



VTM 2.3A-12

Specifications

Nominal Voltage(V) **12V**

Nominal Capacity

20 hour rate	(0.115A to 10.50V)	2.3Ah
10 hour rate	(0.219A to 10.50V)	2.185Ah
5 hour rate	(0.391A to 10.20V)	1.955Ah
1 C	(2.3A to 9.60V)	1.303Ah
3 C	(6.9A to 9.60V)	0.92Ah

Weight **Approx. 1.04kg(2.29Lbs.)**

Internal Resistance (at 1KHz) **Approx. 37 mΩ**

Maximum Discharge Current for 5 seconds: **34.5A**

Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient	-5.0mV/°C/cell
Maximum Charging Current :	0.69A
Standby use:	
Float Charging Voltage	13.5 to 13.8V
Coefficient	-3.0mV/°C/cell

Operating Temperature Range

Charge	-15°C(5°F) to 40°C(104°F)
Discharge	-15°C(5°F) to 50°C(122°F)
Storage	-15°C(5°F) to 40°C(104°F)

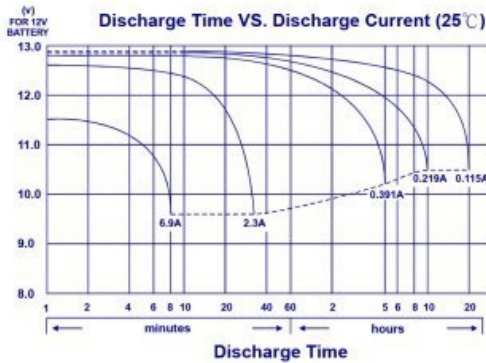
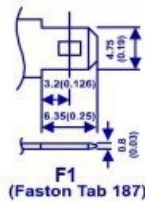
Charge Retention (shelf life) at 20°C(68°F)

1 month	92%
3 month	90%
6 month	80%

Case Material **ABS UL94 HB**

Terminal **F1 (Faston Tab 187)**

Dimensions mm(inch)



- PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25°C(77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
5	min	11.8	13.9	15.3	16.4	16.7	17.2	17.8
10	min	7.82	9.38	10.1	10.6	10.8	11.1	11.4
15	min	6.87	7.90	8.28	8.53	8.63	8.75	8.90
30	min	3.95	4.25	4.43	4.58	4.63	4.70	4.78
60	min	2.27	2.45	2.60	2.72	2.75	2.80	2.85
120	min	1.36	1.50	1.56	1.62	1.64	1.67	1.70
180	min	1.08	1.21	1.24	1.27	1.28	1.29	1.30
240	min	0.863	0.960	0.988	1.01	1.02	1.03	1.04
300	min	0.702	0.777	0.808	0.837	0.848	0.858	0.869
600	min	0.415	0.453	0.468	0.480	0.483	0.488	0.493
1200	min	0.230	0.242	0.248	0.253	0.255	0.257	0.258

- Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)

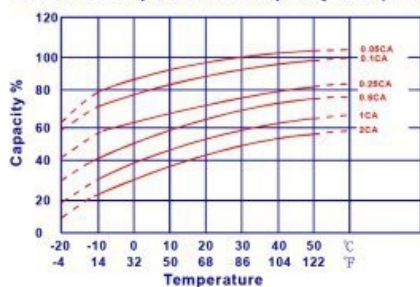
End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
5	min	9.08	9.36	9.62	9.82	9.95	10.1	10.4
10	min	4.76	5.45	5.68	5.87	5.94	6.03	6.15
15	min	3.89	4.15	4.27	4.38	4.42	4.47	4.53
30	min	2.02	2.17	2.24	2.30	2.32	2.35	2.39
60	min	1.23	1.34	1.39	1.42	1.43	1.45	1.47
120	min	0.668	0.731	0.765	0.796	0.809	0.826	0.849
180	min	0.508	0.562	0.587	0.609	0.618	0.628	0.643
240	min	0.411	0.449	0.472	0.491	0.497	0.505	0.513
300	min	0.364	0.383	0.396	0.405	0.409	0.414	0.419
600	min	0.217	0.226	0.232	0.237	0.238	0.240	0.242
1200	min	0.114	0.118	0.121	0.123	0.124	0.125	0.126

All data on the spec. sheet is an average value:

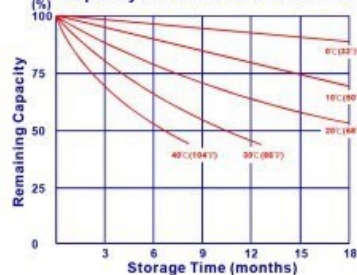
The tolerance range : $X < 6\text{min}$ (+15%~-15%), $6\text{min} \leq X < 10\text{min}$ (+12%~-12%), $10\text{min} \leq X < 60\text{min}$ (+8%~-8%), $X \geq 60\text{min}$ (+5%~-5%)



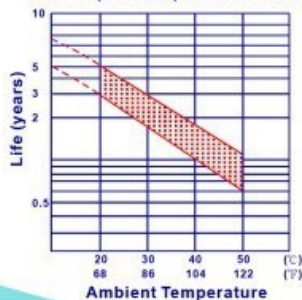
Effect of Temperature on Capacity 25°C(77°F)



Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life

