



6-GFMJ-80

12V gel battery



Application

- Telecom
- Switching power supply
- CATV
- Oil and gas
- UPS, medical facilities
- Solar energy
- Street lamp
- Other situation with normal application

Features of performance application

- ✚ Designed service life of 15 years
- ✚ High cycle service life
- ✚ Wider temperature range
- ✚ Excellent deep cycle performance
- ✚ Excellent high rate discharge performance
- ✚ Stronger constant power discharge capability
- ✚ Better charge acceptability
- ✚ Better safety performance and reliability
- ✚ High Performance/price ratio and low yearly operating cost
- ✚ Environment protection and energy saving

| | |
|---|--|
| Rated voltage | 12 V |
| Capacity@ 25°C(77°F) | 80Ah @ 10hr to 10.8V |
| Weight | About 35kg (77 lb) |
| Reference internal resistance (charged) | About 4.33mΩ@ 25°C(77°F) |
| Short-circuit current | About 2771A (0.1S reference value) |
| Max discharge current | 240A (5sec) |
| Self-discharge | < 20% 180 days @ 25°C (77°F) |
| Temperature range | Application: -20°C ~ 50°C(-4°F ~ 122°F) Storage: 5°C~40°C(41°F~104°F) Recommendation: 20°C~30°C(68°F~86°F) |
| Max charge current | 12A |
| Charge voltage @ 25°C(77°F) | Floatcharge: 13.5V, average charge: 14.1V Temperature compensation factor: -18 mV/°C |
| Terminal output | M8 copper terminal (HPb59-1) |
| Recharge time | See figure 2 |

Execution standard:

IEC60896-21/22 BS EN 61427-2002
Q/321284KCC 03-2006 YD/T 1360

Authentication and certificate:

Certificate of Qualification on Perfecting Measurement & Measuring System
GB/T19022 ISO10012:2003、IDT

Quality Management System Authentication

GB/T19001 NO.03006Q10002R0M-2

Environmental Management System Authentication

ISO 14001 NO.010607E2024R1M-2

Occupational Health Management System Authentication

GB/T28001 NO.010607S10147R0M-2

Product authentication:

YD/T1360 NO.030074640566R1M

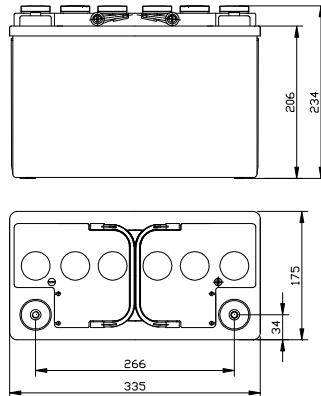
CE authentication

EN 61000-6-3:2001+A11:2004
EN 61000-6-1:2001

National Industrial Product Production License

XK06-044-00012

Product Quality Test Free Certificate



Structure feature of Shuangdeng 12V gel battery

- Electrolyte: primary material adopts Germany gas silicon dioxide, and special technology is adopted; the material will be the thin collosol state when it's injected initially, and the material will be gel state in finished battery, accordingly, leakage and lamination are avoided.
- Plate: both positive plate and negative plate adopt pasted plate, the distance is shorter, the strong current discharging capability is strong; the grid is composed of multi-component alloy whose hydrogen evolution potential is higher, the corrosion resistance is fine and service life is long; the utilization rate of active substance is high and charge receptivity is strong.
- Battery case lid: made of ABS material, corrosion is prevented, strength is high and appearance is beautiful. The case lid is sealed by hot-melting, reliability is high and potential leakage risk can be prevented.
- Separator: adopt special micro-pore PVC-SiO2 separator from Europe AMER-SIL Company, the porosity of separator is big and resistance is low. It has bigger electrolyte storage space.
- Terminal sealing: the built-in copper core lead-base terminal post has stronger current carrying capacity and corrosion resistance. The unique double sealing structure of terminal post can effectively avoid leakage, to guarantee reliability of terminal post sealing.
- Safety valve: adopt Germany technology, constant opening and closing valve, high reliability, the accumulator case expansion, damage and electrolyte dry up can be avoided.

Discharge current at different final voltages and different discharge rates unit: A (25°C, 77°F)

| | 5min | 10min | 15min | 30min | 45min | 1hr | 1.5hr | 2hr | 3hr | 4hr | 5hr | 8hr | 10hr | 20hr | 100hr | 120hr |
|------|-------|-------|-------|-------|-------|------|-------|------|------|------|------|------|------|------|-------|-------|
| 11.4 | 157.3 | 100.5 | 95.8 | 54.7 | 48.6 | 36.1 | 28.0 | 23.3 | 17.1 | 13.0 | 11.6 | 8.2 | 6.8 | 3.87 | 0.95 | 0.81 |
| 11.1 | 174.8 | 111.7 | 106.4 | 60.8 | 54.0 | 40.1 | 31.2 | 25.8 | 19.0 | 14.4 | 12.9 | 9.1 | 7.6 | 4.25 | 1 | 0.86 |
| 10.8 | 184.0 | 117.6 | 112.0 | 64.0 | 56.8 | 42.2 | 32.8 | 27.2 | 20.0 | 15.2 | 13.6 | 9.6 | 8.0 | 4.46 | 1.03 | 0.89 |
| 10.5 | 193.2 | 123.5 | 117.6 | 67.2 | 59.6 | 44.3 | 34.4 | 28.6 | 21.0 | 16.0 | 14.3 | 10.1 | 8.4 | 4.63 | 1.06 | 0.91 |

