

SPB 12V - 33Ah | VRLA Battery



Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	12 years	
Dimensions	Length	195 mm
	Width	130 mm
	Height	155 mm
	Total Height	166 mm
Approx. Weight	10.0 kg	
Nominal Capacity (25°C)	20 hours rate (1.73 A, 10.8 V)	34.6 Ah
	10 hours rate (3.30 A, 10.8 V)	33.0 Ah
	5 hours rate (5.78 A, 10.5 V)	28.9 Ah
	1 hour rate (19.60 A, 10.2 V)	19.6 Ah
Max. Discharge Current (25°C)	330 A (5s)	
Internal Resistance	11.0 mOhms	
Fully Charged battery (25°C)		
Self-Discharge	3% of capacity declined per month at 25°C (average)	
Operating Temperature Range	Discharge	-15°C~50°C
	Charge	-10°C~50°C
	Storage	-20°C~50°C
Short Circuit Current	1200 A	
Charging Characteristics (25°C)	Boost charging voltage	2.40-2.45 Vpc
	Maximum charging current	9.9 A
	Temperature compensation	-30 mV/°C
	Float charging voltage	2.25-2.30 Vpc
	Temperature compensation	-18 mV/°C

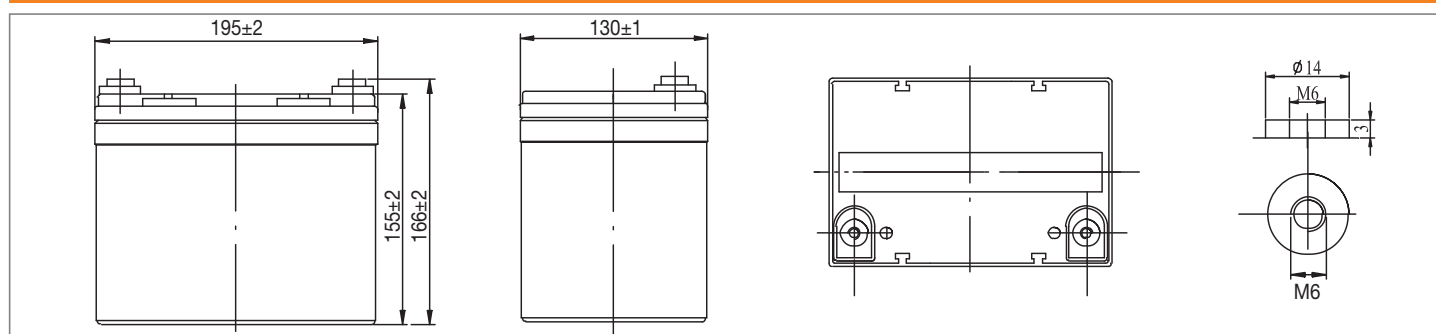
Applications

- Uninterruptible Power Supplies (UPS)
- Electric Power Systems (EPS)
- Emergency backup power supplies
- Electronic apparatus and equipment
- Communication power supplies
- DC power supplies
- Auto control system

Battery Construction

Component	Positive Plate	Negative Plate	Container	Cover	Safety Valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

Dimensions



Constant Current Discharge (Amperes) at 25°C

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	67.2	53.4	32.3	20.5	12.1	8.42	6.90	5.89	4.04	3.36	1.76
1.65 V	65.2	52.1	31.7	20.2	12.0	8.37	6.86	5.86	4.02	3.35	1.76
1.70 V	62.5	50.2	30.7	19.6	11.9	8.31	6.81	5.82	3.99	3.34	1.76
1.75 V	59.8	48.5	30.0	19.3	11.7	8.25	6.77	5.78	3.96	3.32	1.74
1.80 V	56.5	45.9	28.9	18.7	11.4	8.00	6.56	5.60	3.84	3.30	1.73

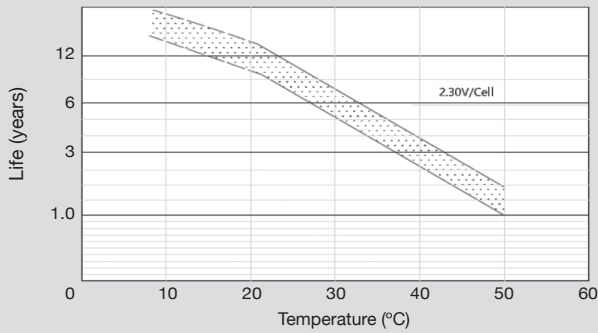
Constant Power Discharge (Watts) at 25°C

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	726	586	363	233	140	99.0	81.1	69.6	48.0	40.1	21.2
1.65 V	704	572	356	230	139	98.4	80.7	69.2	47.7	40.0	21.1
1.70 V	675	551	345	224	138	97.7	80.1	68.7	47.4	39.9	21.1
1.75 V	646	532	336	219	136	97.0	79.6	68.3	47.0	39.7	20.9
1.80 V	610	504	324	213	132	94.1	77.2	66.2	45.6	39.4	20.8

