

Reserve Power SPB Batteries

Stand-By Applications



Reserve Power

As a member of a strong and developing business ecosystem, SUNLIGHT relies on its modern infrastructure, continuous innovation and its passion for excellence, to develop and supply reliable battery solutions.

Our manufacturing plant, located in Xanthi, Northern Greece, is a core element of our dynamic growth. We have systematically invested in the development of **one of the most modern industrial units**, in accordance with the strictest international standards. It covers **200.000m²**, with indoors areas of more than 60.000m².

The company has consistently invested in developing one of **the most advanced industrial plants in the world**, running highly specialized production and assembly lines. The plant is fully compliant with the

strictest international standards and is certified for Quality, Occupational Health & Safety and Environmental management systems.

The products are developed by SUNLIGHT R&D team which constantly designs and evaluates new innovative solutions to better meet market needs based on the latest technological trends, industry developments and market feedback.

SUNLIGHT products and services have gained international recognition by ensuring uninterrupted and reliable operations in a wide range of critical applications for a broad spectrum of industries, such as Telecom and Power networks.

The complete Reserve Power portfolio consists of:

OPzS OPzV	RES OPzS RES OPzV	RES SOPzS RES SOPzV	RES SLT RES SLT GEL	SP SERIES ACCUFORCE SVT/ SVT GEL FRONT ACCESS	OGI
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SPB | Valve Regulated AGM Batteries

The SPB range of SUNLIGHT Valve Regulated Lead Acid batteries has been developed as an advanced battery range, to provide reliable performance in the Uninterruptible Power Supply, Telecommunications, Information Technology and Emergency Power Supply Systems.

Valve Regulated Lead Acid (VRLA) battery is a rechargeable battery type with a safety valve, which allows the internal pressure to be released in case of overcharge. This battery type is maintenance free as there is no need for topping-up during the entire battery service life.

The SUNLIGHT SPB range of VRLA batteries features models with flat plates and capacity from 33 up to 200Ah. SUNLIGHT SPB batteries have been developed to offer competitive solutions to the demanding market requirements, with specifications focused on high quality and reliability.



Security and fire alarm



Transportation signalling



UPS



Telecommunications

	UPS systems	Security and fire alarm systems
	Emergency power supply in power generation plants and substations	Broadcasting systems
	Telecommunications and electrical equipment	Various telemeter equipment
	Switchboards	Signalization
	Robots, control equipment and other factory automation equipment	

SPB 12 - 33



SPB 12 - 40



SPB 12 - 55



SPB 12 - 65



SPB 12 - 75



SPB 12 - 80



SPB 12 - 100



SPB 12 - 120



SPB 12 - 150



SPB 12 - 200



The ideal energy solution for stand-by applications

High Performance

With low internal resistance and efficient discharge characteristics, SUNLIGHT SPB batteries can be applied to many fields in stand-by applications.

Maintenance Free

During the battery service life, there is no need to check the electrolyte level or to add water. The gases produced during electrolysis are almost completely recombined to water (up to 99%) through an effective reaction between hydrogen and oxygen.

Safety Valve Design

Excessive gas produced by overcharge or an incorrect charging method is released through the safety valve, which opens when the internal pressure exceeds a maximum level allowing gas to exit and then automatically reseals.

Leak and Spill Proof Container

The construction of SUNLIGHT SPB batteries guarantees that no electrolyte leakage can occur from the terminals or case. A highly resistant plastic material is used, available in either standard ABS (UL94 HB) or flame retardant type (UL94 V-0).

Wide Temperature Range Performance

SUNLIGHT SPB batteries operate within a wide range of temperature while the optimum temperature for the battery operation is 20°C - 25°C.

Low Self-discharge Rate

Using a lead / calcium grid alloy, the self-discharge is the minimum possible. The battery can be stored for maximum 6 months under normal conditions (20°C - 25°C) with no permanent effect on the capacity or the expected service life.

Separator Technology

Absorbent Glass Mat (AGM) separator, used in SUNLIGHT batteries, is a highly porous material, which achieves maximization of oxygen diffusion and facilitates the reaction of active materials in the plates. The separator also maintains a constant distance between the positive and the negative plates and immobilizes the electrolyte, so that the possibility of acid leakage is minimized.

