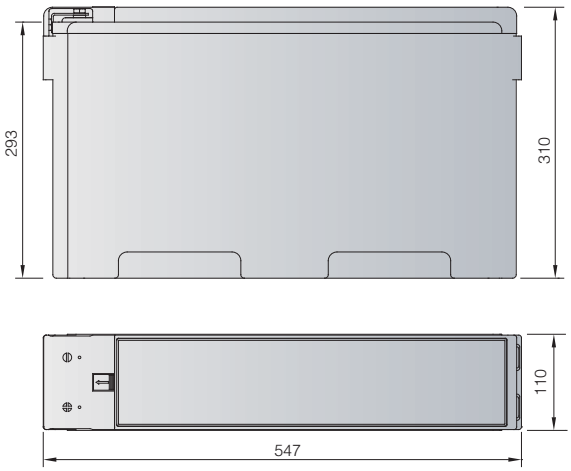
6-XFMJ-120

12V front terminal gel battery

shoto

power the future



views of battery

Application:

- Telecom
- Switching power supply
- CATV
- Oil and gas
- UPS, medical facilities
- Solar energy
- 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℃(77F)	120Ah@10hr to 10.8V
Weight	Weight About 49.5kg (108.9 lb)
Reference internal resistance (charged) Short-circuit current	About 4.5mΩ@ 25℃(77F) About 2667A (0.1s reference value)
Max discharge current	330A (5sec)
Self-discharge	<20% 180 days @ 25℃ (77F)
Temperature range	Application: -20~50℃(-4~122F) Storage: 5~40℃(41~104F) Recommendation: 20~30℃(68~86F)
Max charge current	16.5A
Charge voltage @ 25℃(77F)	Float charge: 13.5V, average charge: 14.1V Temperature compensation factor: -18 mV/℃
Terminal output	M8 copper terminal (HPb59-1)
Recharge time	See figure 2

Standard:

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

Structure feature of Shoto 12V front terminal 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 complex 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-SiO_2 separator 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 pressure, 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℃, 77F)

	Discharge time (min)					Discharge time (hr)										
	5	10	15	30	45	1	1.5	2	3	4	5	8	10	20	100	120
11.4V	226	155	144	83.6	72.9	57.9	42.1	34.9	24.9	19.4	16.5	11.8	10.4	5.44	1.43	1.22
11.1V	251	171	159	92.7	81.1	64.5	46.8	38.7	27.6	21.7	18.2	13.1	11.6	5.99	1.52	1.30
10.8V	264	181	168	97.6	85.2	67.9	49.2	40.8	29.0	22.8	19.2	13.9	12.1	6.27	1.56	1.33
10.5V	277	190	177	102.7	89.6	71.1	51.7	42.9	30.4	24.0	20.2	14.5	12.8	6.51	1.59	1.36

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

	Discharge time (min)					Discharge time (hr)										
	5	10	15	30	45	1	1.5	2	3	4	5	8	10	20	100	120
11.4V	1717	1324	860	824	628	513	539	446	319	250	211	152	133	65.38	17.14	14.68
11.1V	2194	1692	1096	1052	803	655	589	489	348	273	230	166	145	71.14	17.97	15.39
10.8V	2642	2039	1321	1268	968	789	610	506	360	284	238	171	151	73.80	18.35	15.67
10.5V	3214	2183	1452	1307	980	808	640	531	379	297	250	180	158	75.46	18.48	15.84

Performance curve of 6-XFMJ gel battery

Figure 1 Discharge characteristic curve (20℃)

