

# NS12-20D

12V 20Ah / 20hr rate



### Introduction

Samson NSD series is designed for standby use with 5-year design life in float service. The series battery is featured of high consistency, excellent performance and reliable standby service life. It is widely applied in UPS/EPS, medical equipment, emergency light, security system and deep cycle applications.

### Battery Features

- Increase durability and deep cycle ability
- Low self-discharge
- Fully tank formed plates
- Low impurity electrolyte
- Spill proof / leak proof
- Multi-position usage
- ABS case and cover VO upon request
- Very high purity lead

### Electrical Specification

Design floating Life @ 25°C (77°F)	5 years
Design Life Cycles @ 50% D.O.D. (25°C)	600 Cycles
Nominal Capacity @ 25°C / 77°F	
20 hour rate 1A to 1.75Vpc	20 Ah
10 hour rate 1.85A to 1.75Vpc	18.5 Ah
Internal Resistance	
(Fully charged battery @ 25°C / 77°F)	12 mΩ
Max. Discharge Current @ 25°C / 77°F	180 A (5S)
Short Circuit Current	330 A
Charge Methods: Constant voltage charge @ 25°C / 77°F	
Cycle Use	14.7 ~ 14.9V
Max. Current	4.3 A
Standby Use	13.6 - 13.8V
Operating Temperature Range	-30 ~ 50°C
<i>Notes: battery voltage must be adjusted according to temperature. Please refer to our recommendation.</i>	
Self-Discharge	
3% of capacity declined per month @ 25°C (77°F).	

### Battery Picture & Terminal Layout

**Terminal Type: Female M5**  
**Terminal Torque: 5-6 Nm**

### Dimension & Weight

Length	Dimension (± 2mm)			Total Height	Weight (± 2%)
	Width	Height	Height		
181 mm	77 mm	166 mm	166 mm	166 mm	5,4 kg
7,1 inch	3,0 inch	6,5 inch	6,5 inch	6,5 inch	11,9 lbs

### Certificates



### Other relevant information

Contry of origin: **China** HS Code (harmonized system code): **85 07 10 00**  
UN-Transport declaration: **UN2800** Customs tariff number **8507 10 20 80**

### Typical Applications

- UPS & EPS    Security Power Supply    Power Utility    Electrical Toys

### Constant Current Discharge (Amperes @ 25°C / 77°F)

V/cell	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	1hr	2hr	3hr	4hr	5hr	10hr	20hr
1,60	52,47	40,05	34,23	28,40	23,88	20,85	19,13	17,41	15,96	14,71	13,83	7,13	5,07	3,95	3,41	1,96	1,03
1,65	50,25	38,36	32,81	27,27	23,03	20,10	18,47	16,85	15,49	14,33	13,55	6,96	4,95	3,86	3,36	1,89	1,02
1,70	48,04	36,67	31,40	26,12	22,16	19,32	17,79	16,27	15,00	13,95	13,26	6,80	4,85	3,79	3,30	1,85	1,01
1,75	45,82	34,98	29,99	25,01	21,34	18,59	17,15	15,72	14,54	13,58	12,98	6,63	4,71	3,69	3,25	1,85	1,00
1,80	43,60	33,29	28,61	23,94	20,58	17,91	16,55	15,19	14,10	13,21	12,69	6,46	4,57	3,59	3,20	1,83	0,95

### Constant Power Discharge (Watts/cell @ 25°C / 77°F)

V/cell	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	1hr	2hr	3hr	4hr	5hr	10hr	20hr
1,60	100,51	76,73	65,25	53,78	45,25	39,44	36,57	33,70	31,35	29,48	28,03	14,59	10,06	7,94	6,23	3,79	2,07
1,65	96,45	73,62	62,62	51,62	43,56	37,84	35,06	32,28	30,03	28,25	26,89	13,92	9,82	7,76	6,12	3,75	2,05
1,70	92,38	70,52	60,08	49,65	42,15	36,48	33,74	31,01	28,80	27,06	25,75	13,26	9,57	7,58	6,01	3,72	2,03
1,75	89,05	67,98	57,83	47,67	40,46	34,87	32,23	29,59	27,48	25,83	24,61	12,60	9,30	7,39	5,90	3,67	2,00
1,80	84,99	64,88	55,29	45,70	39,05	33,56	31,02	28,47	26,45	24,91	23,78	12,12	9,01	7,16	5,74	3,63	1,90