Multi-position Placement

The sealed construction of the battery allows perfect operation in any position (vertical or horizontal but not in completely inverted position).



Features of SPB Range

- Capacity Range: 33Ah - 200Ah
- Design Floating Life: 12 years at 20°C

- Classified as: "Very Long Life", according to EUROBAT guide 2015
- Configurations: 12V blocks available (6V blocks upon request)



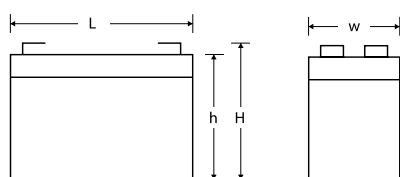
- SUNLIGHT SPB 12V batteries are recognized by **UL**
- SUNLIGHT Manufacturing Plant is certified according to **ISO 9001, ISO 14001** and **BS OHSAS 18001**
- SUNLIGHT SPB batteries comply with **IEC 60896 Part 21 & 22** and **BS6290 Part 4**
- Products are 100% tested and checked prior to shipment
- SUNLIGHT SPB batteries are completely recyclable
- As a member of **EUROBAT** organization SYSTEMS SUNLIGHT S.A. closely monitors the latest developments in the battery industry

Battery Type	Nominal Voltage (V)	Nominal Capacity (Ah) at 1.80 Vpc (25°C)		Length (mm)	Width (mm)	Height (h) (mm)	Total Height (H) (mm)	Typical Weight (kg)	Terminal Position	Terminal Type	Maximum Current (25°C)		Internal Resistance (mOhm)	Short Circuit Current (A)
		20 h	10 h								Charging (A)	Discharging (A)		
SPB 12 - 33	12	34.6	33.0	195	130	155	166	10.00	A	M6/Ø14	9.90	330.0	11.0	1200
SPB 12 - 40	12	42.0	40.0	197	165	170	170	13.50	B	M6/Ø14	12.00	400.0	8.5	1400
SPB 12 - 55	12	57.8	55.0	229	138	208	211	17.00	A	M6/Ø14	16.50	550.0	6.5	1850
SPB 12 - 65	12	68.2	65.0	350	167	179	179	22.50	A	M6/Ø14	19.50	650.0	6.0	2000
SPB 12 - 75	12	75.6	75.0	260	168	211	214	24.00	A	M6/Ø14	22.50	750.0	6.5	2020
SPB 12 - 80	12	84.6	80.5	350	167	179	179	24.00	A	M6/Ø14	24.00	800.0	4.0	2600
SPB 12 - 100	12	105.0	100.0	330	171	214	220	31.50	A	M6/Ø14	30.00	800.0	4.5	2700
SPB 12 - 120	12	126.0	120.0	409	176	225	225	36.00	A	M8/Ø16	36.00	960.0	4.0	3020
SPB 12 - 150	12	157.6	150.0	485	172	240	240	45.50	A	M8/Ø16	45.00	1200.0	3.5	3450
SPB 12 - 200	12	210.0	200.0	522	238	218	221	64.00	D	M8/Ø16	60.00	1600.0	3.0	4030

All dimensions and weights shown are subject to manufacturing tolerances

Drawings

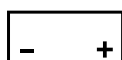
Case Dimensions



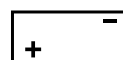
Terminal Positions



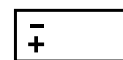
A



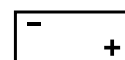
B



C

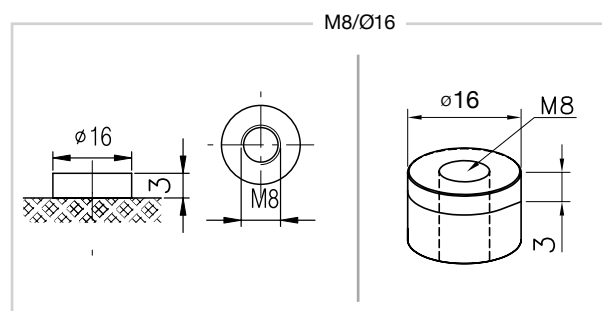
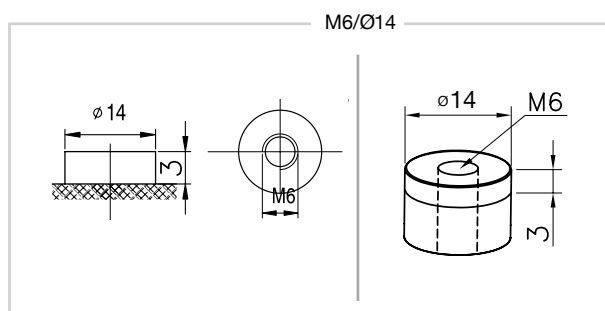


