -20°C~50°C (-4°F~122°F) |
| Float charging voltage at 25°C | 13.5V~13.8V | |
| Cyclic charging voltage at 25°C | 14.5V~15.0V | |
| Temperature compensation | Float charge | -18 mV/°C/Block |
| | Cycle charge | -30 mV/°C/Block |
| Max. charging current (A) | 13.5A | |
| Max. discharge current for 5 seconds | 400A | |
| Self discharge rate (25°C) | ≤3%/month | |
| Battery container ABS UL94-HB | V-0 optional | |

Overview

NPP Power General Purpose series batteries are designed with state-of-the-art AGM (absorbent glass mat) technology, high-performance plates and electrolyte. With excellent value and characteristics, this range is suitable for all general purpose applications.

Dimensions & Terminal Type (mm)



Certification & Compliances



Compliant to: EUROBAT, RoHS, WEEE's and Reach.
Manufactured according to IEC 60896-21 / 22

Construction

| Component | Positive Plate | Negative plate | Container | Separator | Electrolyte | Safety valve | Terminal |
|--------------|----------------|----------------|-----------|-----------|---------------|--------------|----------|
| Raw material | Lead dioxide | Lead | ABS | AGM | Sulfuric Acid | Rubber | Copper |

Constant current discharge characteristics at 25°C

(Ampere/battery)

| F.V/Time | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V | 98.1 | 75.6 | 45.2 | 27.8 | 16.4 | 11.8 | 9.46 | 8.08 | 5.55 | 4.58 | 2.43 |
| 9.90V | 95.2 | 73.8 | 44.3 | 27.4 | 16.3 | 11.8 | 9.40 | 8.03 | 5.52 | 4.57 | 2.42 |
| 10.2V | 91.2 | 71.1 | 43.0 | 26.7 | 16.2 | 11.7 | 9.33 | 7.98 | 5.48 | 4.56 | 2.42 |
| 10.5V | 87.3 | 68.6 | 41.9 | 25.9 | 16.0 | 11.6 | 9.27 | 7.92 | 5.45 | 4.53 | 2.40 |
| 10.8V | 82.4 | 65.0 | 40.4 | 25.0 | 15.6 | 11.3 | 8.99 | 7.68 | 5.28 | 4.50 | 2.39 |

Constant power discharge characteristics at 25°C

(Watts/battery)

| F.V/Time | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|-----|-----|-----|------|------|------|------|
| 9.60V | 1059 | 830 | 507 | 317 | 190 | 139 | 111 | 95.5 | 66.0 | 54.7 | 29.1 |
| 9.90V | 1028 | 810 | 497 | 312 | 189 | 138 | 111 | 94.9 | 65.6 | 54.6 | 29.1 |
| 10.2V | 985 | 780 | 482 | 304 | 188 | 137 | 110 | 94.3 | 65.1 | 54.4 | 29.0 |
| 10.5V | 943 | 754 | 470 | 295 | 185 | 137 | 109 | 93.6 | 64.7 | 54.1 | 28.8 |
| 10.8V | 890 | 714 | 453 | 285 | 180 | 132 | 106 | 90.8 | 62.7 | 53.7 | 28.6 |

The above characteristics represent average values and can be obtained within three charge and discharge cycles. The batteries must be fully charged before testing. The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact NPP Power for the latest available version.

NPP Power (Vietnam) Co., Ltd.

Lot A22.3, Road C4, Thanh Thanh Cong Industrial Zone,
An Hoa Ward, Trang Bang Town, Tay Ninh Province,
Vietnam

Guangzhou NPP Power Co., Ltd.

No.67 Lianglong Road, Huashan Town, Huadu District,
Guangzhou, China
Email: info@nppower.com.cn Tel. +86 20 37887 390

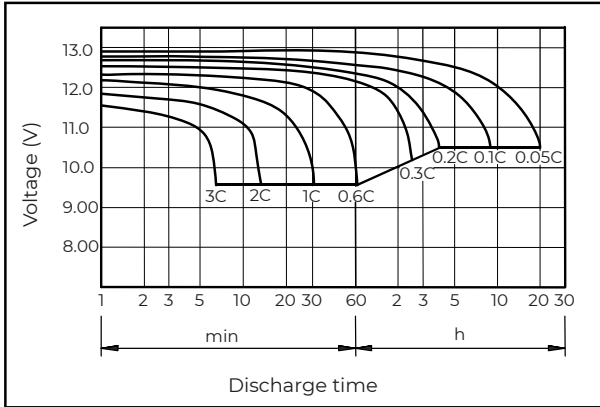
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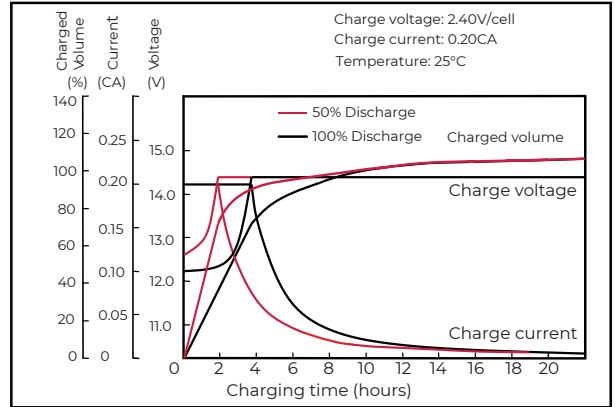
GENERAL PURPOSE