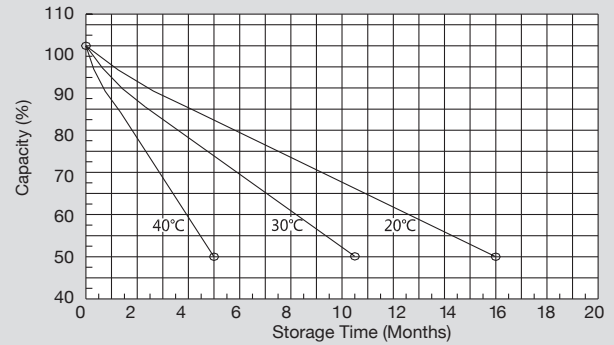
(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

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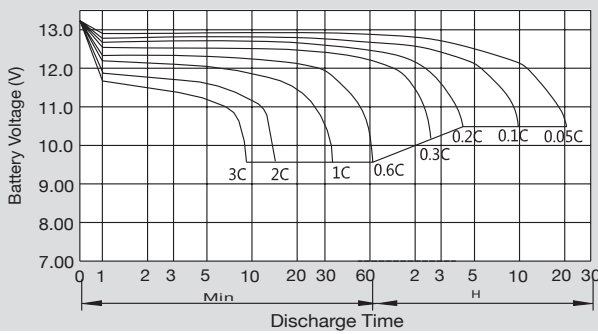
Temperature Effects on Float Life



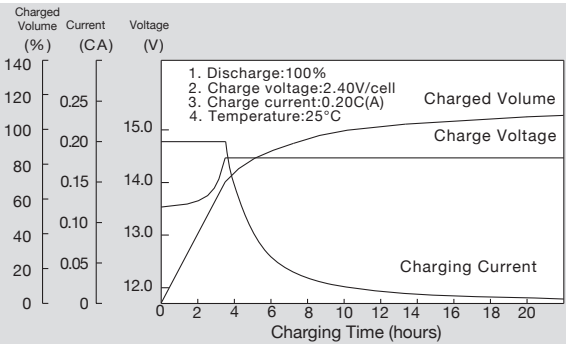
Self Discharge Characteristics



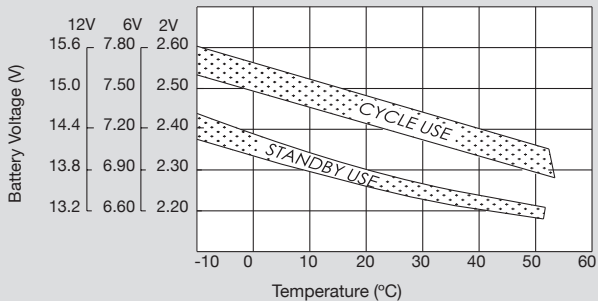
Discharge Characteristics (25°C)



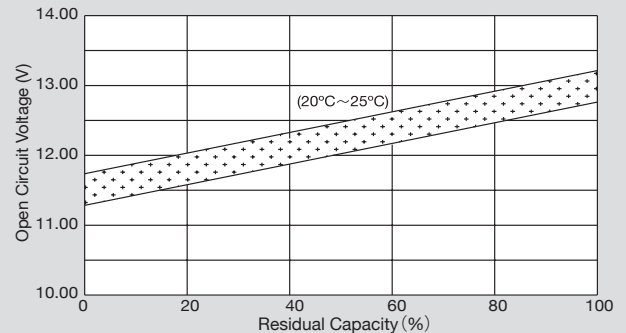
Charging Characteristic (25°C)



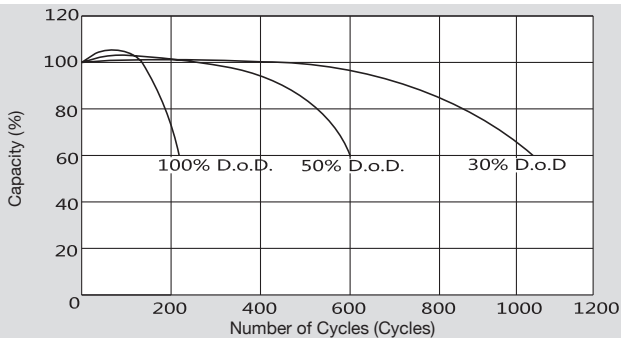
Relationship Between Charging Voltage and Temperature



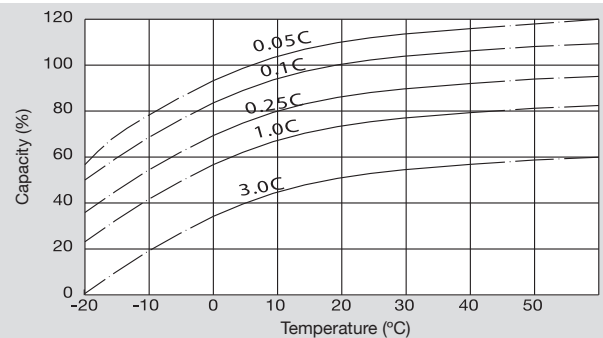
Relationship Between OCV and Residual Capacity (25°C)



Cycle Service Life in Relation to Depth of Discharge



Temperature Effects on Capacity



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