

machpower®



DATASHEET BATTERY 12V 4.5Ah

MODEL: UPS-B412

FEATURES

- 100% before shipment testing, stable and reliable long-term quality

- Patented grid alloy formula and updated manufacturing technique

- Completely sealed and maintenance-free, low self-discharge

- Excellent charging and re-charging acceptance

- Cycle use: More than 260 cycles at 100% DOD

- Floating & standby use: 3-5 years

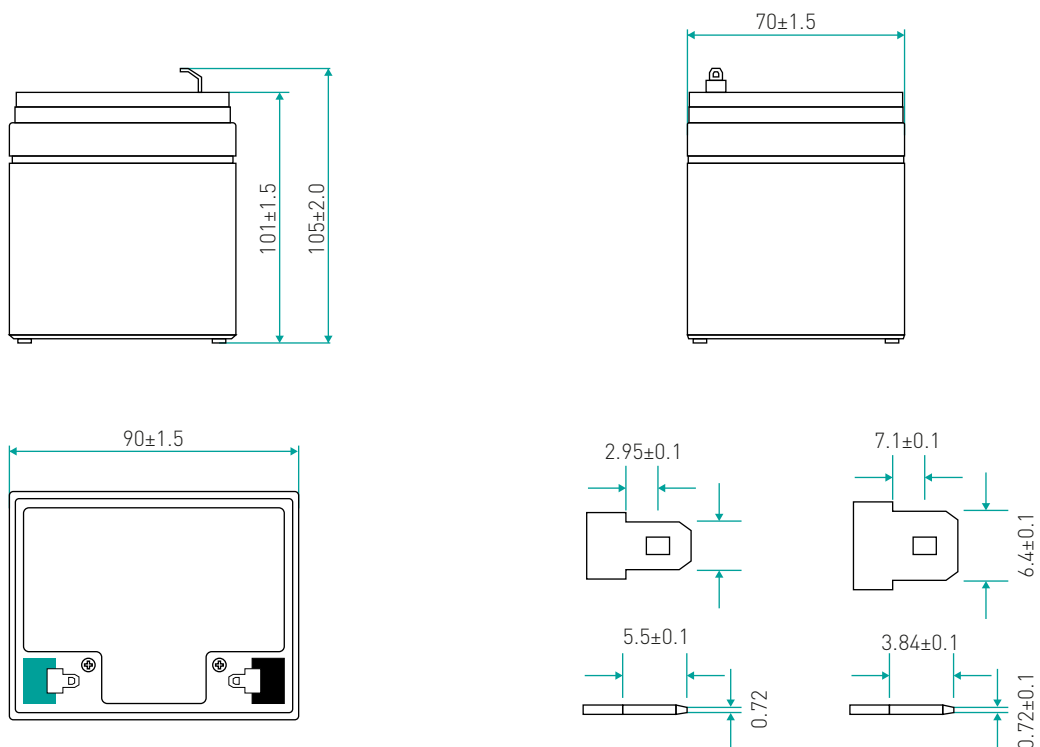
APPLICATION

- | | | |
|-------------------------|-------------------|-------------------|
| Alarm System | Security System | Power tools |
| Cable Television | Medical Equipment | Control Equipment |
| Communication Equipment | UPS | Toys |
| Emergency Power System | | |

CONSTRUCTION

Component	Raw material
Positive	Lead dioxide
Negative	Lead
Container	ABS
Cover	ABS

Sealant	Epoxy
Safety valve	Rubber
Terminal	Copper
Separator	Fiber glass
Electrolyte	Sulfuric acid



SPECIFICATION

Battery	12V 4.5Ah			
Designed Floating Life	3~5 Years			
Capacity (25°C)	20HR(0.225A,10.5V)	10HR(0.408A,10.5V)	5HR(0.391A,10.5V)	1HR(1.330A,10.5V)
	4.50Ah	4.08Ah	3.71Ah	2.30Ah
Dimensions	Lenght	Width	Height	Total Height
	90mm	70mm	101mm	105mm
Approx. Weight	1.44Kg ±3%			
Internal Resistance	Full charged at 25°C:≤25.00 mΩ			
Self Discharge	2% of capacity declined per month at (25°C)			
Capacity Affected by Temp. (20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use			Float use
	14.4-15.0V(-30mV/°C), max. Current:1.20A			13.5-13.8V (-20mV/°C)