D

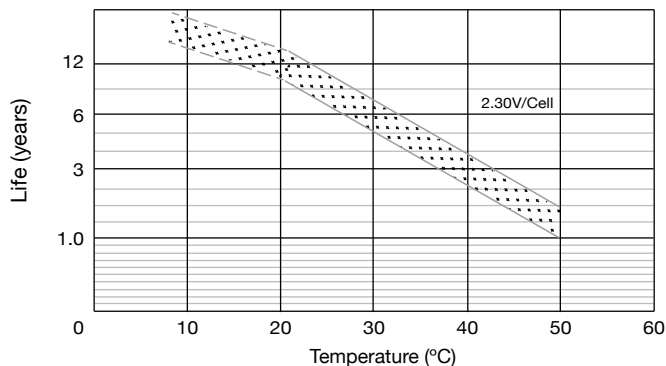


E

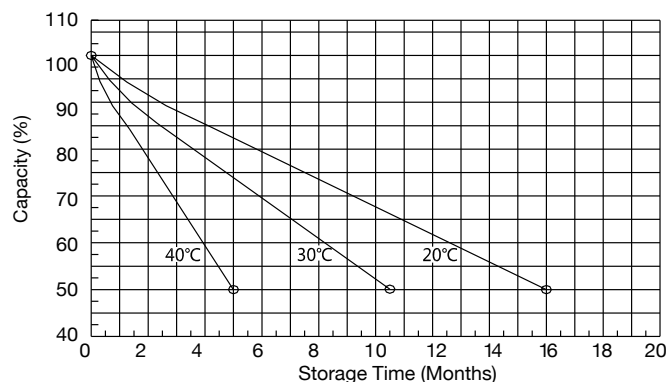
Terminals



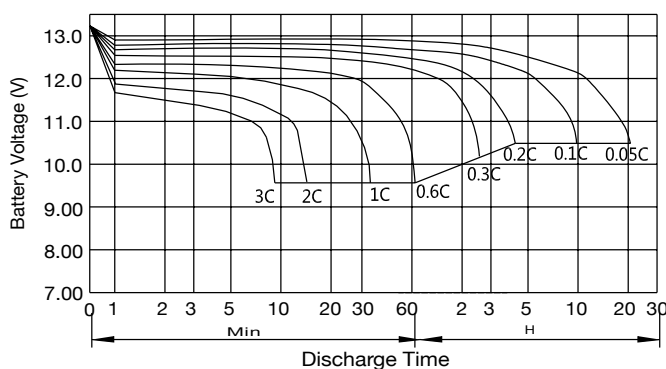
Temperature Effects on Float Life



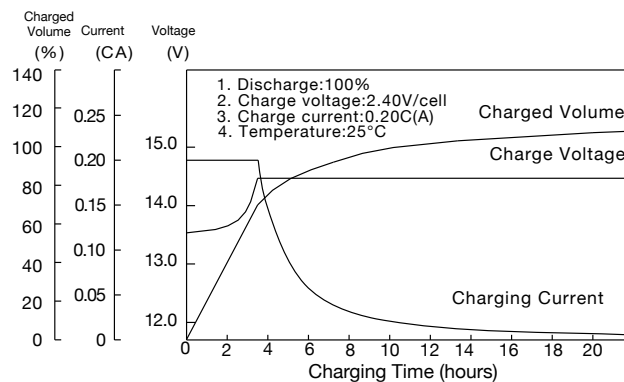
Self Discharge Characteristics



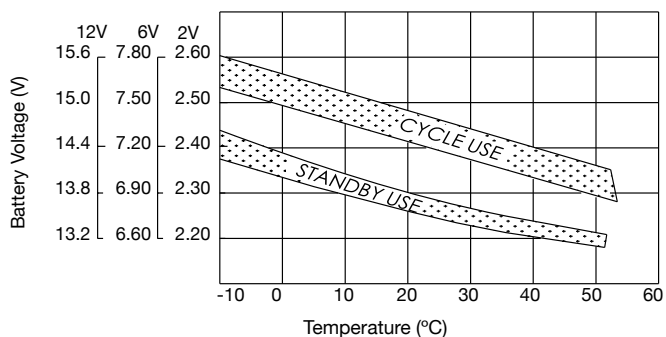
Discharge Characteristics (25°C)



