

MR4.5-6



General Features

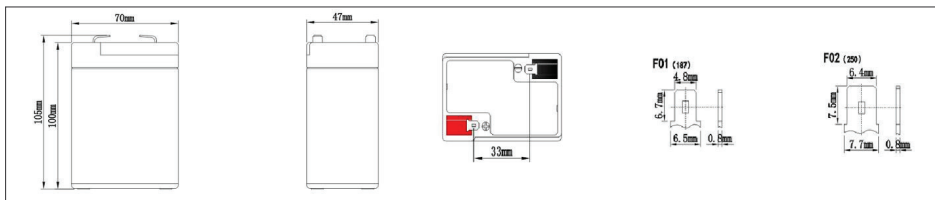
- Designed floating charging service life: 8 years (25°C)
- Sealed and maintenance free operation
- Safety valve installation for explosion proof
- Low self-discharge characteristic
- Wide operating temperature range from 0°C~40°C
- Lead Aluminum calcium Tin alloy high energy, prevent corrosion

Application

- DC power supply
- Medical equipments
- UPS/EPS power supply
- Emergency lighting systems
- Alarm and security systems

MR series is a general purpose battery with 6~8 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the MR series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

Dimensions



Physical Specifications

Nominal Voltage	Nominal Capacity (20HR)	Dimension				Weight ±2%	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
6V	4.5AH	70±2mm	47±1mm	100±2mm	105±2mm	Approx 0.7kg (1.54lbs)	≈32.0 mΩ	F01 (standard)

Constant-Voltage Charge

Rated Capacity	
20 hour rate (0.225A)	4.5AH
10 hour rate (0.45A)	4.28AH
5 hour rate (0.76A)	3.70AH
27 minute rate (4.5A)	2.03AH
7 minute rate (13.5A)	1.58AH
Capacity affected by Temperature	
40°C(104°F)	103%
25°C(77°F)	100%
0°C(32°F)	86%

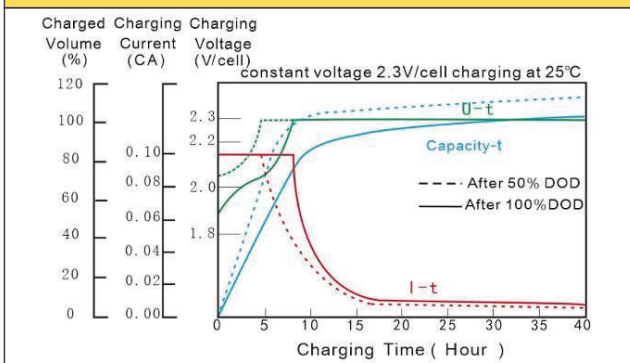
Cycle Application
1. Limit initial current less than 1.125A.
2. Charge until battery voltage (under charge) reaches 7.05V to 7.20V at 25°C(77°F).
3. Hold at 7.05V to 7.20V until current drop to under 0.027A for at least 3 hours.
4. Temperature compensation coefficient of charging voltage is -15mV/°C.
Standby Service
1. Hold battery across constant voltage source of 6.8 to 6.9 volts with current limit 1.125A continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charge status.
2. Temperature compensation coefficient of charging voltage is -9mV/°C.

