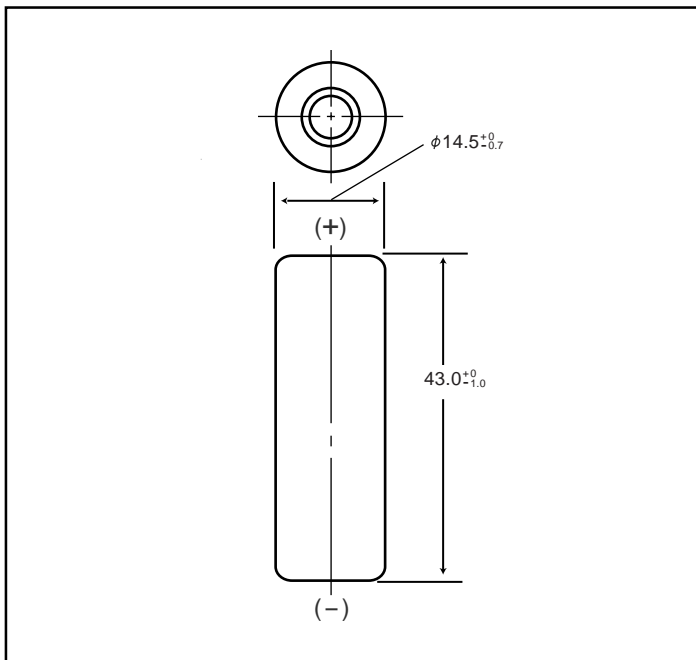


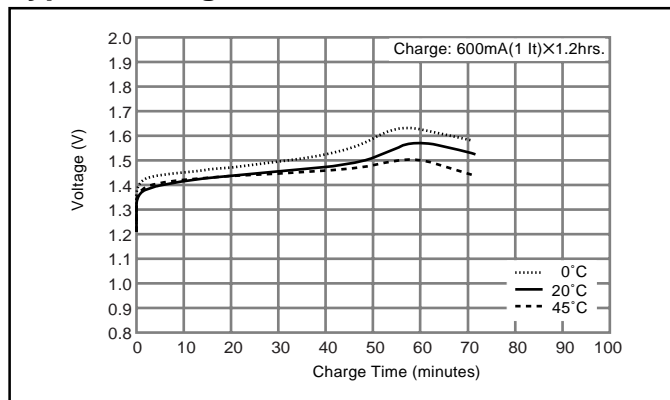
NICKEL METAL HYDRIDE BATTERIES: INDIVIDUAL DATA SHEET

HHR120AA Cylindrical 4/5AA size (HR 15/43)

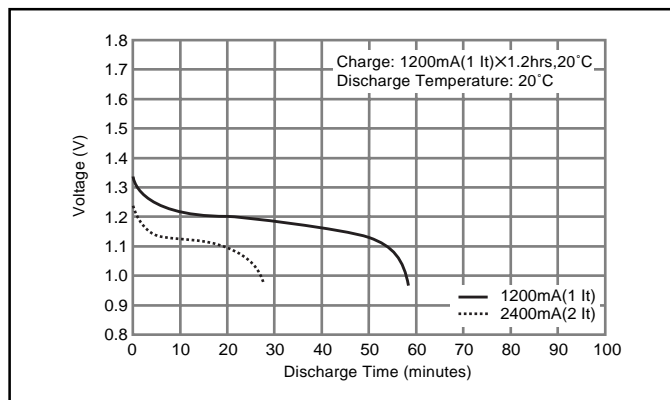
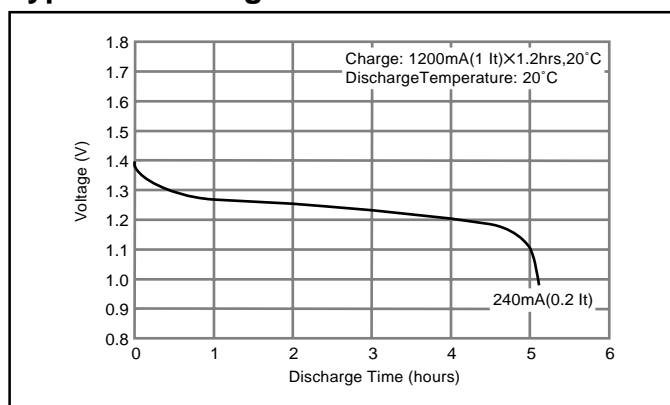
Dimensions (with Tube) (mm)



Typical Charge Characteristics



Typical Discharge Characteristics



Specifications

| | mm | inch |
|--------------------|-------------|--------------|
| Diameter | 14.5+0/-0.7 | 0.57+0/-0.03 |
| Height | 43.0+0/-1.0 | 1.69+0/-0.04 |
| Approximate Weight | Grams | Ounces |
| | 23 | 0.81 |

| | | | | |
|--|--------------|-------------------------|---------------|---------------|
| Nominal Voltage | | 1.2V | | |
| Discharge Capacity* | Average** | 1220 mAh | | |
| | Rated (Min.) | 1150 mAh | | |
| Approx. Internal impedance at 1000Hz at charged state. | | 19mΩ | | |
| Charge | Standard | 120mA (0.1It) x 16hrs. | | |
| | Rapid | 1200mA (1It) x 1.2 hrs. | | |
| Ambient Temperature | Charge | Standard | °C | °F |
| | | | 0°C to 45°C | 32°F to 113°F |
| | Rapid | 0°C to 40°C | 32°F to 104°F | |
| | | Discharge | -10°C to 65°C | 14°F to 149°F |
| Storage | < 1 year | -20°C to 35°C | -4°F to 95°F | |
| | < 3 months | -20°C to 45°C | -4°F to 113°F | |
| | < 1 month | -20°C to 55°C | -4°F to 131°F | |

* After charging at 0.1It for 16 hours, discharging at 0.2It.

** For reference only.

Battery performance and cycle life are strongly affected by how they are used. In order to maximize battery safety, please consult Panasonic when determining charge / discharge specs, warning label contents and unit design.

Note: [It] was previously expressed as [C]. [It] is an IEC standard expression for the amount of charge or discharge current and is expressed as:
It(A) = Cn (Ah)/1h.

- [It] is the reference test current in amperes
- [Cn] is the rated capacity of the cell or battery in Ampere-hours.
- n = the time base [hours] for which the rated capacity is declared