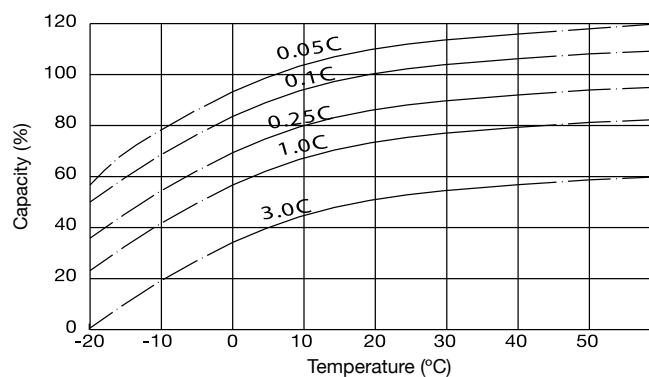
Charging Characteristics (25°C)



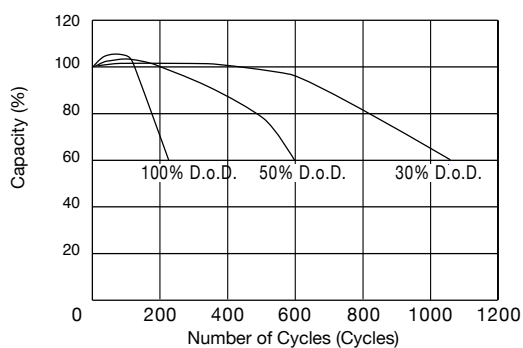
Relationship Between Charging Voltage and Temperature



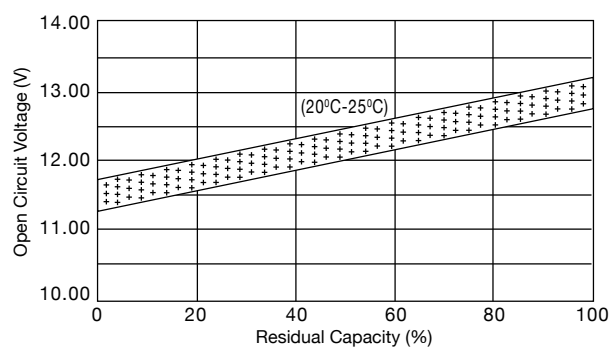
Temperature Effects on Capacity



Cycle Service Life in Relation to Depth of Discharge



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



Discharge Constant Current at 25°C (Amperes)

End Voltage 1.80 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	87.26	56.50	45.90	37.82	28.90	22.74	18.70	11.40	8.00	6.56	5.60	4.89	3.84	3.30	1.73
SPB 12 - 40	105.70	68.40	55.60	45.82	35.00	27.54	22.60	13.80	9.70	7.95	6.79	5.93	4.66	4.00	2.10
SPB 12 - 55	145.44	94.10	76.50	63.04	48.10	37.85	31.10	19.00	13.30	10.90	9.34	8.15	6.40	5.50	2.89
SPB 12 - 65	171.87	111.00	90.40	74.49	56.90	44.77	36.80	22.50	15.80	12.90	11.00	9.60	7.57	6.50	3.41
SPB 12 - 75	190.12	123.00	100.00	82.40	63.00	49.57	40.70	24.90	17.50	14.30	12.20	10.65	8.38	7.50	3.78
SPB 12 - 80	220.54	145.00	116.00	95.59	73.20	57.60	45.20	27.60	19.40	15.90	13.60	11.87	9.31	8.05	4.23
SPB 12 - 100	264.26	171.00	139.00	114.54	87.50	68.85	56.50	34.60	24.30	19.90	17.00	14.84	11.60	10.00	5.25
SPB 12 - 120	317.50	201.10	167.00	137.61	105.00	82.62	67.90	41.50	29.10	23.90	20.40	17.80	14.00	12.00	6.30
SPB 12 - 150	397.34	251.59	209.00	172.22	131.00	103.08	84.80	51.80	36.40	29.80	25.50	22.30	17.50	15.00	7.88
SPB 12 - 200	528.52	334.66	278.00	229.08	175.00	137.70	113.00	69.10	48.50	39.80	34.00	29.70	23.30	20.00	10.50

