



# BUDDY GEL BATTERY 6GFM SERIES —

# 6GFM Series Valve Regulated Sealed Lead Acid Battery Characteristics

Unique structural design, so that the current distribution is uniform, excellent conductivity, battery internal Low resistance to avoid thermal runaway, ensuring the reliability and safety of the battery.

- High tin-lead-calcium alloy, minimize grid corrosion, extend battery life
- Unique active substance formula, so that the battery has a better wide temperature adaptability.
- Excellent high and low temperature resistance and charging acceptability
- Highly efficient gas composite efficiency, avoiding water loss in the battery, making the electrolyte maintenance-free
- Strong deep discharge recovery ability, good cycle and float charging performance



# Main application areas

**01**

**Automatic alarm,  
signaling, security  
systems**

**02**

**Instrumentation,  
automatic control  
systems**

**03**

**Power Remote and  
Uninterruptible Power  
Systems**

**04**

**Fire control systems**

**05**

**General  
uninterruptible power  
supply systems**

**06**

**Centralized Large  
Server Room Power  
System**

**07**

**Distributed Small  
Server Room Power  
Systems**

**08**

**Power supply  
systems for power  
tools**

# Components and Material Composition

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## Applicable standards

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### Components and Material Composition

- Components ..... Materials
- Positive plate ..... Lead dioxide
- Negative Plate ..... Sponge lead
- Battery Cases ..... .ABS Engineering Plastic
- Safety valves ..... Fluorinated rubber
- Terminal blocks ..... Copper core cylindrical
- Partitions ..... Microfiberglass
- Electrolyte ..... Analytically pure sulfuric acid

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### Applicable standards

- GB/T 19638.1–2014
- YD/T 799–2010
- DL/T 637–2019
- IEC 60896-21&22–2004

# Design standard

## Design life

Greater than 7 years

## Operating temperature range

Charging Temperature:  $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$   
Discharge Temperature:  $-40^{\circ}\text{C} \sim 60^{\circ}\text{C}$   
Storage Temperature:  $-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$

## Effect of temperature on capacity

$40^{\circ}\text{C}$  105%;  $25^{\circ}\text{C}$  100%;  $0^{\circ}\text{C}$  86%;  
 $-15^{\circ}\text{C}$  70%

