(R20 D)

**1. Scope**

This specification is suitable for the performance of batteries supplied by Simeans battery.

**2. Ratings**

|  |  |  |
| --- | --- | --- |
| Nominal Voltage | | 1.5 V |
| Temperature Range for | Standard Temperature | 20℃±2℃ |
| Special Temperature | 30℃±2℃ |
| High Temperature | 45℃±2℃ |
| Humidity Range for Storage | Standard Humidity | 45%∽75% |
| Special Humidity | 35%∽65% |
| Dimenstion | Diameter | R20p: 32.83∽32.84mm |
| Height | R20p: 58.44 mm |
| Approx weight | | R20p: 84∽84.2g |

**3. Electrical Characteristic**

(Condition: on-load resistance 3.9Ω, precision±0.5%,time:0.3S,

Temperature: 20℃±2℃ Testing should be done within 30days upon the

Receipt of goods.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Off- load Voltage (V) | On-load Voltage (V) | Short-circuit  current (A) | Test Standard |
| Fresh Battery | R20p:1.65 | R20p:1.50 | R20p:6.5 | MIL-STD105E, common second level, double |
| Stored for 3 months | R20p:1.60 | R20p:1.45 | R20p:6.0 |
| Stored for 12 months under | R20p:1.58 | R20p:1.40 | R20p:5.5 |

**4. Discharge Characteristic**

(Condition: temperature: 20℃±2℃. Testing should be done within 30days upon the receipt of goods)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Discharge condition | | | Minimum average Discharge time | |
|  | On-load resistance | Discharge time per day | End voltage (V) | Fresh Battery | Stored for 12 months under Room Temp |
| IEC/IEC standard | 10Ω | 4h/day | 0.9V | R20p:36h | R20p:32h |
| Reference standard | 2.2 Ω | 1h/day | 0.8V | R20p:7h | R20p:6.3h |
| 3.9 Ω | 24h/day | 0.9V | R20p:9h | R20p:7h |

Inspect standard: discharge 9 nos sample for each condition. It pass if average discharge time is equal to or more than minimum average value specified and the nos with discharge time less than 80% speclfied value is less than one.）

**5. Anti-leakage characteristic**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Condition | Period | characteristic | Inspect standard |
| Feature of over-disch | On-load:  Temp: 20℃±2℃°  Huml: 65±15% | Uninterrupted discharge for 4hours | Deformation is less than 0.2mm and no visual leakage | N=30,AC=0,  Re=1 |
| Feature of storage | Temp: 55℃±2℃  Huml: ≤70%RH | 30 days | N=30,AC=0,  Re=2 |
| Tenp: 65℃±2℃  Hunl: ≤90%RH | 15 days |

**6. Safety Characteristic**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Condition | Period | characteristic | Inspect standard |
| anti-short-circuit | Temp:  20℃±2℃ | 24hours | no explosion | N=9,Ac=0,Re=1 |

**7. Marks:**

The following message will be printed or stamped on the body of the battery:

(1) Model

(2) Manufacture’s name: SIMEANS

(3) Nominal Voltage

(4) Pole

(5) Warning

**8. Store period of battery**

The battery is ok within 3 years under room temp and suit environment.

**9. Battery discharge curve (test temp: 20℃±2℃)**

Method: 24 hour per day

On-load resistance: 3.9 Ω

End Voltage: 0.9V

Standard time: 820min