End Voltage 1.75 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	92.56	59.80	48.50	39.91	30.00	23.54	19.30	11.70	8.25	6.77	5.78	5.05	3.96	3.32	1.74
SPB 12 - 40	112.12	72.50	58.70	48.35	36.30	28.48	23.30	14.20	10.00	8.20	7.00	6.12	4.80	4.03	2.11
SPB 12 - 55	154.27	99.70	80.80	66.52	50.00	39.23	32.10	19.50	13.80	11.30	9.63	8.42	6.60	5.54	2.91
SPB 12 - 65	182.30	118.00	95.40	78.61	59.00	46.30	37.90	23.00	16.30	13.30	11.40	9.97	7.80	6.55	3.44
SPB 12 - 75	201.66	131.00	106.00	86.96	65.40	51.32	42.00	25.50	18.00	14.80	12.60	11.02	8.64	7.55	3.81
SPB 12 - 80	233.93	153.00	123.00	100.87	76.00	59.64	46.70	28.40	20.00	16.40	14.00	12.24	9.60	8.10	4.25
SPB 12 - 100	280.31	181.00	147.00	120.88	90.80	71.25	58.30	35.50	25.00	20.50	17.50	15.30	12.00	10.10	5.29
SPB 12 - 120	336.77	212.71	176.00	145.22	109.00	85.53	70.00	42.60	30.00	24.60	21.00	18.40	14.40	12.10	6.34
SPB 12 - 150	421.47	265.80	220.00	181.75	136.00	106.72	87.50	53.20	37.50	30.80	26.30	23.00	18.00	15.10	7.93
SPB 12 - 200	560.62	355.21	294.00	241.75	182.00	142.81	117.00	70.90	50.00	41.00	35.00	30.60	24.00	20.10	10.60

End Voltage 1.70 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	96.70	62.50	50.20	41.31	30.70	24.04	19.60	11.90	8.31	6.81	5.82	5.09	3.99	3.34	1.76
SPB 12 - 40	117.14	75.80	60.80	50.04	37.20	29.13	23.80	14.40	10.10	8.26	7.05	6.16	4.83	4.05	2.13
SPB 12 - 55	161.17	104.00	83.60	68.85	51.20	40.09	32.70	19.80	13.80	11.40	9.69	8.47	6.65	5.57	2.93
SPB 12 - 65	190.45	123.00	98.80	81.36	60.50	47.37	38.70	23.40	16.40	13.40	11.50	10.06	7.85	6.58	3.46
SPB 12 - 75	210.68	136.00	109.00	90.00	67.00	52.46	42.90	25.90	18.10	14.90	12.70	11.10	8.70	7.60	3.83
SPB 12 - 80	244.39	160.00	127.00	104.40	77.90	60.99	47.60	28.80	20.10	16.50	14.10	12.33	9.67	8.13	4.28
SPB 12 - 100	292.84	189.00	152.00	125.10	93.10	72.89	59.50	36.00	25.20	20.60	17.60	15.39	12.10	10.10	5.32
SPB 12 - 120	351.84	222.00	182.00	150.30	112.00	87.69	71.40	43.20	30.20	24.80	21.10	18.50	14.50	12.20	6.38
SPB 12 - 150	440.32	278.02	228.00	188.10	140.00	109.61	89.30	54.00	37.80	31.00	26.40	23.10	18.10	15.20	7.98
SPB 12 - 200	585.69	370.69	304.00	250.20	186.00	145.63	119.00	72.00	50.40	41.30	35.20	30.80	24.20	20.30	10.60

The above characteristics data can be obtained within three charge/discharge cycles.

