

# SPA 12 - 6 | VRLA Battery



## Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	10 years	
Dimensions	Length	151 mm
	Width	52 mm
	Height	94 mm
	Total Height	99 mm
Approx. Weight	1.83 kg	
Nominal Capacity (25°C)	20 hours rate (0.301 A, 10.5 V)	6.02 Ah
	10 hours rate (0.554 A, 10.5 V)	5.54 Ah
	5 hours rate (1.020 A, 10.5 V)	5.10 Ah
	1 hour rate (3.900 A, 9.6 V)	3.90 Ah
Max. Discharge Current (25°C)	97.5 A (5s)	
Max. Charging Current (25°C)	1.8 A	
Internal Resistance	26 mOhms	
Fully Charged battery (25°C)		
Self-Discharge (25°C)	3% of capacity declined per month (average)	
Operating Temperature Range	Discharge	-15~50°C
	Charge	-10~50°C
	Storage	-20~50°C
Short Circuit Current	500 A	
Charging Characteristics (25°C)	Boost charging voltage	2.40-2.45 Vpc
	Temperature compensation	-30 mV/°C
	Float charging voltage	2.25-2.30 Vpc
	Temperature compensation	-18 mV/°C

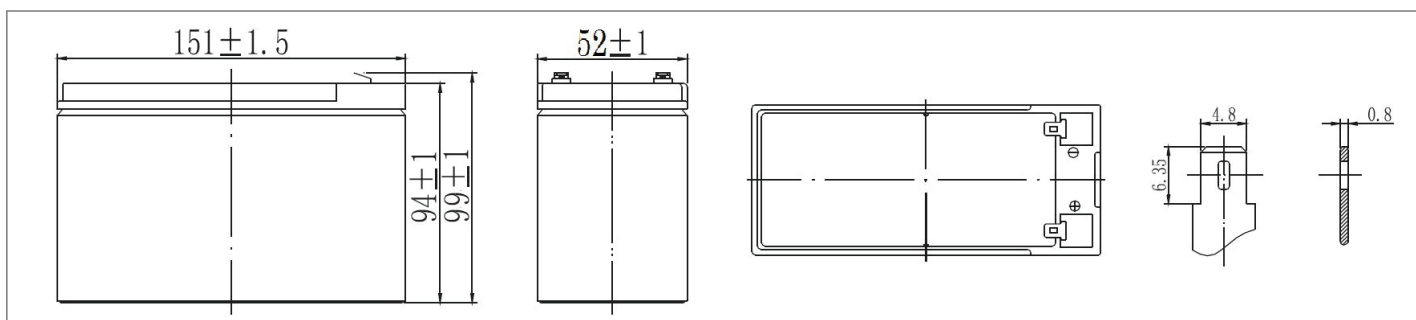
## Applications

- 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)	5 min	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	10 h	20 h
1.60 V	22.8	14.4	11.4	6.36	3.90	2.13	1.53	1.23	1.04	0.56	0.31
1.65 V	22.2	13.9	11.2	6.23	3.84	2.12	1.52	1.22	1.03	0.56	0.31
1.70 V	21.2	13.4	10.7	6.05	3.75	2.10	1.51	1.21	1.02	0.56	0.30
1.75 V	20.3	12.8	10.3	5.90	3.67	2.07	1.50	1.20	1.02	0.55	0.30
1.80 V	19.1	12.1	9.78	5.68	3.55	2.01	1.46	1.16	0.99	0.55	0.30

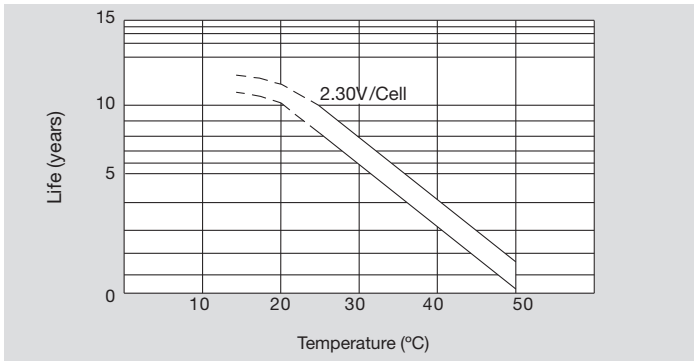
## Constant Power Discharge (Watts) at 25°C

End Voltage (Volts/Cell)	5 min	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	10 h	20 h
1.60 V	255	162	130	72.9	45.1	24.9	18.2	14.6	12.5	6.79	3.66
1.65 V	246	158	126	71.4	44.5	24.8	18.1	14.5	12.4	6.77	3.64
1.70 V	236	151	122	69.2	43.4	24.6	17.9	14.4	12.3	6.74	3.62
1.75 V	226	145	118	67.6	42.5	24.2	17.8	14.3	12.2	6.69	3.60
1.80 V	214	137	112	65.1	41.2	23.6	17.3	13.8	11.81	6.56	3.53

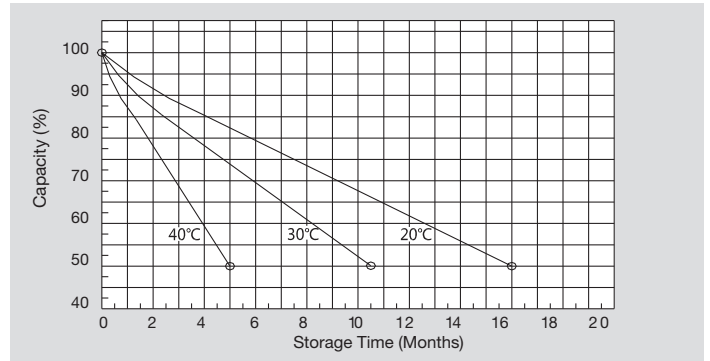
(Note) The above characteristics data are average values obtained within three charge/discharge cycles.