## Float Charge Voltage

$13.20\text{V} \sim 13.70\text{V}$ ;  
Recommended:  $13.50\text{V}$

## Equalizing voltage

$13.80\text{V} \sim 14.40\text{V}$ ;  
Recommended:  $14.10\text{V}$

## Recycling Charging Voltage

$14.40\text{V} \sim 15.00\text{V}$ ;  
Recommended:  $14.70\text{V}$

## Temperature compensation factor for float use

$-20\text{mV}/^{\circ}\text{C}$

## Temperature compensation coefficients

$-30\text{mV}/^{\circ}\text{C}$

## Maximum charging current

$\leq 0.25C10\text{A}$

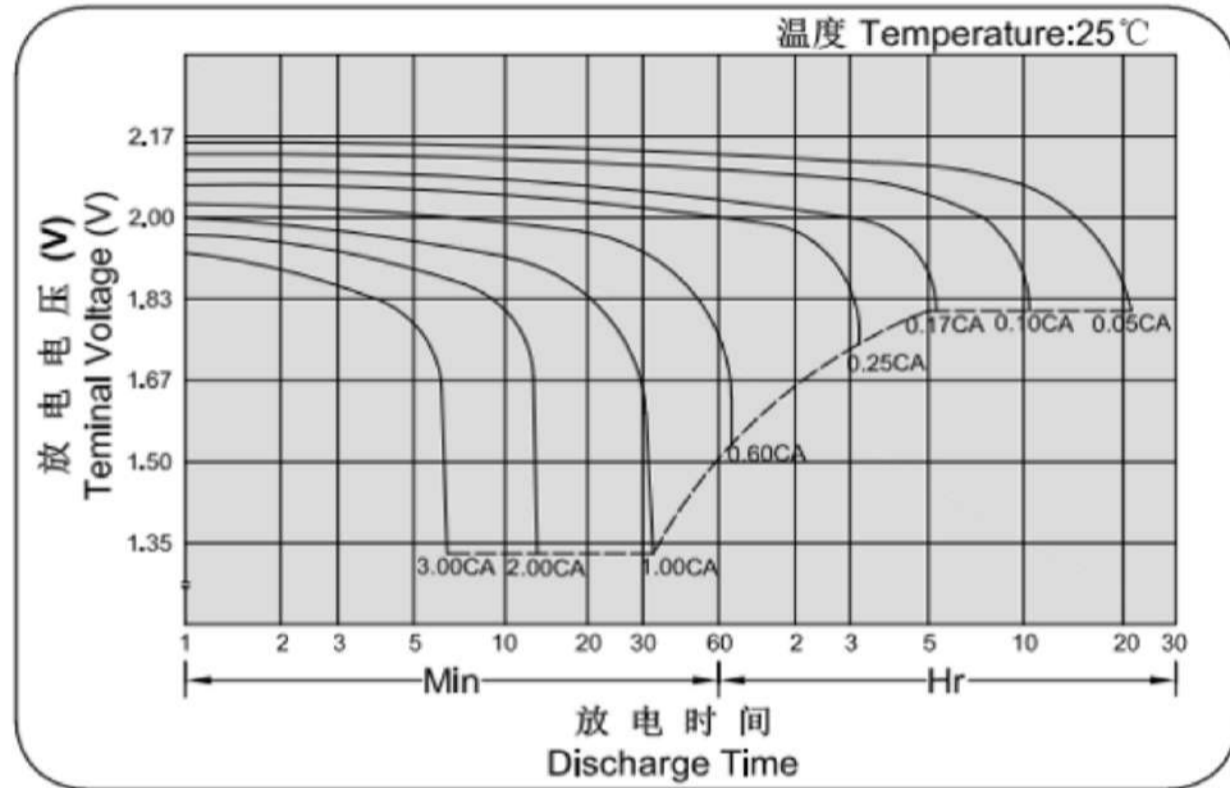
## Monthly self-discharge rate

$\leq 2\%$  ( $20^{\circ}\text{C}$ )

