

SEALED LEAD-ACID BATTERIES v1.2

TCB

LEAD-ACID RECHARGEABLE BATTERY

MODEL: BT-12M5.0AC (12V 5.0Ah)



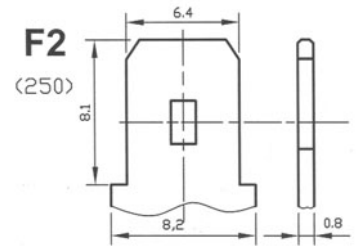
Application

- ☆ Measuring equipment and instrument
- ☆ Telephone sets
- ☆ Lighting equipment
- ☆ Security systems
- ☆ UPS power supply

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 10°C-40°C
- ☆ Lead Aluminum calcium Tin alloy high energy, prevent corrosion

PHYSICAL SPECIFICATIONS		
Nominal Voltage	12V	
Nominal Capacity (20HR)	5.0AH	
Dimensions	Length	90±1mm
	Width	70±1mm
	Container height	101±2mm
	Total Height (with terminal)	107±2mm
Weight	Approx 1.42Kg(3.13lbs)	
Internal Resistance(In full charge status)	29.6mΩ	
Standard Terminals	F2(standard)	



ELECTRICAL SPECIFICATIONS		
Rated Capacity	20 hour rate(250mA)	5.12AH
	10 hour rate(500mA)	4.78AH
	5 hour rate(0.8A)	4.0AH
	27 minute rate(5.0A)	0.36AH
	7 minute rate (15A)	1.75AH
Capacity affected by Temperature (20Hour Rate)	40°C(104°F)	103%
	25°C(77°F)	100%
	0°C(32°F)	86%

Constant Current Discharge Data Sheet (Amperes at 25°C)

End Voltage/cell	Minute (M)				Hour (H)					
	5	10	20	45	1	2	4	8	10	20
1.70	18.23	11.85	6.624	3.437	2.869	1.783	0.996	0.564	0.488	0.257
1.75	18.13	11.75	6.564	3.417	2.849	1.723	0.976	0.559	0.483	0.255
1.80	17.83	11.65	6.495	3.387	2.829	1.644	0.956	0.553	0.478	0.251

CYCLE APPLICATION

1. Limit initial current less than 1,25A.
2. Charge until battery voltage (under charge) reaches 14,1V to 14,4V at 25°C.
3. Hold at 14,1V to 14,4V until current drop to under 0,03A for at least 3 hours.
4. Temperature compensation coefficient of charging voltage is -30mV/°C.

Constant Power Discharge Data Sheet (Watt at 25°C)

End Voltage/cell	Minute (M)				Hour (H)					
	5	10	20	45	1	2	4	8	10	20
1.70	218.85	141.85	79.390	41.319	34.396	21.327	11.943	6.767	5.806	3.048
1.75	216.06	140.65	78.723	40.980	34.167	20.550	11.724	6.700	5.751	3.037
1.80	213.27	139.56	77.946	40.532	33.948	19.763	11.505	6.633	5.684	2.992

STANDBY SERVICE

1. Hold battery across constant voltage source of 13,6V to 13,8V with current limit 1,25A 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 -18mV/°C.

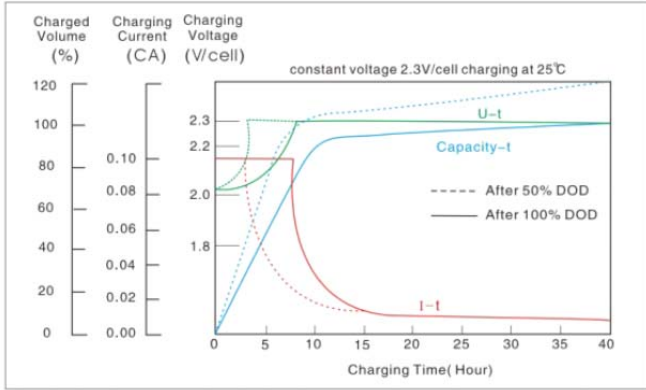
NOTE: the battery should be charged within 6 months of storage. Otherwise, permanent loss of capacity might occur as a result of sulfation.

