

VTM 12A-12



Specifications

Nominal Voltage(V) **12V**

Nominal Capacity

| | | | | |
|--------------|--------|----|---------|--------|
| 20 hour rate | (0.6A | to | 10.50V) | 12Ah |
| 10 hour rate | (1.14A | to | 10.50V) | 11.4Ah |
| 5 hour rate | (2.04A | to | 10.20V) | 10.2Ah |
| 1 C | (12A | to | 9.60V) | 6.4Ah |
| 3 C | (36A | to | 9.60V) | 4.2Ah |

Weight **Approx. 3.75kg(8.25Lbs.)**

Internal Resistance (at 1KHz) **Approx. 13 mΩ**

Maximum Discharge Current for 5 seconds: **180A**

Charging Methods at 25°C(77°F)

Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient **-5.0mV/°C/cell**

Maximum Charging Current : **3.6A**

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

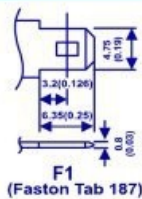
ABS UL94 HB

Terminal

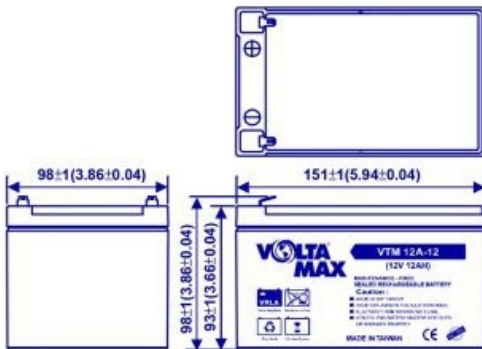
F1 (Faston Tab 187)

Dimensions

mm(inch)

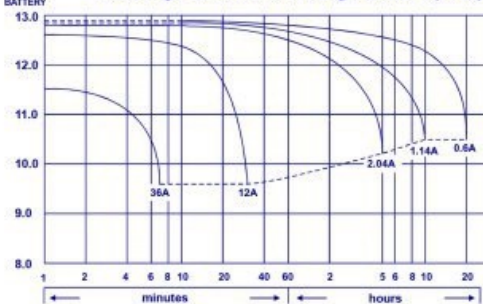


F1 (Faston Tab 187)



(V) FOR 12V BATTERY

Discharge Time VS. Discharge Current (25°C)



Discharge Time



- 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 | 67.6 | 75.2 | 80.8 | 86.7 | 89.3 | 91.9 | 97.0 |
| 10 | min | 48.0 | 52.5 | 54.9 | 57.3 | 58.2 | 59.5 | 61.0 |
| 15 | min | 38.6 | 41.0 | 42.6 | 44.1 | 44.5 | 45.4 | 46.6 |
| 30 | min | 22.2 | 23.6 | 24.6 | 25.4 | 25.7 | 25.9 | 26.3 |
| 60 | min | 15.8 | 16.3 | 16.7 | 17.0 | 17.2 | 17.3 | 17.5 |
| 120 | min | 8.63 | 8.92 | 9.04 | 9.14 | 9.18 | 9.24 | 9.32 |
| 180 | min | 5.65 | 5.87 | 6.05 | 6.20 | 6.27 | 6.35 | 6.42 |
| 240 | min | 4.78 | 4.88 | 4.96 | 5.06 | 5.12 | 5.20 | 5.26 |
| 300 | min | 3.96 | 4.08 | 4.18 | 4.30 | 4.33 | 4.38 | 4.48 |
| 600 | min | 2.34 | 2.40 | 2.44 | 2.47 | 2.48 | 2.50 | 2.52 |
| 1200 | min | 1.19 | 1.21 | 1.25 | 1.26 | 1.28 | 1.29 | 1.32 |

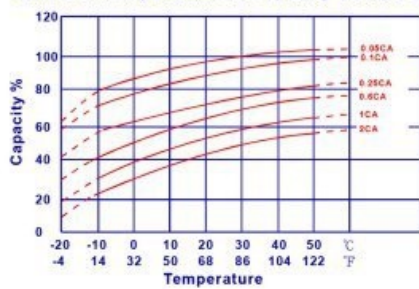
- Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)

| Time \ End Voltage | | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|--------------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 5 | min | 37.2 | 41.4 | 44.5 | 47.7 | 49.1 | 50.6 | 53.4 |
| 10 | min | 25.7 | 28.1 | 29.4 | 30.7 | 31.2 | 31.9 | 32.7 |
| 15 | min | 19.8 | 21.3 | 22.1 | 22.9 | 23.2 | 23.5 | 24.2 |
| 30 | min | 11.4 | 12.1 | 12.6 | 13.0 | 13.1 | 13.3 | 13.5 |
| 60 | min | 8.21 | 8.40 | 8.52 | 8.63 | 8.68 | 8.74 | 8.82 |
| 120 | min | 4.21 | 4.36 | 4.47 | 4.56 | 4.59 | 4.63 | 4.68 |
| 180 | min | 2.87 | 3.06 | 3.13 | 3.19 | 3.22 | 3.25 | 3.29 |
| 240 | min | 2.38 | 2.43 | 2.47 | 2.52 | 2.55 | 2.58 | 2.62 |
| 300 | min | 1.97 | 2.03 | 2.08 | 2.14 | 2.16 | 2.19 | 2.23 |
| 600 | min | 1.16 | 1.18 | 1.20 | 1.22 | 1.23 | 1.24 | 1.25 |
| 1200 | min | 0.592 | 0.599 | 0.618 | 0.627 | 0.634 | 0.642 | 0.656 |

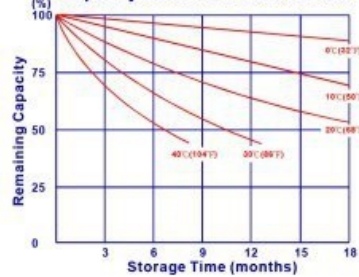
All data on the spec. sheet is an average value:

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%)

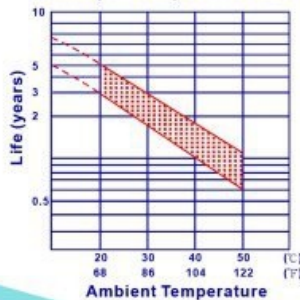
Effect of Temperature on Capacity 25°C(77°F)



Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life