Discharge Constant Current at 25°C (Amperes)

End Voltage 1.65 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	100.68	65.20	52.10	42.88	31.70	24.77	20.20	12.00	8.37	6.86	5.86	5.13	4.02	3.35	1.76
SPB 12 - 40	121.95	79.00	63.10	51.94	38.40	30.01	24.40	14.50	10.10	8.31	7.10	6.21	4.87	4.06	2.13
SPB 12 - 55	167.79	109.00	86.80	71.46	52.80	41.26	33.60	20.00	13.90	11.40	9.76	8.54	6.69	5.59	2.93
SPB 12 - 65	198.28	128.00	103.00	84.45	62.40	48.76	39.70	23.60	16.50	13.50	11.50	10.07	7.91	6.60	3.47
SPB 12 - 75	219.34	142.00	114.00	93.42	69.10	53.99	44.00	26.20	18.30	15.00	12.80	11.20	8.76	7.62	3.84
SPB 12 - 80	254.43	167.00	132.00	108.36	80.40	62.82	48.90	29.10	20.30	16.60	14.20	12.43	9.73	8.14	4.29
SPB 12 - 100	304.88	198.00	158.00	129.85	96.00	75.01	61.10	36.30	25.40	20.80	17.70	15.49	12.20	10.20	5.33
SPB 12 - 120	366.29	231.57	189.00	156.00	115.00	89.86	73.30	43.60	30.40	24.90	21.30	18.60	14.60	12.20	6.40
SPB 12 - 150	458.42	290.29	237.00	195.24	144.00	112.52	91.60	54.50	38.00	31.20	26.60	23.30	18.30	15.20	8.00
SPB 12 - 200	609.76	387.06	316.00	259.70	192.00	150.03	122.00	72.60	50.70	41.60	35.50	31.00	24.30	20.30	10.70

End Voltage 1.60 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	103.99	67.20	53.40	43.92	32.30	25.21	20.50	12.10	8.42	6.90	5.89	5.16	4.04	3.36	1.76
SPB 12 - 40	125.96	81.50	64.70	53.21	39.20	30.60	24.80	14.60	10.20	8.36	7.14	6.25	4.90	4.07	2.14
SPB 12 - 55	173.31	112.00	88.90	73.21	53.90	42.07	34.10	20.10	14.00	11.50	9.82	8.60	6.73	5.60	2.94
SPB 12 - 65	204.80	132.00	105.00	86.51	63.70	49.72	40.30	23.80	16.60	13.60	11.60	10.16	7.96	6.62	3.47
SPB 12 - 75	226.55	147.00	116.00	95.69	70.60	55.10	44.60	26.30	18.40	15.10	12.90	11.30	8.81	7.64	3.85
SPB 12 - 80	262.80	172.00	135.00	111.01	82.00	64.00	49.60	29.20	20.40	16.70	14.30	12.53	9.79	8.15	4.29
SPB 12 - 100	314.91	204.00	162.00	133.02	98.00	76.49	62.00	36.50	25.50	20.90	17.90	15.68	12.20	10.20	5.34
SPB 12 - 120	378.34	239.25	194.00	159.81	118.00	92.10	74.40	43.80	30.60	25.10	21.40	18.70	14.70	12.20	6.41
SPB 12 - 150	473.50	299.59	243.00	200.00	147.00	114.74	93.00	54.80	38.30	31.40	26.80	23.40	18.40	15.30	8.02
SPB 12 - 200	629.82	398.22	323.00	266.03	196.00	152.98	124.00	73.10	51.00	41.80	35.70	31.20	24.50	20.40	10.70

The above characteristics data can be obtained within three charge/discharge cycles.

Discharge Constant Power at 25°C (Watts/cell)

