

# SPB 12V - 55Ah | VRLA Battery



## Specifications

Nominal Voltage	12 V			
Number of cells	6			
Design Life	12 years			
Dimensions	Length	229 mm		
	Width	138 mm		
	Height	208 mm		
	Total Height	211 mm		
Approx. Weight	17.0 kg			
	20 hours rate (2.89 A, 10.8 V)	57.80 Ah		
Nominal Capacity (25°C)	10 hours rate (5.50 A, 10.8 V)	55.00 Ah		
	5 hours rate (9.63 A, 10.5 V)	48.15 Ah		
	1 hour rate (32.70 A, 10.2 V)	32.70 Ah		
	Max. Discharge Current (25°C)	550 A (5s)		
Internal Resistance	6.5 mOhms			
Fully Charged battery (25°C)	3% of capacity declined per month at 25°C (average)			
Self-Discharge	Discharge	:-15°C~50°C		
	Charge	:-10°C~50°C		
	Storage	:-20°C~50°C		
Operating Temperature Range	1850 A			
	Boost charging voltage	2.40-2.45 Vpc		
Charging Characteristics (25°C)	Maximum charging current	16.5 A		
	Temperature compensation	-30 mV/°C		
	Float charging voltage	2.25-2.30 Vpc		
	Temperature compensation	-18 mV/°C		
	Short Circuit Current	1850 A		
		Boost charging voltage 2.40-2.45 Vpc		
	Maximum charging current 16.5 A			
	Temperature compensation -30 mV/°C			
	Float charging voltage 2.25-2.30 Vpc			
	Temperature compensation -18 mV/°C			

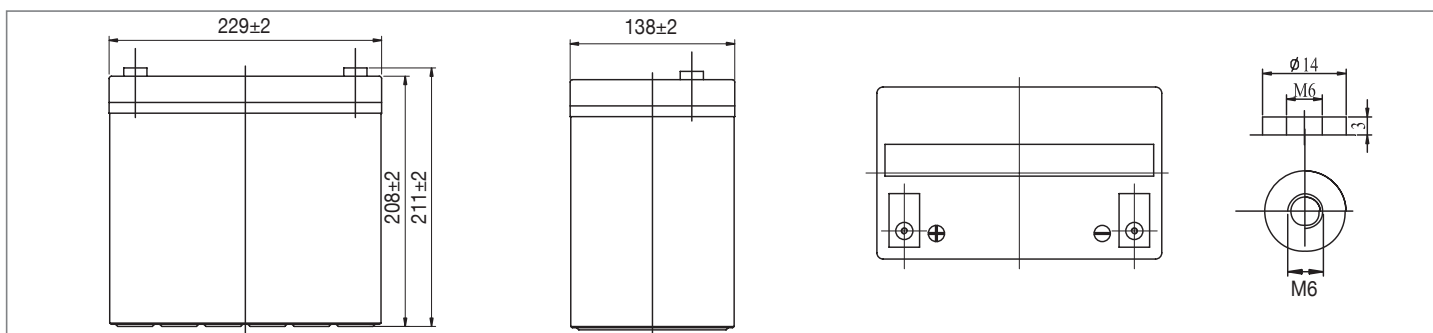
## Applications

- 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	112	88.9	53.9	34.1	20.1	14.0	11.5	9.82	6.73	5.60	2.94
1.65 V	109	86.8	52.8	33.6	20.0	13.9	11.4	9.76	6.69	5.59	2.93
1.70 V	104	83.6	51.2	32.7	19.8	13.8	11.4	9.69	6.65	5.57	2.93
1.75 V	99.7	80.8	50.0	32.1	19.5	13.8	11.3	9.63	6.60	5.54	2.91
1.80 V	94.1	76.5	48.1	31.1	19.0	13.3	10.9	9.34	6.40	5.50	2.89

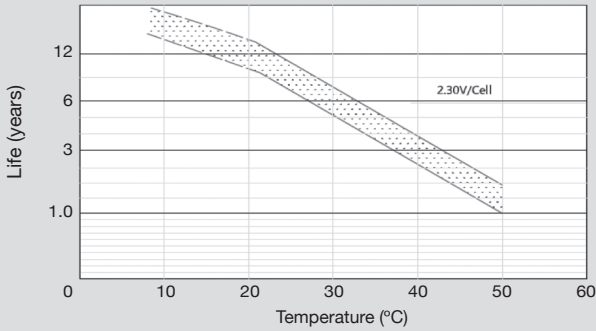
## Constant Power Discharge (Watts) at 25°C

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	1210	977	605	389	233	165	135	116	80.0	66.9	35.3
1.65 V	1174	953	593	383	231	164	134	115	79.5	66.7	35.2
1.70 V	1125	918	575	373	229	163	134	115	79.0	66.5	35.1
1.75 V	1077	887	561	366	226	162	133	114	78.4	66.1	34.9
1.80 V	1016	840	540	355	220	157	129	110	76.1	65.7	34.7

