

**Cod. 00412180**

**VRLA BATTERY AGM TECHNOLOGY**

Revision 4.0

**Specifications**

**Nominal Voltage (V)** 12V

**Nominal Capacity**

20 hour rate	(0.9A to 10.50V)	<b>18Ah</b>
10 hour rate	(1.71A to 10.50V)	<b>17.1Ah</b>
5 hour rate	(3.06A to 10.20V)	<b>15.3Ah</b>
1 C	(18A to 9.60V)	<b>11.4Ah</b>
3 C	(54A to 9.60V)	<b>7.2Ah</b>

**Weight** Approx. 5.6kg (12.32 Lbs.)

**Internal Resistance (at 1KHz)** Approx. 10.5 mΩ

**Maximum Discharge Current for**

**5 seconds:** 270A

**Charging Methods at 25°C (77°F)**

**Cycle use:**

Charging Voltage **14.4 to 15.0V**  
Coefficient -5.0mv/°C/cell  
Maximum Charging Current: **5.4A**

**Standby use:**

Float Charging Voltage **13.50 to 13.80V**  
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	<b>92%</b>
3 month	<b>90%</b>
6 month	<b>80%</b>

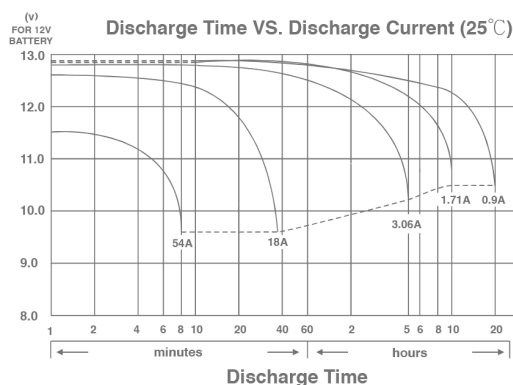
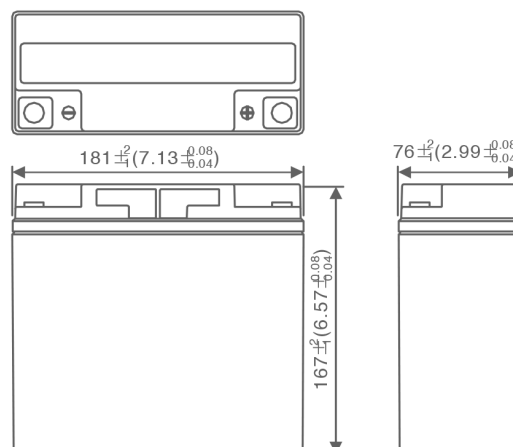
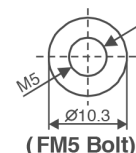
**Case Material ABS UL94HB**

(Option: ABS UL94 V-0 flame retardant)

**Terminal** FM5

**ENERGY SAFE**

**Dimensions mm (inch)**

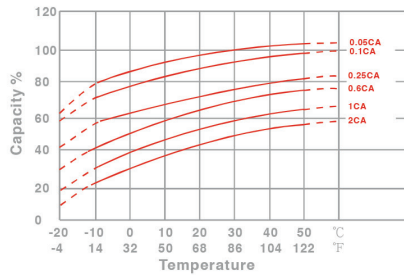


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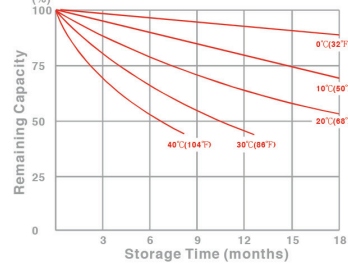
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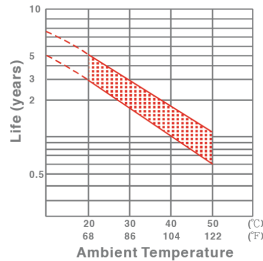
Effect of Temperature on Capacity 25°C(77°F)



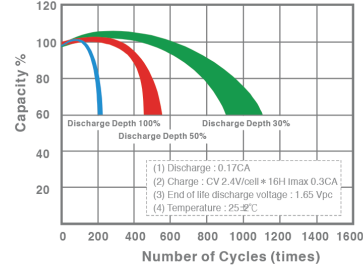
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



**PERFORMANCE DATA**

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

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	594	699	768	811	822	835	847
10	min	402	463	507	534	541	550	558
15	min	343	387	417	435	440	445	451
30	min	196	211	226	236	239	242	245
60	min	113	119	124	128	129	131	133
120	min	71.2	74.4	76.2	78.7	79.3	80.0	80.9
180	min	52.5	54.6	56.0	57.2	57.6	58.1	58.7
240	min	39.8	41.6	42.7	43.6	43.9	44.3	44.8
300	min	34.9	36.3	37.0	37.6	37.8	38.1	38.5
600	min	20.4	21.1	21.6	22.0	22.1	22.3	22.5
1200	min	10.6	11.0	11.3	11.5	11.6	11.7	11.8

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

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	62.6	68.3	71.9	75.1	76.4	77.8	80.2
10	min	38.6	41.8	44.3	46.5	47.4	48.4	50.1
15	min	31.9	34.6	36.3	37.7	38.2	38.8	39.7
30	min	17.4	18.7	19.8	20.7	21.0	21.4	21.9
60	min	9.74	10.3	10.7	11.0	11.1	11.3	11.5
120	min	5.98	6.23	6.39	6.53	6.58	6.64	6.72
180	min	4.35	4.52	4.64	4.73	4.76	4.80	4.85
240	min	3.43	3.52	3.58	3.62	3.63	3.65	3.68
300	min	2.96	3.02	3.07	3.11	3.12	3.14	3.16
600	min	1.73	1.77	1.80	1.82	1.83	1.84	1.85
1200	min	0.893	0.914	0.931	0.946	0.952	0.959	0.962

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

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