Battery Discharge Table

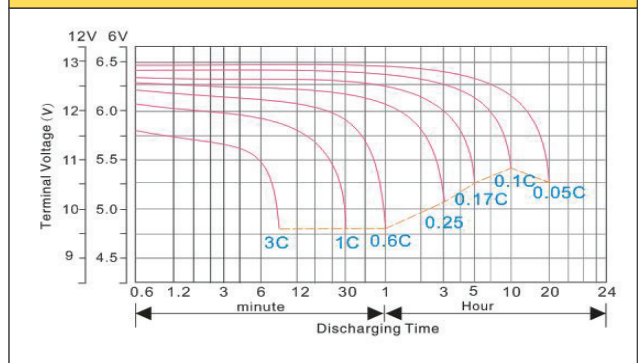
End Voltage	Minute (M)				Hour (H)							
	10	15	30	45	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A												
4.75V	12.2	9.75	5.01	3.65	2.70	2.20	1.68	1.26	0.79	0.525	0.446	0.235
4.80V	11.7	9.28	4.77	3.53	2.63	2.14	1.64	1.23	0.77	0.515	0.441	0.232
5.10V	11.1	8.84	4.54	3.41	2.57	2.09	1.60	1.20	0.75	0.505	0.437	0.230
5.25V	10.9	8.65	4.40	3.33	2.55	2.05	1.54	1.16	0.74	0.500	0.433	0.228
5.40V	10.6	8.41	4.24	3.19	2.53	2.00	1.47	1.12	0.73	0.495	0.428	0.225
Constant Power Discharge Data Sheet (@25°C) Unit: W												
4.75V	72.1	58.4	33.0	23.4	17.4	13.4	10.1	7.18	4.73	3.30	2.62	1.41
4.80V	68.7	55.6	31.4	22.6	17.0	13.0	9.81	7.00	4.61	3.23	2.60	1.39
5.10V	65.4	53.0	29.9	21.8	16.6	12.7	9.57	6.83	4.50	3.17	2.57	1.38
5.25V	63.2	51.4	29.3	21.3	16.3	12.5	9.43	6.68	4.45	3.15	2.53	1.36
5.40V	60.9	49.7	28.4	20.8	16.1	12.4	9.30	6.56	4.40	3.11	2.49	1.34

Performance Characteristics

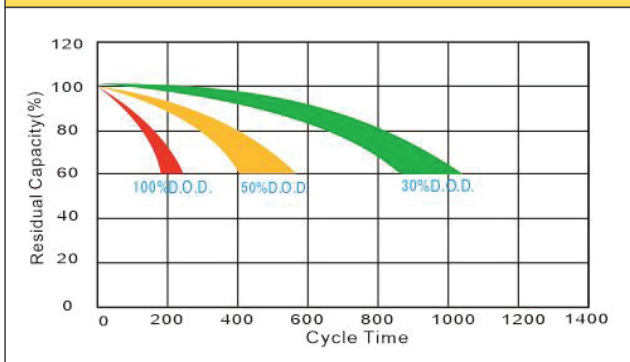
Charge Characteristics (25°C/77°F)



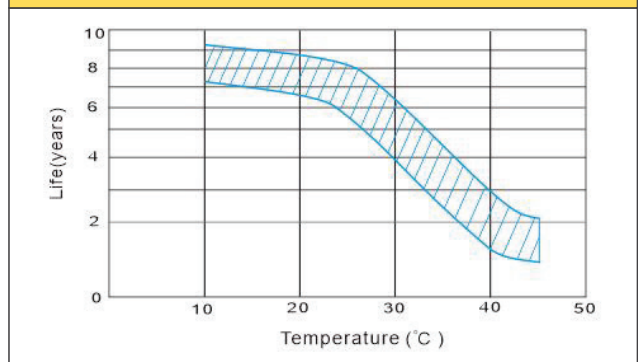
Discharge Characteristic (25°C/77°F)



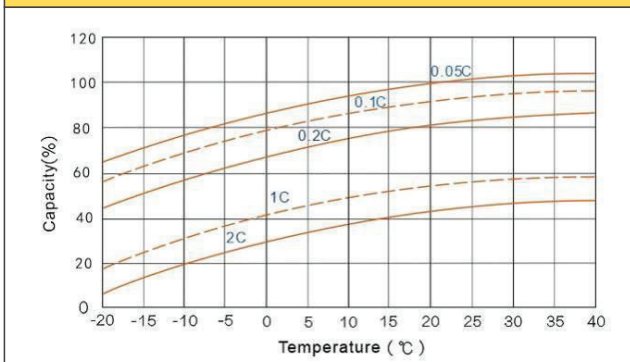
Cycle Life in Relation to Depth of Discharge



Temperature vs Float Life



Capacity Curve At Different Temperature



Self Discharge Characteristics