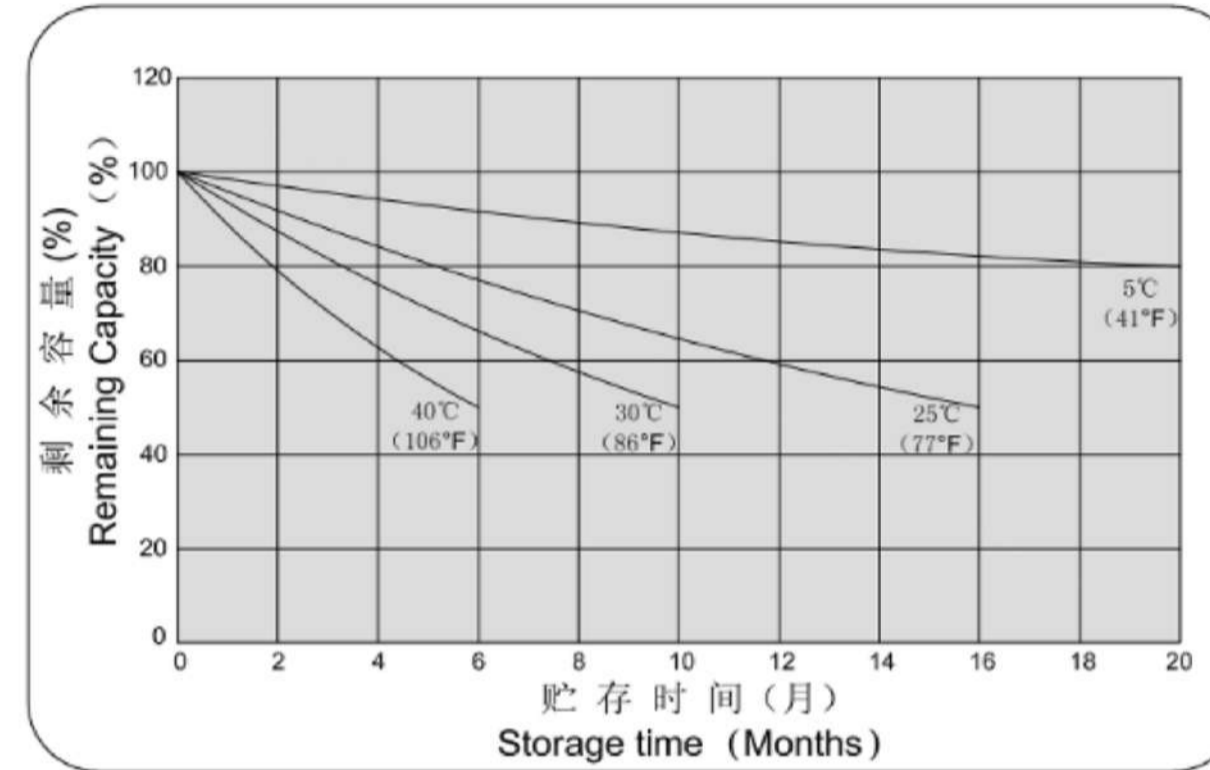
## Shell material

Flame retardant ABS (V0)

