The battery must be fully charged before the capacity test. The C10 should reach 95% after the first cycle and 100% after the third cycle.

RT series is a general purpose battery with 6~8 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RT series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

### Specification
- **Cells Per Unit**: 6
- **Voltage Per Unit**: 12
- **Nominal Capacity**: 22Ah@20hour-rate to 1.75V per cell @25℃
- **Weight**: Approx. 5.6 Kg (Tolerance ±5.0%)
- **Internal Resistance**: Approx. 13.0 mΩ
- **Terminal**: F13-BP(M5)/F3(M5)
- **Max. Discharge Current**: 220A (5 sec)
- **Short Circuit Current**: 830A
- **Design Life**: 6~8 years (Float charging)
- **Max. Charging Current**: 6.6 A
- **Reference Capacity**: C3 17.0AH, C5 19.2AH, C10 20.6AH, C20 22.0AH
- **Standby Use Voltage**: 13.7 V~13.9 V @25℃
- **Temperature Compensation**: -3mV/℃/Cell
- **Cycle Use Voltage**: 14.6 V~14.8 V @25℃
- **Temperature Compensation**: -4mV/℃/Cell
- **Operating Temperature Range**: Discharge: -20℃~60℃
  - Charge: 0℃~50℃
  - Storage: -20℃~60℃
- **Normal Operating Temperature Range**: 25℃ ± 5℃
- **Self Discharge**: RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃. Please charge batteries before using.
- **Container Material**: A.B.S. UL94-HB, UL94-V0 Optional.

### Dimensions

![Dimensions Diagram]

### Constant Current Discharge Characteristics : A (25℃)

<table>
<thead>
<tr>
<th>F.V/Time</th>
<th>5MIN</th>
<th>10MIN</th>
<th>15MIN</th>
<th>30MIN</th>
<th>1HR</th>
<th>2HR</th>
<th>3HR</th>
<th>4HR</th>
<th>5HR</th>
<th>8HR</th>
<th>10HR</th>
<th>20HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.60V</td>
<td>79.30</td>
<td>56.04</td>
<td>40.51</td>
<td>23.27</td>
<td>12.77</td>
<td>8.253</td>
<td>6.204</td>
<td>5.009</td>
<td>4.150</td>
<td>2.671</td>
<td>2.169</td>
<td>1.145</td>
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<tr>
<td>1.65V</td>
<td>73.74</td>
<td>52.96</td>
<td>38.73</td>
<td>22.34</td>
<td>12.33</td>
<td>7.990</td>
<td>6.013</td>
<td>4.873</td>
<td>4.042</td>
<td>2.641</td>
<td>2.143</td>
<td>1.127</td>
</tr>
<tr>
<td>1.70V</td>
<td>66.53</td>
<td>48.75</td>
<td>36.28</td>
<td>21.35</td>
<td>11.93</td>
<td>7.726</td>
<td>5.849</td>
<td>4.741</td>
<td>3.937</td>
<td>2.600</td>
<td>2.110</td>
<td>1.114</td>
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<tr>
<td>1.75V</td>
<td>59.61</td>
<td>44.63</td>
<td>33.76</td>
<td>20.41</td>
<td>11.49</td>
<td>7.456</td>
<td>5.675</td>
<td>4.619</td>
<td>3.838</td>
<td>2.564</td>
<td>2.083</td>
<td>1.100</td>
</tr>
<tr>
<td>1.80V</td>
<td>52.34</td>
<td>40.40</td>
<td>31.17</td>
<td>19.51</td>
<td>11.05</td>
<td>7.189</td>
<td>5.499</td>
<td>4.487</td>
<td>3.739</td>
<td>2.521</td>
<td>2.056</td>
<td>1.089</td>
</tr>
<tr>
<td>1.85V</td>
<td>41.54</td>
<td>33.01</td>
<td>25.87</td>
<td>16.80</td>
<td>9.915</td>
<td>6.587</td>
<td>5.084</td>
<td>4.170</td>
<td>3.487</td>
<td>2.366</td>
<td>1.936</td>
<td>1.034</td>
</tr>
</tbody>
</table>