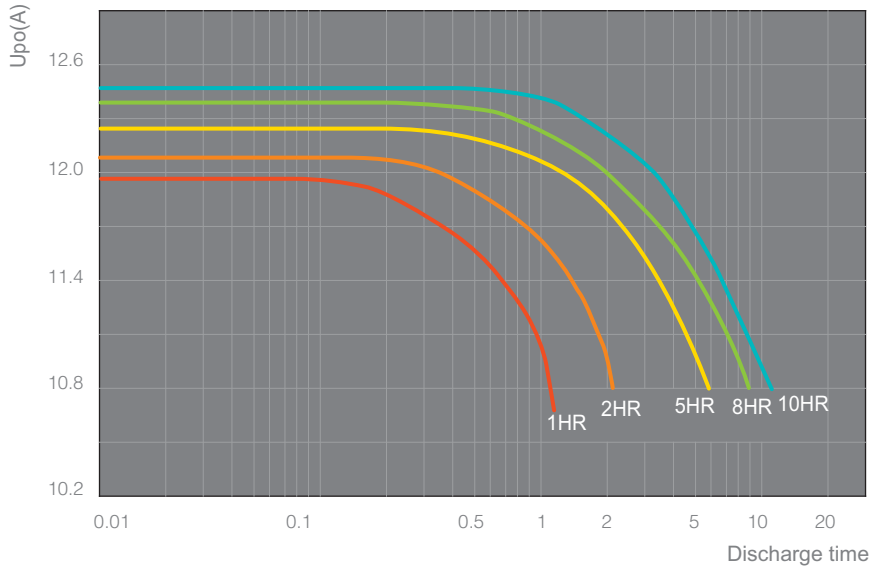


Figure 2 Constant voltage charge characteristic curve

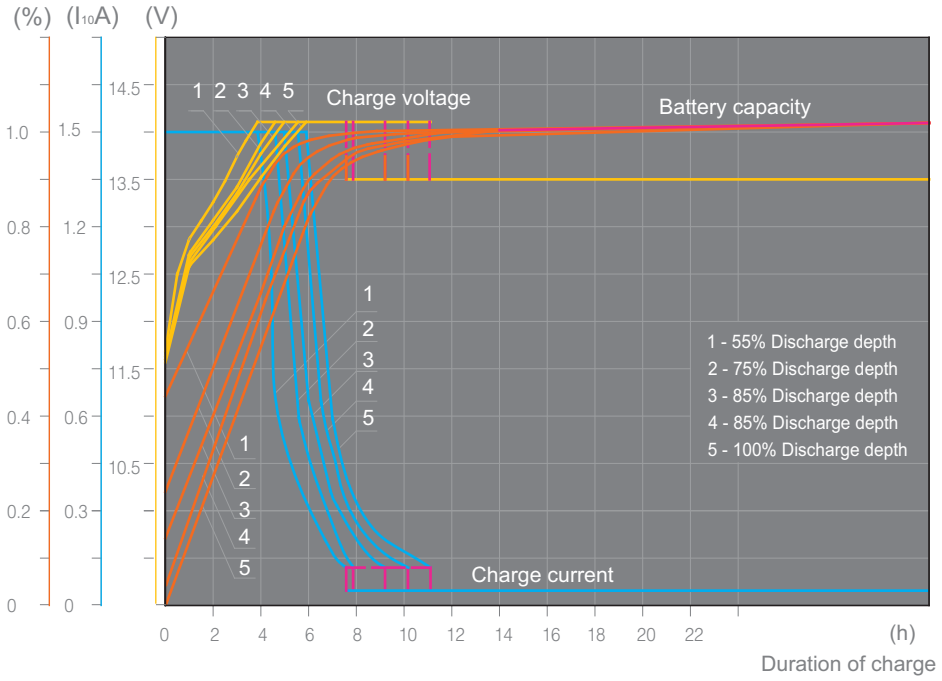


Figure 3 Relation curves of capacity and temperature

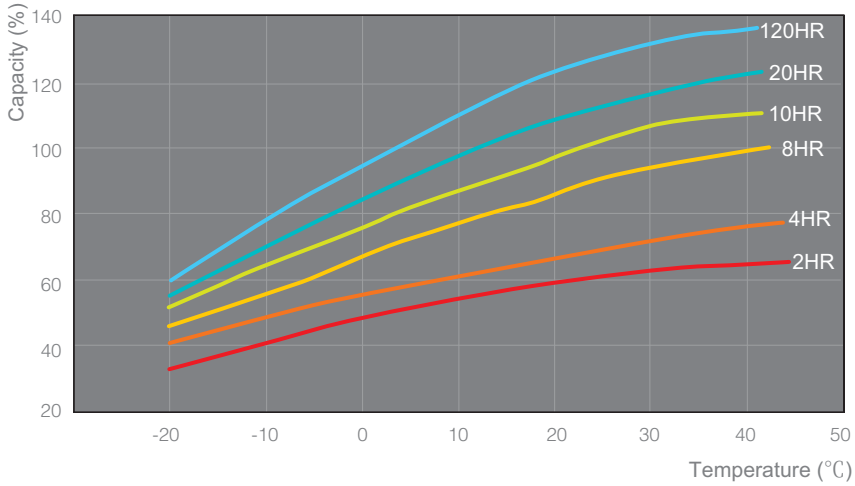


Figure 4 Self-discharge characteristic curve

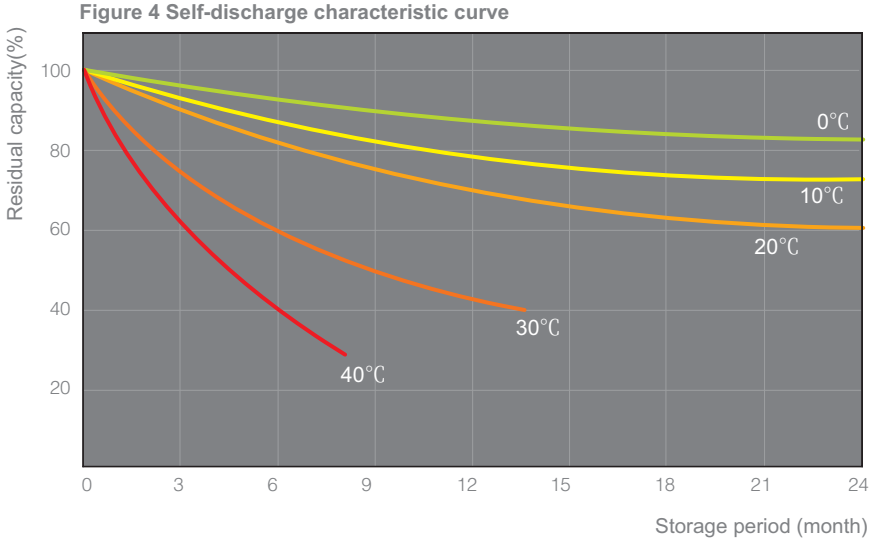
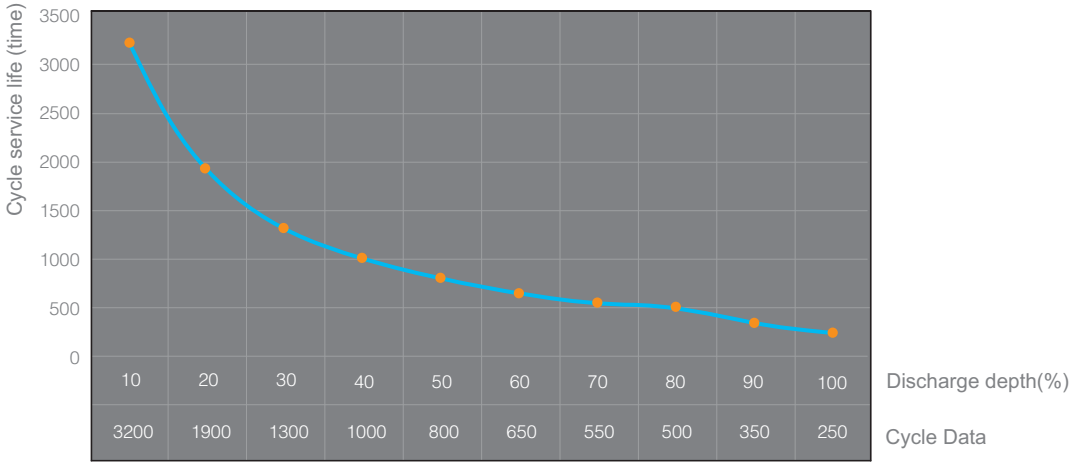
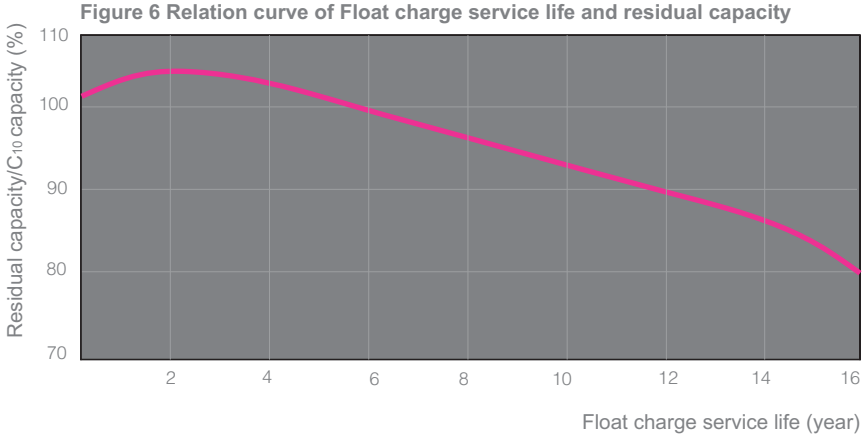


Figure 5 Relation curve between discharge depth and cycle service life



Remark: a) test circumstances: 20-30℃, relative humidity is 50~80percent;
b) charge mode: charge quantity is equal to 105~115percent of discharge quantity
c) residual capacity is 80 percent C_{10}

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



all data and specifications are subject to change without notice.

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