DATASHEET NH12-77W

Introduction

Anda NH (high rate) series is primarily for heavy load discharge in short time backup especially in UPS applications. Designed with a high-density plate technology, the series battery is featured of high consistency, excellent performance and reliable standby service life.

Battery Features

- ○ High rate output aimed at the UPS market
- ○ 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

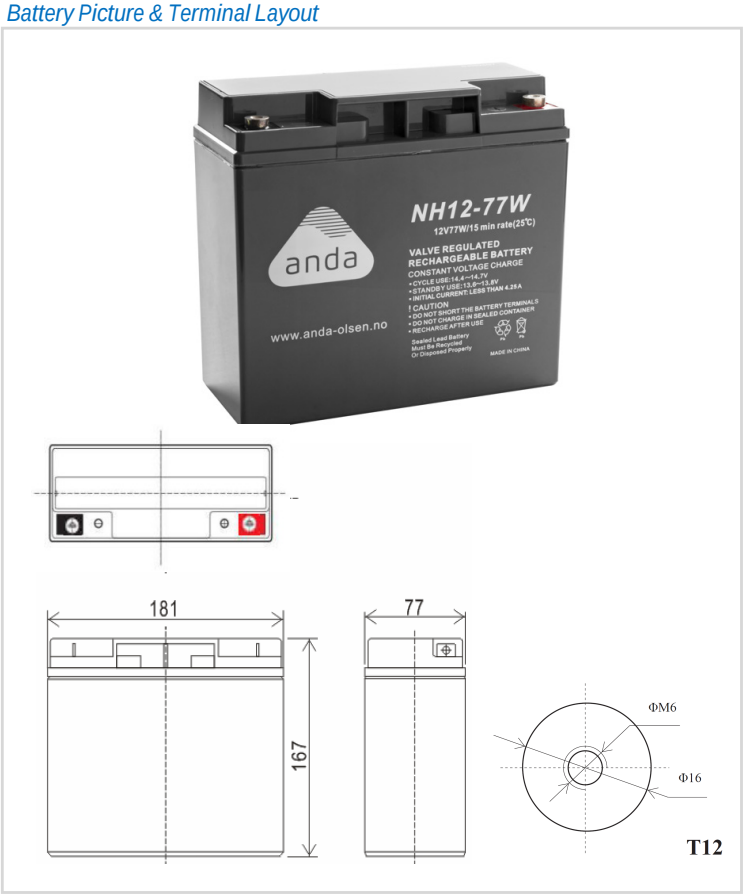
Design floating Life @ 25°C (77°F)	5 years
Nominal Capacity @ 25°C /77°F	
Watt @ 15min to 1.67V/cell	78 W/cell
Watt @ 10min to 1.67V/cell	101 W/cell
Internal Resistance	
(Fully charged battery @ 25°C /77°F)	11mΩ
Max. Discharge Current @ 25°C /77°F	270A (5S)
Charge Methods: Constant voltage charge @ 25°C /77°F	
Cycle Use	14.7 ~ 14.9V
Max. Current	4.5A
Standby Use	13.6 - 13.8V
Operating Temperature Range	-30 ~ 50°C
Notes: battery voltage must be adjusted according to temperature.	
Effect of temperature on float charge voltage: -3mV/ ℃ /Cell.	
Self-Discharge	
3% of capacity declined per month @ 25°C (77°F).	

Typical Applications

- ○ UPS/EPS (High rate)
- ○ High power backup supply
- ○ Emergency power supply
- ○ Emergency lighting
- ○ Electric starting

Certificates

Battery Picture & Terminal Layout



Dimension & Weight

Dimension (± 2mm)				Weight
Length	Width	Height	Total Height	(± 2%)
181 mm	77 mm	167 mm	167 mm	5.53 kg
7.1 inch	3.0 inch	6.6 inch	6.6 inch	12.2 lbs