End Voltage 1.80 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	157.29	101.67	84.00	69.50	54.00	42.51	35.50	22.00	15.68	12.87	11.03	9.59	7.60	6.57	3.47
SPB 12 - 40	190.68	123.17	101.83	84.25	65.50	51.54	43.00	26.67	19.00	15.58	13.38	11.64	9.22	7.97	4.20
SPB 12 - 55	262.15	169.33	140.00	115.83	90.00	70.85	59.17	36.67	26.17	21.50	18.33	15.94	12.68	10.95	5.78
SPB 12 - 65	309.58	200.17	165.33	136.79	106.33	83.68	69.83	43.33	30.83	25.33	21.67	18.84	14.98	12.93	6.83
SPB 12 - 75	342.97	221.83	183.17	151.55	117.83	92.70	77.33	48.00	34.17	28.00	24.00	20.87	16.67	14.93	7.57
SPB 12 - 80	398.84	260.33	213.00	176.23	137.00	105.93	86.00	53.33	38.00	31.17	26.83	23.33	18.50	15.92	8.40
SPB 12 - 100	476.54	308.00	254.50	210.57	163.67	128.80	107.50	66.67	47.50	39.00	33.50	29.13	23.00	19.83	10.50
SPB 12 - 120	571.73	367.67	305.33	252.63	196.33	154.53	129.00	80.00	57.00	46.83	40.17	35.17	27.67	23.83	12.60
SPB 12 - 150	714.66	459.45	381.67	315.78	245.50	193.17	161.17	100.00	71.33	58.50	50.17	43.83	34.50	29.83	15.75
SPB 12 - 200	953.09	612.74	509.00	421.14	327.33	257.53	214.83	133.33	95.00	78.00	66.83	58.50	46.17	39.83	21.00

End Voltage 1.75 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	166.84	107.67	88.67	73.34	56.00	43.94	36.50	22.67	16.17	13.27	11.38	9.91	7.83	6.62	3.48
SPB 12 - 40	202.26	130.50	107.50	88.91	68.00	53.36	44.33	27.33	19.67	16.07	13.78	12.00	9.50	8.02	4.23
SPB 12 - 55	278.06	179.50	147.83	122.24	93.50	73.39	61.00	37.67	27.00	22.17	19.00	16.55	13.07	11.02	5.82
SPB 12 - 65	328.38	212.17	174.67	144.36	110.50	86.69	72.00	44.50	31.83	26.17	22.33	19.45	15.45	13.03	6.87
SPB 12 - 75	363.80	235.00	193.50	159.93	122.33	96.03	79.83	49.33	35.33	29.00	24.83	21.63	17.17	15.03	7.62
SPB 12 - 80	423.05	275.83	224.83	185.98	142.17	109.65	88.67	54.83	39.17	32.17	27.50	23.95	19.00	16.03	8.47
SPB 12 - 100	505.48	326.33	268.67	222.21	169.83	133.32	110.83	68.50	49.00	40.17	34.50	30.05	23.83	20.00	10.57
SPB 12 - 120	606.44	389.76	322.50	266.60	203.83	160.00	133.00	82.17	58.83	48.17	41.33	36.17	28.50	24.00	12.68
SPB 12 - 150	758.05	486.91	403.00	333.25	254.83	200.05	166.33	102.67	73.50	60.33	51.67	45.17	35.67	30.00	15.87
SPB 12 - 200	1010.96	649.21	537.33	444.42	339.83	266.71	221.67	136.83	98.00	80.33	69.00	60.33	47.50	40.00	21.17

End Voltage 1.70 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	174.30	112.50	91.83	75.91	57.50	45.05	37.33	23.00	16.28	13.35	11.45	9.97	7.90	6.65	3.52
SPB 12 - 40	211.30	136.33	111.33	92.02	69.67	54.55	45.17	27.83	19.67	16.18	13.88	12.09	9.57	8.07	4.25
SPB 12 - 55	290.50	187.50	153.00	126.51	95.83	75.05	62.17	38.17	27.17	22.33	19.17	16.69	13.17	11.08	5.85
SPB 12 - 65	343.07	221.67	180.83	149.40	113.17	88.67	73.50	45.17	32.00	26.33	22.50	19.60	15.55	13.10	6.92
SPB 12 - 75	380.07	245.50	200.33	165.52	125.33	98.25	81.50	50.00	35.50	29.17	25.00	21.77	17.17	15.12	7.65
SPB 12 - 80	441.97	288.33	232.67	192.47	145.67	112.18	90.50	55.67	39.50	32.33	27.83	24.24	19.17	16.13	8.52
SPB 12 - 100	528.09	341.00	278.17	229.98	174.17	136.48	113.17	69.50	49.33	40.50	34.67	30.19	24.00	20.17	10.63
SPB 12 - 120	633.57	407.19	333.83	275.91	208.83	163.64	135.67	83.33	59.17	48.50	41.67	36.50	28.67	24.17	12.77
SPB 12 - 150	791.96	508.69	417.17	344.89	261.17	204.65	169.67	104.17	74.00	60.67	52.00	45.50	35.83	30.17	15.95
SPB 12 - 200	1056.17	678.39	556.33	459.95	348.17	272.81	226.17	139.00	98.67	81.00	69.50	60.67	47.83	40.33	21.33

The above characteristics data can be obtained within three charge/discharge cycles.