### Constant Power Discharge Characteristics : WPC (25℃)

<table>
<thead>
<tr>
<th>F.V/Time</th>
<th>5MIN</th>
<th>10MIN</th>
<th>15MIN</th>
<th>30MIN</th>
<th>1HR</th>
<th>2HR</th>
<th>3HR</th>
<th>4HR</th>
<th>5HR</th>
<th>8HR</th>
<th>10HR</th>
<th>20HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.60V</td>
<td>131.5</td>
<td>95.26</td>
<td>70.82</td>
<td>42.26</td>
<td>24.00</td>
<td>15.64</td>
<td>11.85</td>
<td>9.616</td>
<td>8.000</td>
<td>5.216</td>
<td>4.264</td>
<td>2.255</td>
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<tr>
<td>1.65V</td>
<td>123.7</td>
<td>91.75</td>
<td>68.71</td>
<td>41.00</td>
<td>23.31</td>
<td>15.22</td>
<td>11.53</td>
<td>9.391</td>
<td>7.821</td>
<td>5.169</td>
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<td>1.70V</td>
<td>114.1</td>
<td>86.02</td>
<td>65.32</td>
<td>39.58</td>
<td>22.69</td>
<td>14.80</td>
<td>11.27</td>
<td>9.170</td>
<td>7.644</td>
<td>5.100</td>
<td>4.160</td>
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<tr>
<td>1.75V</td>
<td>104.6</td>
<td>80.16</td>
<td>61.67</td>
<td>38.22</td>
<td>21.99</td>
<td>14.35</td>
<td>10.98</td>
<td>8.969</td>
<td>7.478</td>
<td>5.040</td>
<td>4.110</td>
<td>2.174</td>
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<td>1.80V</td>
<td>93.71</td>
<td>73.83</td>
<td>57.75</td>
<td>36.90</td>
<td>21.27</td>
<td>13.90</td>
<td>10.68</td>
<td>8.743</td>
<td>7.311</td>
<td>4.965</td>
<td>4.063</td>
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<tr>
<td>1.85V</td>
<td>75.95</td>
<td>61.41</td>
<td>48.60</td>
<td>32.10</td>
<td>19.20</td>
<td>12.81</td>
<td>9.918</td>
<td>8.157</td>
<td>6.840</td>
<td>4.672</td>
<td>3.830</td>
<td>2.050</td>
</tr>
</tbody>
</table>

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C10 should reach 95% after the first cycle and 100% after the third cycle.

- **F.V/Time**: Voltage per unit of time
- **C10**: Discharge current at 10 hours rate
- **C3**: Discharge current at 3 hours rate
- **C5**: Discharge current at 5 hours rate
- **C10**: Discharge current at 10 hours rate
- **C20**: Discharge current at 20 hours rate
- **C3**: Discharge current at 3 hours rate
- **C5**: Discharge current at 5 hours rate
- **C10**: Discharge current at 10 hours rate
- **C20**: Discharge current at 20 hours rate
**Temperature Effects On Capacity**

Temperature effects on capacity are illustrated through graphs showing the capacity percentage at various temperatures for different discharge depths (DOD: 30%, 50%, 100%).

**Charge Characteristic Curve For Standby Use**

Charging characteristics under various temperatures are presented, with curves depicting charge volume, charge current, and charge voltage.

**Discharge Characteristics Curve**

Discharge characteristics, including terminal voltage (V/cell) and discharge time, are shown for different discharge currents (0.5CA, 2CA, 3.0CA).

**Cycle Life In Relation To Depth Of Discharge**

Graphs illustrate the relationship between cycle life and depth of discharge (DOD) for different temperatures, highlighting the impact of DOD on cycle endurance.

**Effect Of Temperature On Long Term Life**

A graph showing life expectancy (years) against temperature (°C) provides insights into how temperature affects long-term battery life.

**Storage Characteristics**

Storage characteristics over time are graphed, indicating capacity retention at various temperatures and storage times.

**Life Characteristics Of Standby Use**

Life characteristics under standby use conditions are displayed, focusing on charge voltage (VPC) and charge current at different temperatures.

**Effect Of Temperature On Long Term Life**

Another graph showing life expectancy (years) against temperature (°C) for different testing conditions (float, charge) is presented.

(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.