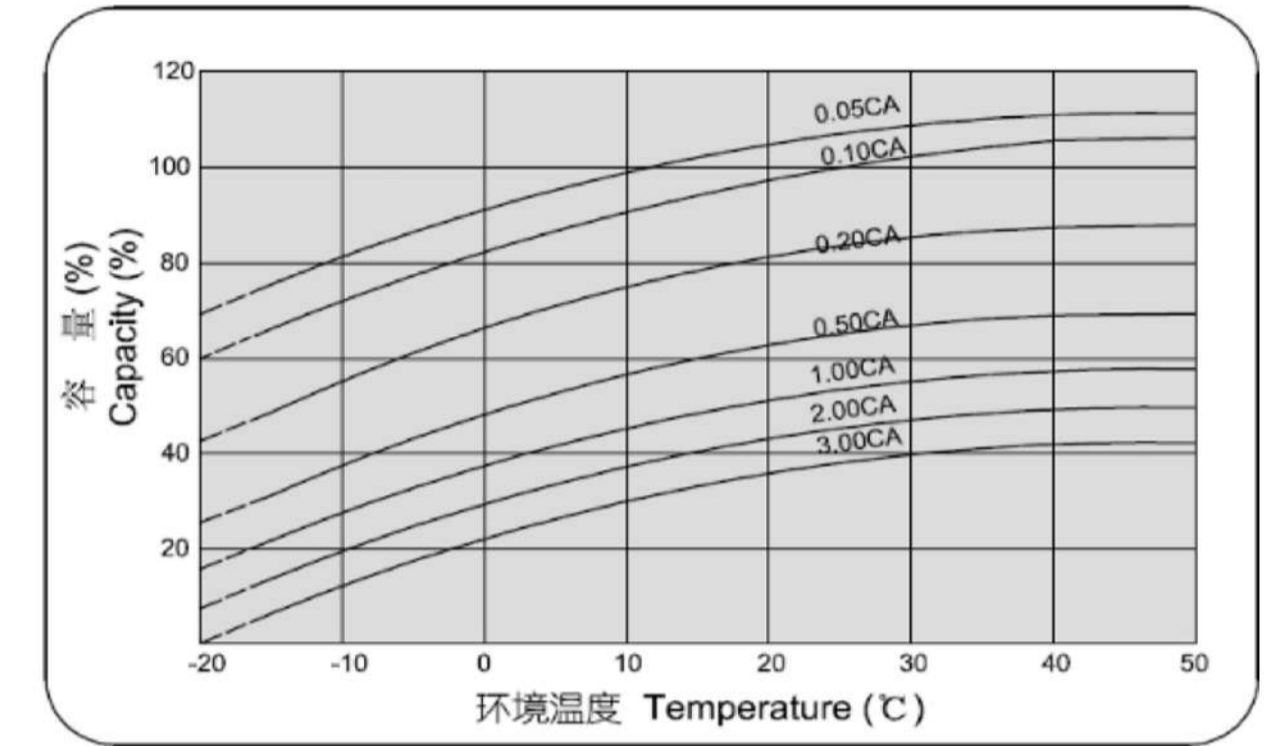
# Characteristic curve



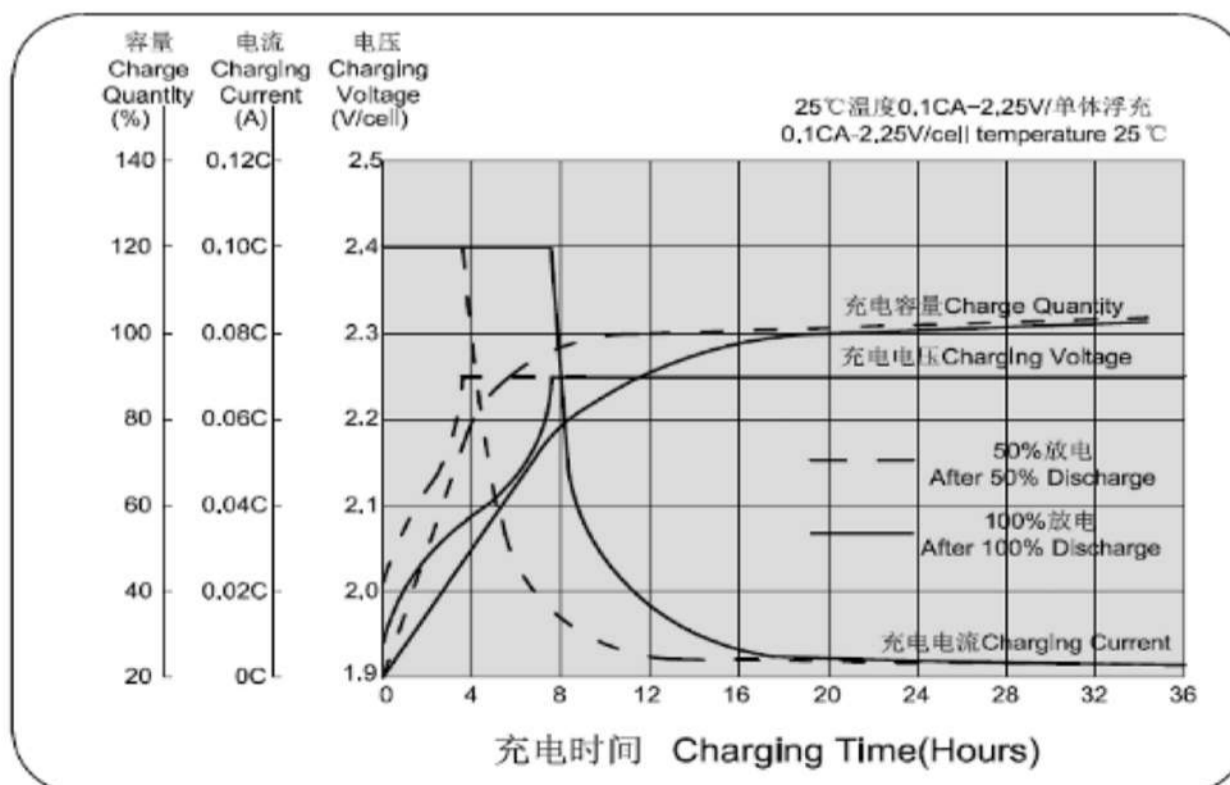
Terminal Voltage (V) and Discharge Time



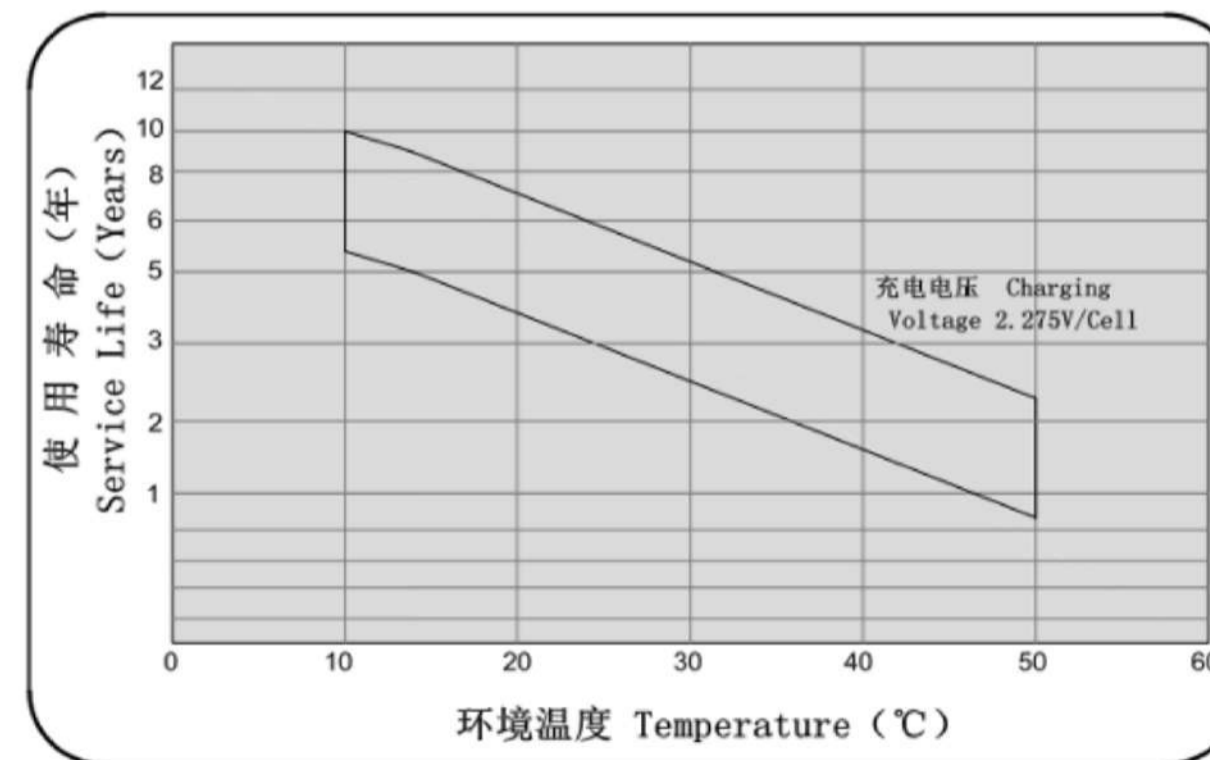
Capacity Retention Characteristic



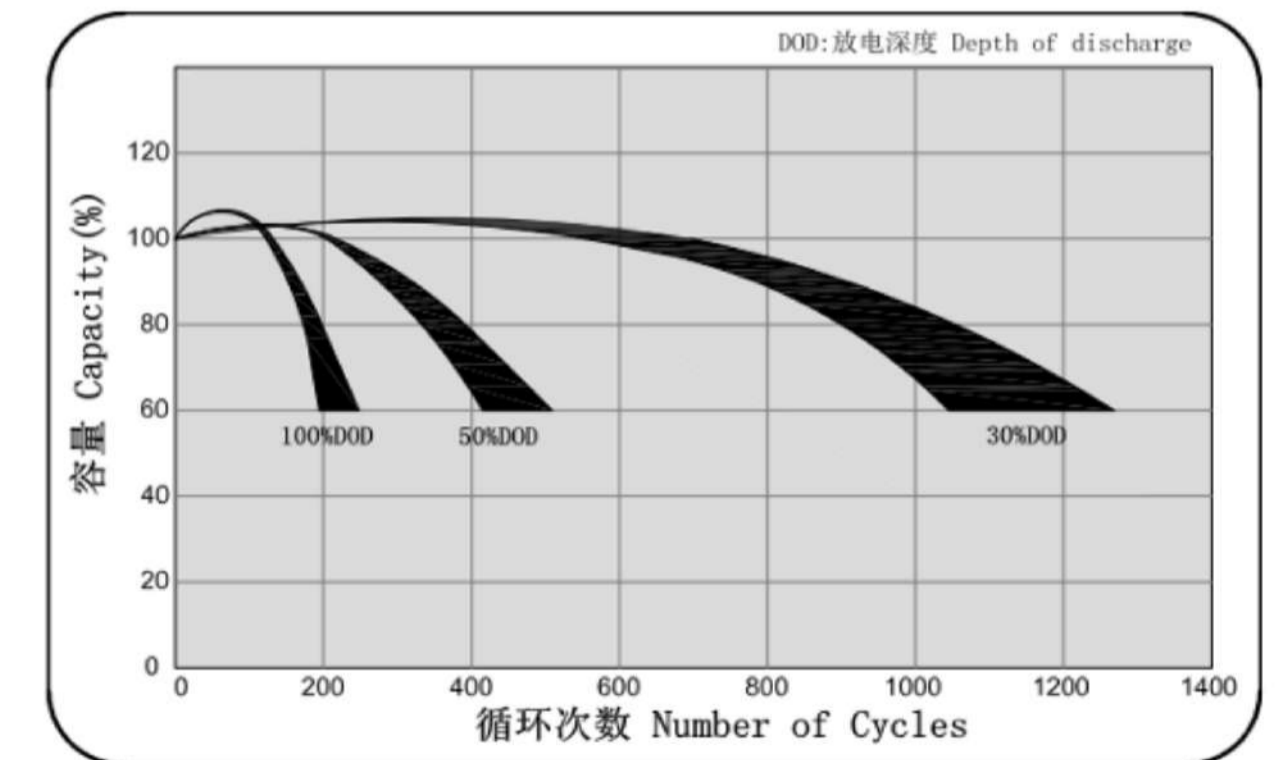
Temperature Effects in Relation to Battery Capacity



Float Charging Characteristics



Effect of Temperature on Float Life



Cycle Life Relation to Depth of Discharge

# Series model technical parameters

Battery type	Rated voltage Voltage(V)	Rated