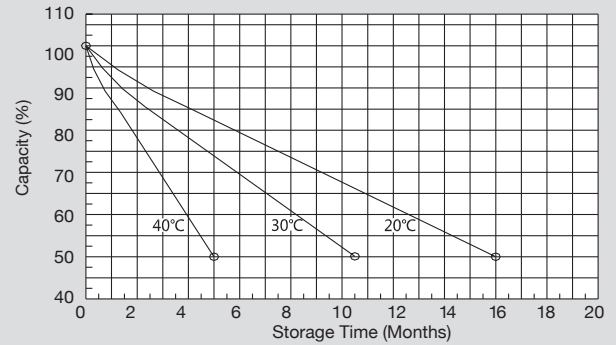
(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

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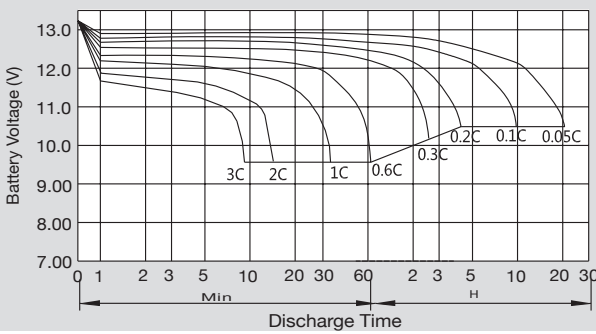
## Temperature Effects on Float Life



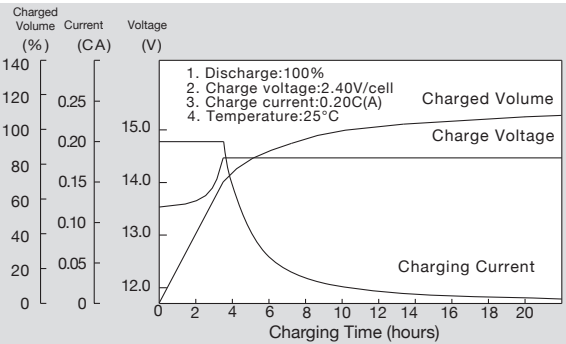
## Self Discharge Characteristics



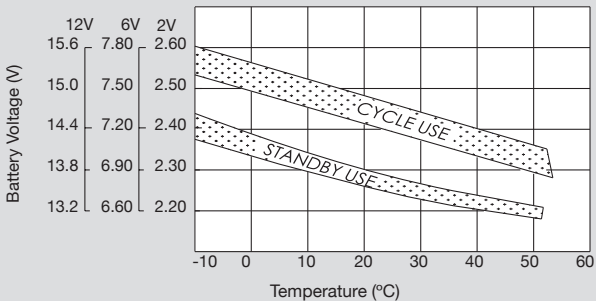
## Discharge Characteristics (25°C)



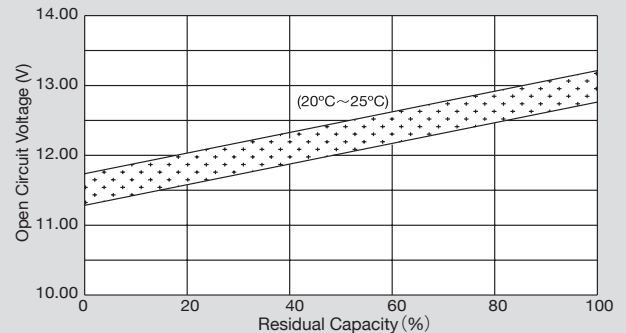
## Charging Characteristic (25°C)



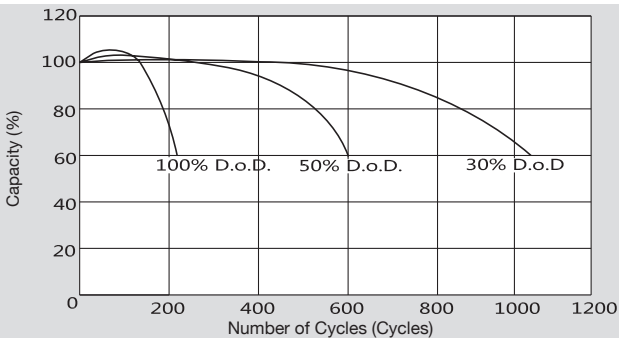
## Relationship Between Charging Voltage and Temperature



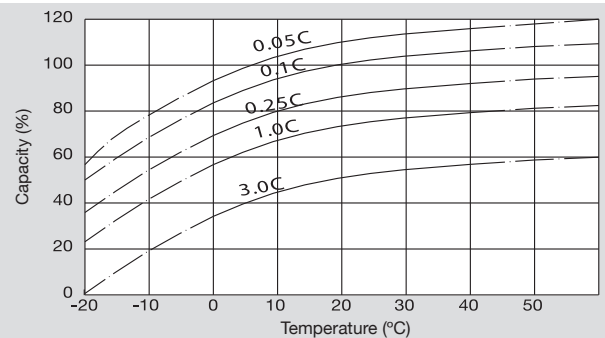
## Relationship Between OCV and Residual Capacity (25°C)



## Cycle Service Life in Relation to Depth of Discharge



## Temperature Effects on Capacity



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