Discharge Constant Power at 25°C (Watts/cell)

End Voltage 1.65 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	181.46	117.33	95.33	78.79	59.33	46.39	38.33	23.17	16.40	13.45	11.53	10.05	7.95	6.67	3.52
SPB 12 - 40	219.99	142.33	115.50	95.51	71.83	56.13	46.33	28.00	19.83	16.30	13.98	12.19	9.63	8.08	4.27
SPB 12 - 55	302.44	195.67	158.83	131.31	98.83	77.27	63.83	38.50	27.33	22.33	19.17	16.71	13.25	11.12	5.87
SPB 12 - 65	357.16	231.17	187.67	155.07	116.67	91.28	75.50	45.50	32.33	26.50	22.67	19.76	15.67	13.15	6.93
SPB 12 - 75	395.69	256.00	208.00	171.80	129.33	101.10	83.50	50.50	35.83	29.33	25.17	21.94	17.33	15.17	7.68
SPB 12 - 80	460.14	300.67	241.67	199.78	150.33	115.50	92.83	56.17	39.67	32.67	28.00	24.41	19.33	16.17	8.53
SPB 12 - 100	549.79	355.67	288.83	238.71	179.67	140.44	116.00	70.17	49.67	40.67	35.00	30.51	24.17	20.17	10.67
SPB 12 - 120	659.60	424.54	346.50	286.39	215.50	168.47	139.17	84.17	59.67	48.83	42.00	36.67	28.83	24.33	12.80
SPB 12 - 150	824.50	530.57	433.17	357.98	269.33	210.58	174.00	105.17	74.50	61.17	52.50	45.83	36.17	30.33	16.00
SPB 12 - 200	1099.58	707.56	577.67	477.42	359.17	280.80	232.00	140.17	99.33	81.50	69.83	61.17	48.17	40.50	21.33

End Voltage 1.60 V/cell															
	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
SPB 12 - 33	187.43	121.00	97.67	80.71	60.50	47.18	38.83	23.33	16.50	13.52	11.60	10.12	8.00	6.68	3.53
SPB 12 - 40	227.22	146.67	118.33	97.84	73.33	57.24	47.17	28.17	20.00	16.40	14.07	12.27	9.70	8.10	4.28
SPB 12 - 55	312.39	201.67	162.83	134.52	100.83	78.69	64.83	38.83	27.50	22.50	19.33	16.87	13.33	11.15	5.88
SPB 12 - 65	368.91	238.33	192.33	158.86	119.17	92.94	76.50	45.83	32.50	26.67	22.83	19.92	15.75	13.17	6.95
SPB 12 - 75	408.71	264.00	213.00	175.99	132.00	103.00	84.83	50.83	36.00	29.50	25.33	22.10	17.50	15.20	7.70
SPB 12 - 80	475.27	310.00	247.67	204.66	153.33	117.56	94.17	56.50	40.00	32.83	28.17	24.57	19.33	16.20	8.55
SPB 12 - 100	567.87	366.67	295.83	244.53	183.33	143.05	117.83	70.50	50.00	41.00	35.17	30.68	24.17	20.33	10.68
SPB 12 - 120	681.30	438.01	355.17	293.37	219.83	171.55	141.33	84.67	60.00	49.17	42.17	36.83	29.00	24.33	12.83
SPB 12 - 150	851.63	547.19	443.83	366.72	274.83	214.46	176.67	105.83	75.00	61.50	52.67	46.17	36.33	30.33	16.03
SPB 12 - 200	1135.75	729.65	591.83	489.06	366.50	286.03	235.67	141.00	100.00	82.00	70.33	61.50	48.50	40.50	21.33

The above characteristics data can be obtained within three charge/discharge cycles.

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