Discharge power at different final voltages and different discharge rates unit: W (25°C, 77°F)

| | 5min | 10min | 15min | 30min | 45min | 1hr | 1.5hr | 2hr | 3hr | 4hr | 5hr | 8hr | 10hr | 20hr | 100hr | 120hr |
|------|------|-------|-------|-------|-------|-----|-------|-----|-----|-----|-----|-----|------|-------|-------|-------|
| 11.4 | 1079 | 898 | 565 | 556 | 428 | 337 | 359 | 298 | 219 | 166 | 149 | 105 | 88 | 46.44 | 11.40 | 9.72 |
| 11.1 | 1357 | 1129 | 711 | 699 | 538 | 424 | 393 | 326 | 239 | 182 | 163 | 115 | 96 | 50.49 | 11.88 | 10.22 |
| 10.8 | 1635 | 1360 | 857 | 842 | 648 | 511 | 407 | 337 | 248 | 188 | 169 | 119 | 99 | 52.45 | 12.11 | 10.47 |
| 10.5 | 1912 | 1604 | 1022 | 924 | 692 | 566 | 427 | 354 | 260 | 198 | 177 | 125 | 104 | 53.62 | 12.27 | 10.54 |



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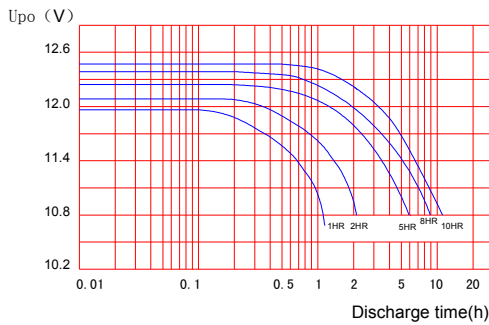


Figure 1 Discharge characteristic curve (20°C)

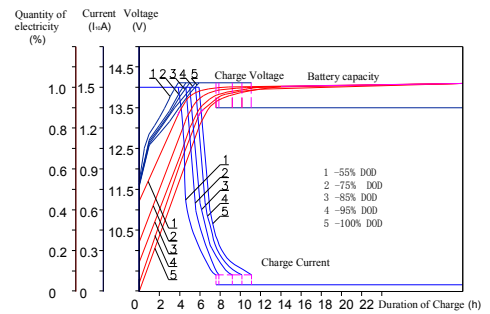


Figure 2 Constant voltage charge characteristic curve

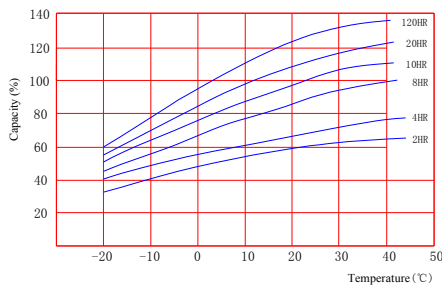


Figure 3 Relation curves between capacity and temperature

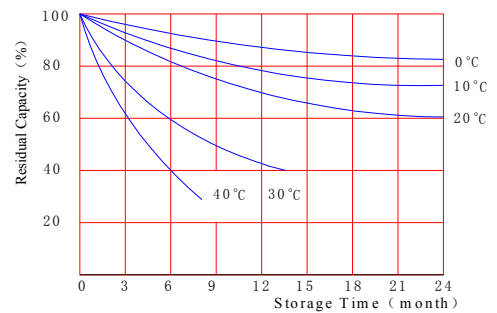


Figure 4 Self-discharge characteristic curve

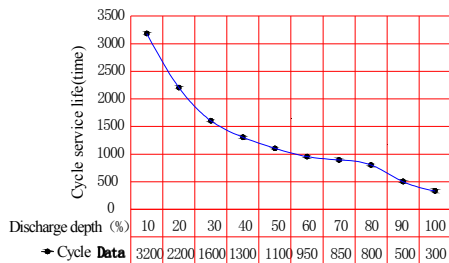


Figure 5 Relation curve between discharge depth and cycle service life

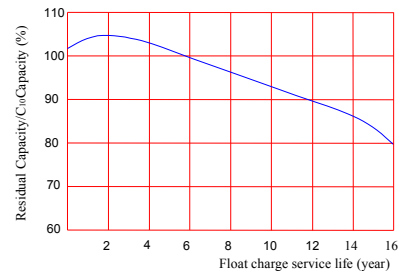


Figure 6 Relation curve between Float charge service life and residual capacity

- Remark: a) Test circumstances: 20-30°C, relative humidity is 50~80 percent;
 b) Charge mode: electricity of charge is equal to 105~115 percent of discharge
 c) Residual capacity is 80 percent C₁₀

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Shuangdeng Group promises to provide excellent engineering service for customers, including product solution, installation design and on-site maintenance.

The above data is only taken as reference instead of inspection standard. Additional notification won't be available for parameter change due to improvement and regulation of product. Inspection shall be performed in accordance with standards.

We must make a statement, when the battery service life and safe operating performance is confirmed, the test condition will be stricter; accordingly, the battery shall not be used in these conditions, because it's difficult for battery to reach expected service life.