Capacity C10(Ah)	Overall dimensions (mm)				Reference weight (kg)	Terminal Model
			L	W	H	LH		
6-GFM-17	12	19	181	77	170	170	5.5	φ10-M5
6-GFM-24	12	24	165	125	173	173	7.0	φ16-M6
6-GFM-38	12	38	197	166	173	173	11.8	φ16-M6
6-GFM-50	12	50	260	134	204	210	15.5	φ16-M6
6-GFM-60	12	60	350	165	173	173	17.0	φ16-M6
6-GFM-65	12	65	350	165	173	173	20.3	φ16-M6
6-GFM-80	12	80	330	172	215	221	24.2	φ18-M8
6-GFM-90	12	90	330	172	215	221	26.3	φ18-M8
6-GFM-100	12	100	407	173	208	232	29.0	φ18-M8
6-GFM-110	12	110	407	173	208	232	31.2	φ18-M8
6-GFM-120	12	120	407	173	208	232	33.5	φ18-M8
6-GFM-125	12	125	480	170	239	242	35.7	φ20-M8
6-GFM-140	12	140	480	170	239	242	37.7	φ20-M8
6-GFM-150	12	150	480	170	239	242	40.5	φ20-M8
6-GFM-155	12	155	522	239	220	228	48.2	φ18-M8
6-GFM-160	12	160	522	239	220	228	50.9	φ18-M8
6-GFM-175	12	175	522	239	220	228	52.1	φ18-M8
6-GFM-190	12	190	522	239	220	228	54.6	φ18-M8
6-GFM-200	12	200	522	239	220	228	60.0	φ18-M8
6-GFM-250	12	250	520	268	220	226	68.4	φ18-M8

# THANKS



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