SERIES

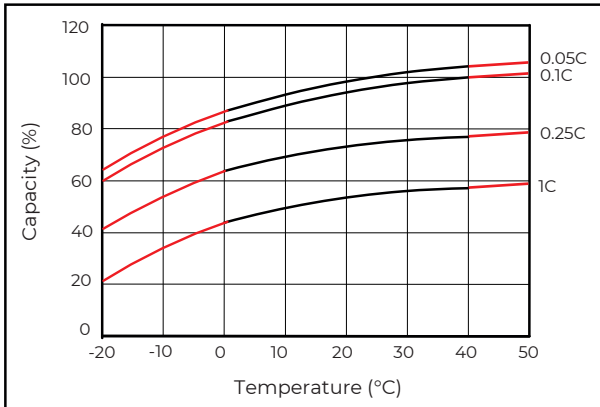
Discharge characteristics (25°C)



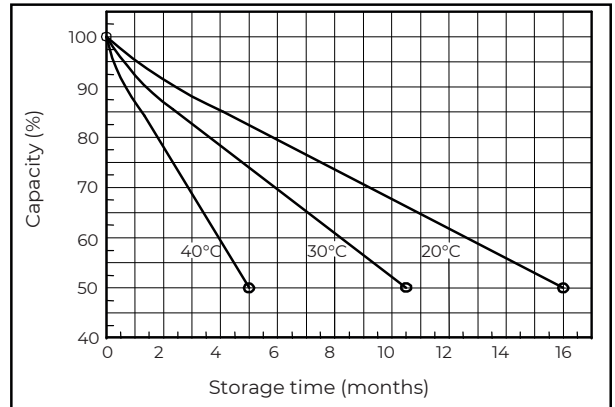
Charging characteristics (25°C)



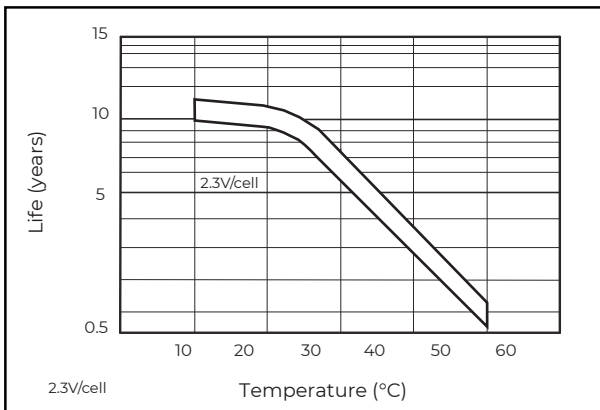
Temperature effects on capacity



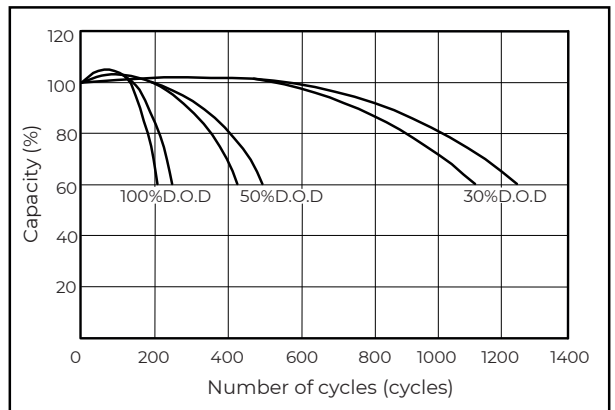
Self-discharge characteristics



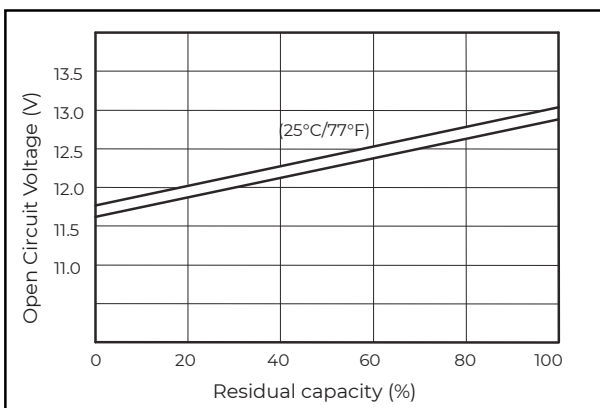
Floating life on temperature



Cycle life on D.O.D (25°C)



Relationship for OCV and capacity (25°C)



Charging voltage VS temperature