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

V/cell	5min	10min	15min	20min	30min	45min	55min	1hr	2hr
1.60	85.94	50.98	38.96	31.27	23.64	17.20	16.45	13.36	8.01
1.65	82.84	49.31	38.76	30.71	23.43	17.17	16.13	13.22	8.00
1.70	81.19	48.53	38.21	30.67	23.30	17.14	16.08	13.17	7.94
1.75	74.60	46.64	37.16	30.03	23.13	17.11	16.02	13.15	7.88
1.80	67.94	43.41	35.51	28.85	22.56	16.75	15.59	12.98	7.81

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

V/cell	5min	10min	15min	20min	30min	45min	55min	1hr	2hr
1.60	174.7	104.5	78.5	63.45	46.71	34.86	32.52	28.29	16.12
1.65	170.4	103.5	78.2	63.26	46.65	34.67	31.32	28.13	15.77
1.67	166.9	101.4	78.0	63.16	46.61	34.51	30.75	28.03	15.47
1.70	159.4	98.8	76.7	61.44	45.23	33.92	30.01	27.64	14.98
1.75	154.3	95.5	75.8	60.13	44.87	33.61	28.96	27.13	14.45
1.80	136.6	88.1	71.6	58.54	44.71	33.15	28.55	26.48	14.14

Above discharge data is average values after batteries are fully charged.

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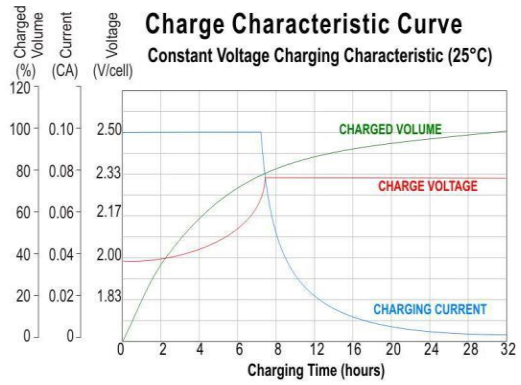
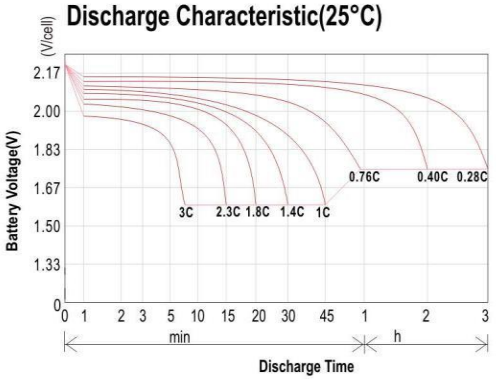
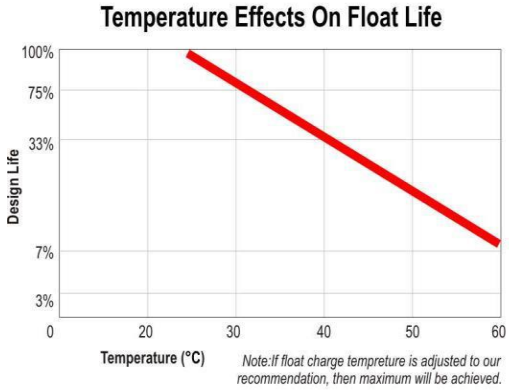
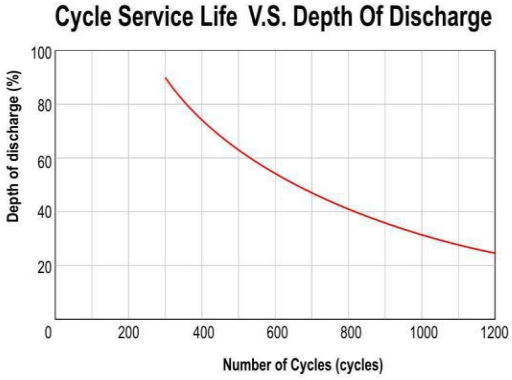
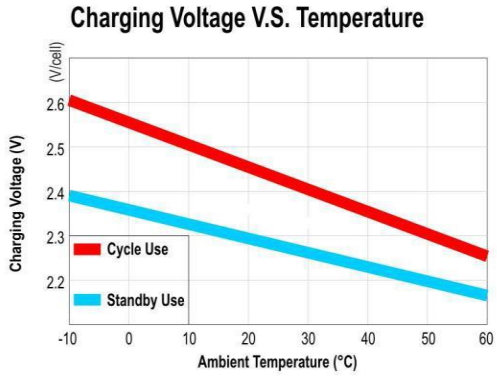
Graphs