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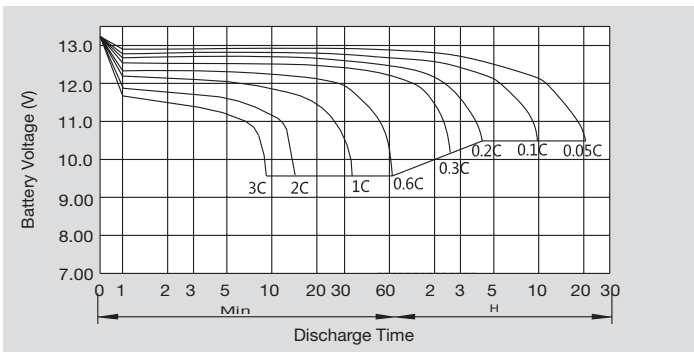
## Temperature Effects on Float Life



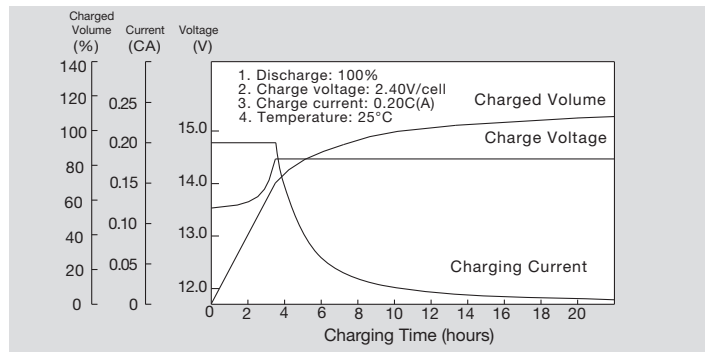
## Self Discharge Characteristics



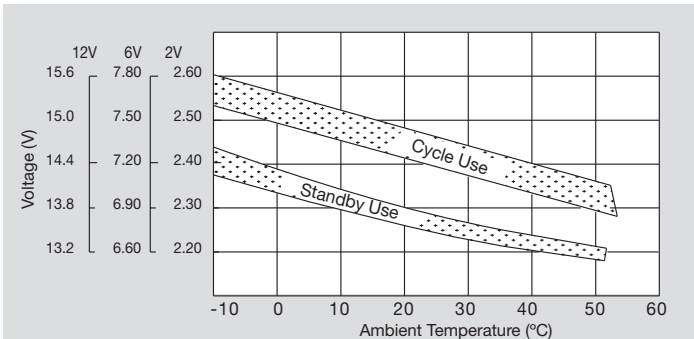
## Discharge Characteristics (25°C)



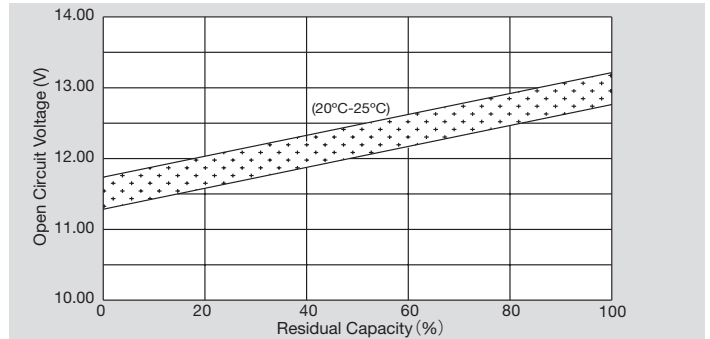
## Charging Characteristics (25°C)



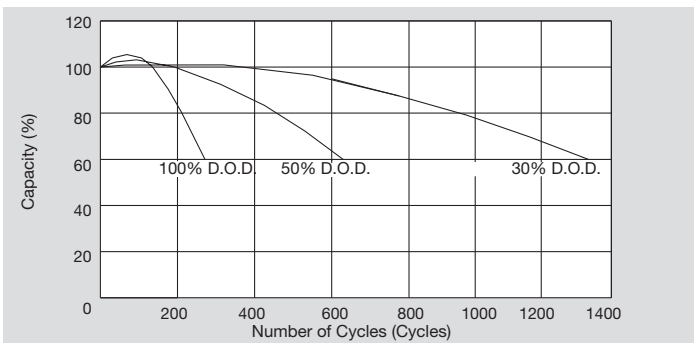
## Relationship Between Charging Voltage and Temperature



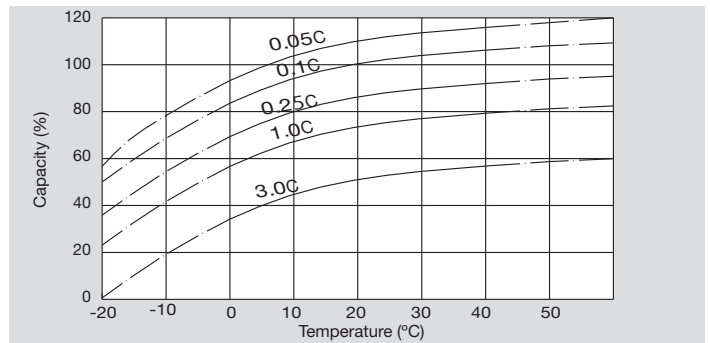
## Relationship Between Open Circuit Voltage and Residual Capacity (25°C)



## Cycle Service Life in Relation to Depth of Discharge



## Temperature Effects on Capacity



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