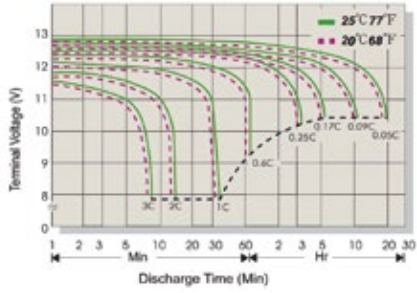
Constant Current Discharge(CC,Unit:A) at 25°C(77°F)

F.V/Time	5min	10min	15min	30min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.80V/Cell	13.53	9.27	6.49	4.12	2.253	1.406	1.093	0.860	0.729	0.487	0.401	0.221
1.75V/Cell	13.79	9.45	6.61	4.20	2.295	1.432	1.114	0.876	0.742	0.496	0.408	0.225
1.70V/Cell	14.20	9.73	6.81	4.32	2.364	1.475	1.147	0.902	0.765	0.511	0.420	0.229
1.67V/Cell	14.61	10.01	7.01	4.45	2.433	1.518	1.180	0.928	0.787	0.526	0.433	0.234
1.60V/Cell	15.03	10.30	7.20	4.57	2.502	1.561	1.214	0.955	0.809	0.541	0.445	0.241

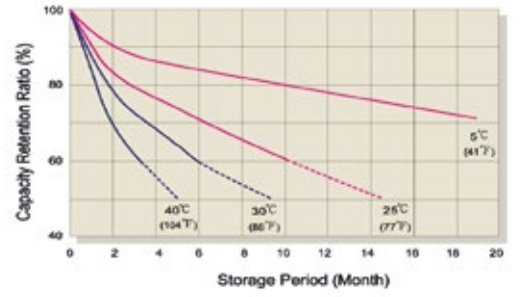
Constant Power Discharge (CP,Unit:W) at 25°C(77°F)

F.V/Time	5min	10min	15min	30min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.80V/Cell	26.39	18.08	12.65	8.03	4.39	2.74	2.13	1.68	1.42	0.95	0.78	0.43
1.75V/Cell	26.88	18.42	12.89	8.18	4.48	2.79	2.17	1.71	1.45	0.97	0.80	0.44
1.70V/Cell	27.69	18.97	13.27	8.43	4.61	2.88	2.24	1.76	1.49	1.00	0.82	0.45
1.67V/Cell	28.49	19.52	13.66	8.67	4.74	2.96	2.30	1.81	1.53	1.03	0.84	0.46
1.60V/Cell	29.30	20.08	14.05	8.92	4.88	3.04	2.37	1.86	1.58	1.05	0.87	0.47

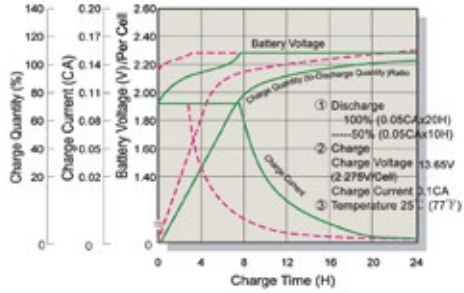
Terminal Voltage (V) and Discharge Time



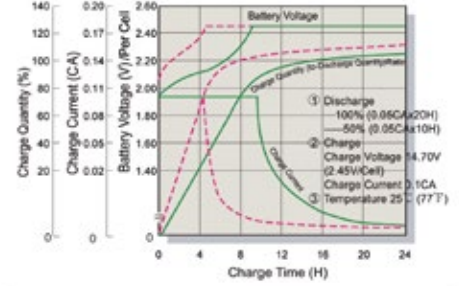
Capacity Retention Characteristic



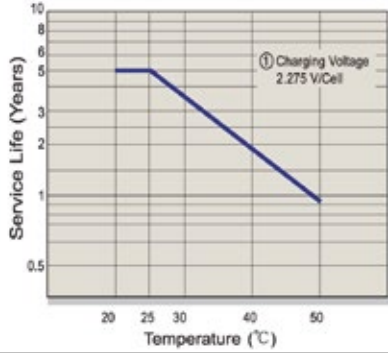
Battery Voltage and Charge Time for Standby Use



Battery Voltage and Charge Time for Cycle Use



Tickle (or Float) Service Life



Cycle Service Life