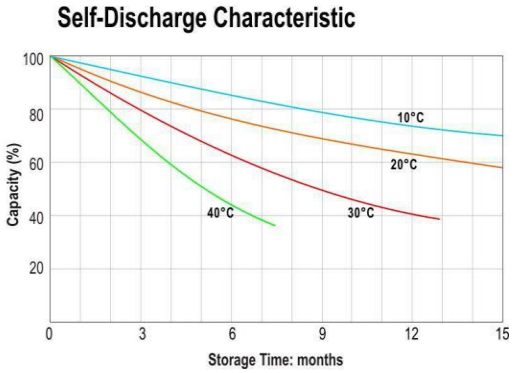

Charge Characteristic Curve
Constant Voltage Charging Characteristic (25°C)
Charged Volume (%)
Current (CA)
Voltage (V/cell)
CHARGED VOLUME
CHARGE VOLTAGE
CHARGING CURRENT
Charging Time (hours)

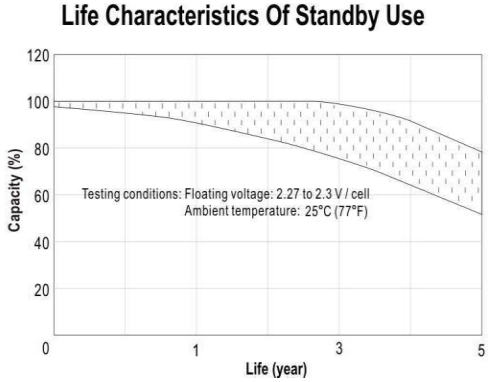

Discharge Characteristic(25°C)
(V/cell)
Battery Voltage(V)
3C
2.3C
1.8C
1.4C
1C
0.76C
0.40C
0.28C
min
h
Discharge Time

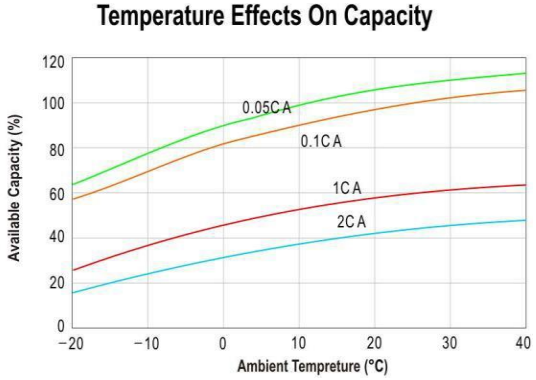

Temperature Effects On Float Life
Design Life
Temperature (°C)
Note:If float charge tempreture is adjusted to our recommendation, then maximum will be achieved.


Cycle Service Life V.S. Depth Of Discharge
Depth of discharge (%)
Number of Cycles (cycles)


Charging Voltage V.S. Temperature
(V/cell)
Charging Voltage (V)
Cycle Use
Standby Use
Ambient Temperature (°C)


Self-Discharge Characteristic
Capacity (%)
10°C
20°C
30°C
40°C
Storage Time: months


Life Characteristics Of Standby Use
Capacity (%)
Testing conditions: Floating voltage: 2.27 to 2.3 V / cell
Ambient temperature: 25°C (77°F)
Life (year)


Temperature Effects On Capacity
Available Capacity (%)
0.05CA
0.1CA
1CA
2CA
Ambient Tempreture (°C)