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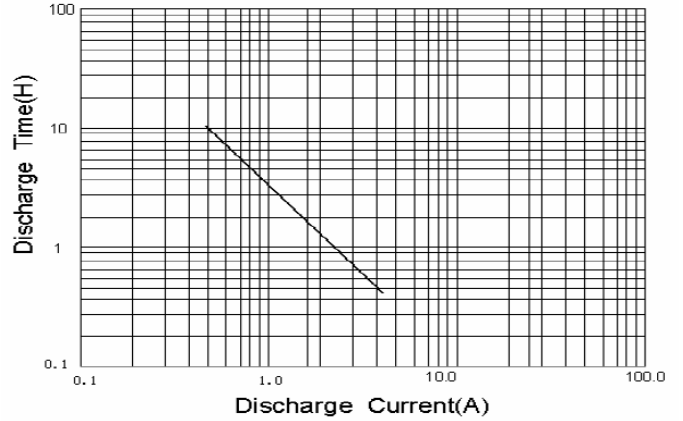


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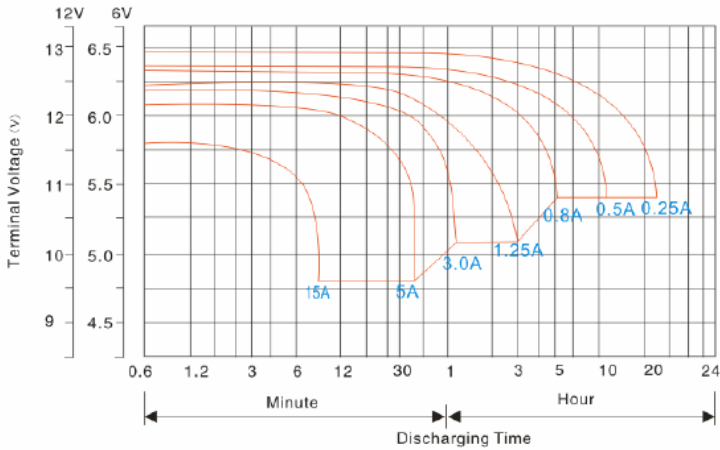
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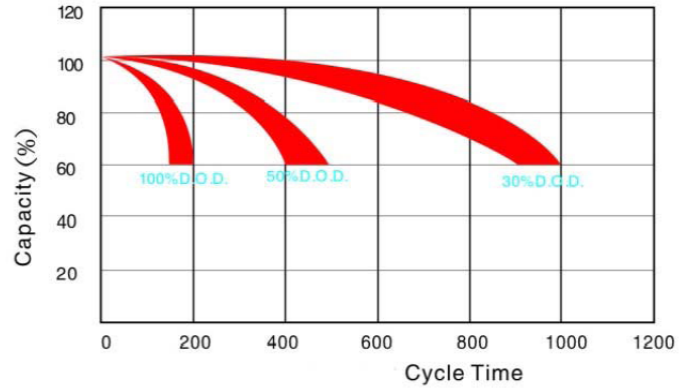
Charge Characteristics



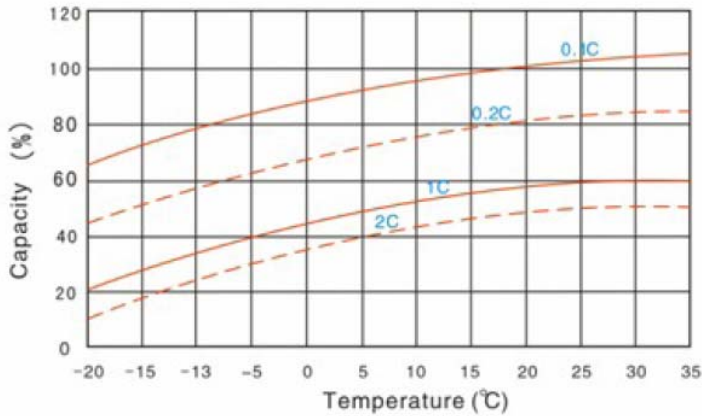
Discharge Current & Discharge Duration (25°C)



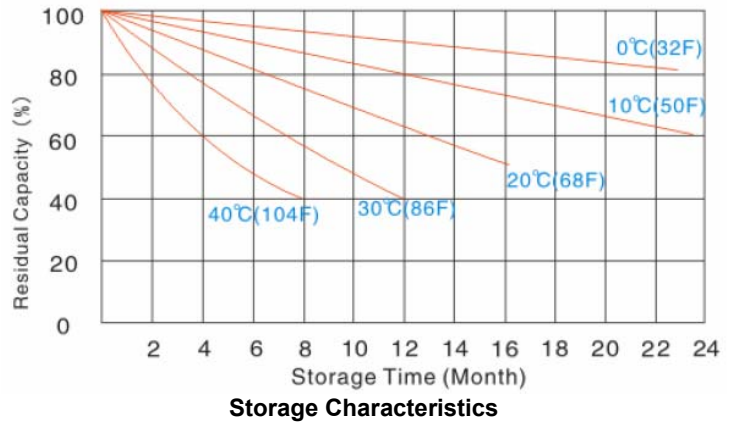
Discharge Characteristics



The Relationship Between Lifetime and Depth Of Discharge(25°C)



Capacity Curve at Different Temperature



Storage Characteristics