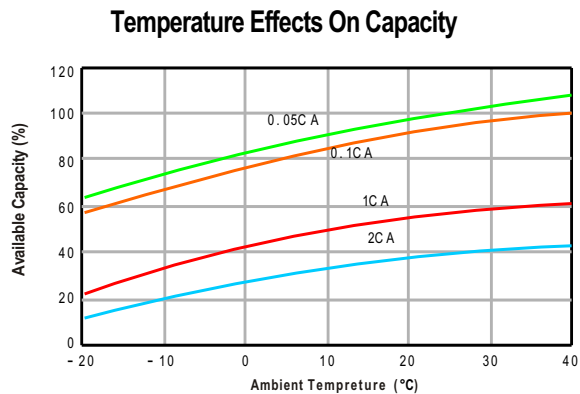
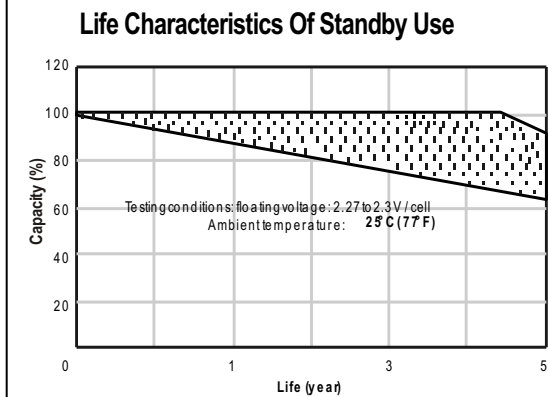
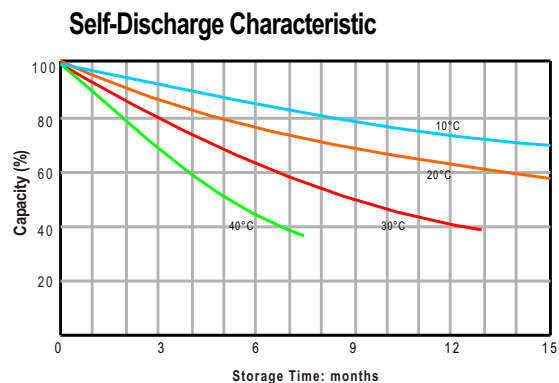
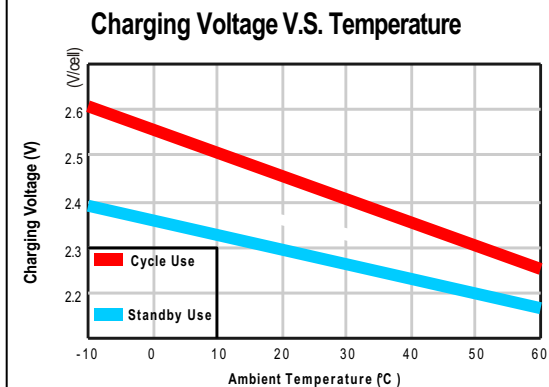
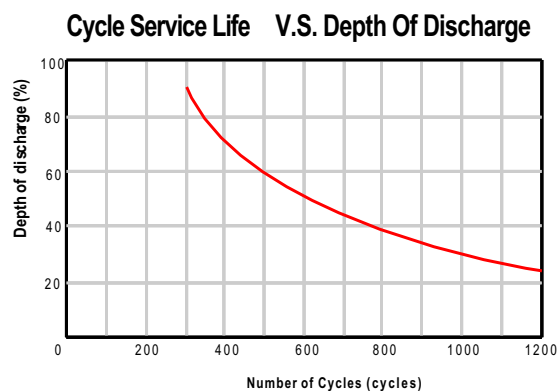
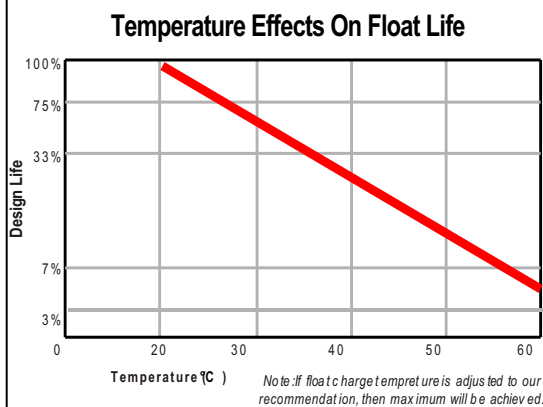
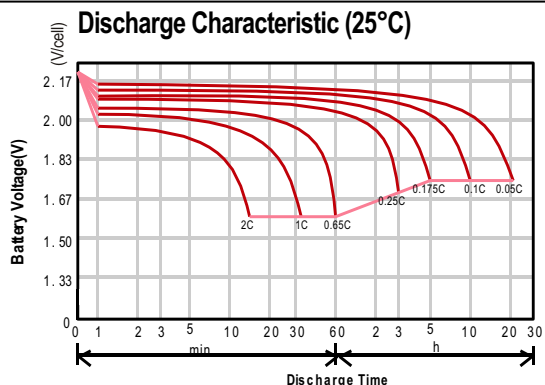
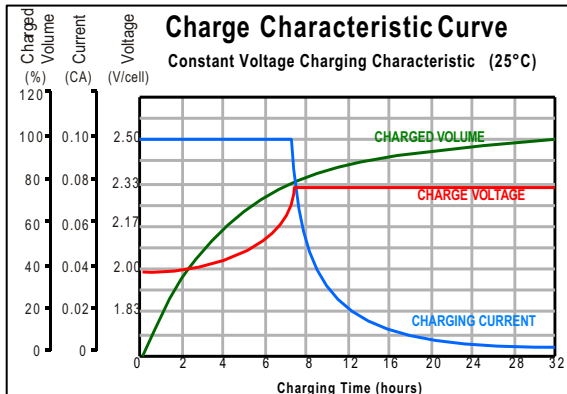
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Graphs



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