VOLTCRAFT

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For more than 40 years, our product range has been dynamically adapting to the constant changes in the industry. We commit to offering first-class quality to our customers while delivering an excellent cost-performance ratio. This philosophy remains the cornerstone of Voltcraft's success.

FR03 AAA Li/FeS_2 BATTERY

CE

Item No.: 2542831 (4pc / pack)



1. Scope

This specification is applicable to the lithium/iron disulfide battery, model FR03.

2. Model

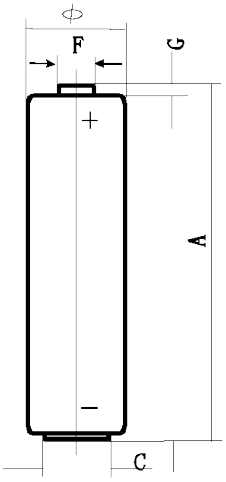
Common: AAA, FR03
IEC/GB: FR10G445
ANSI: 24LF
Chemical System: Li/FeS_2

4. Specification

Data	Value
Nominal Voltage	1.5 V
Capacity	Approximate 1100mAh (30mA, 24h/d, 23±2°C, e.v.=0.9V)
Weight	Approximate 7.5g
Dimensions (Diameter)	9.8 mm (min) to 10.5 mm (max)
Dimensions (Height)	43.5 mm (min) to 44.5 mm (max)
Recommended Storage Temperature	Not to exceed 35°C (Operation: -40°C to 60°C)
Shelf Life	10 years at 21°C

5. Drawing (unit: mm)

	min. (mm)	max. (mm)
Φ	9.8	10.5
A	43.5	44.5
C	4.3	-
F	-	3.8
G	0.8	-



6. Test Conditions and Performance

6.1 Standard Test Conditions

Unless otherwise stated, all measurements are to be performed at a Standard Environment of 23±2°C and 55±20% RH. All samples are normalized for at least 8 hours at the above environment prior to measurement. The digital voltmeter is with a precision of 1mV (internal resistance not less than 1 Megohm). The load resistance of the total circuit is accurate within ±0.5% of the specified value.

6.2 Visual Inspection

The battery is visually inspected by the unaided eye 30cm away. The battery shall be free from dents, scratches, rust, and extruded internal compounds (such as sealing compounds), and serious displacement of artwork. Appearance defects shall not be observed that may adversely affect actual use or performance.

6.3 Basic Characteristics

Item	Criteria
Open-Circuit Voltage (Initial)	>1.75 V
Open-Circuit Voltage (Stored 1 year)	>1.73 V
Closed-Circuit Voltage (Initial)	>1.62 V (Load resistance 50Ω, 0.1~0.5S)
Closed-Circuit Voltage (Stored 1 year)	>1.62 V (Load resistance 50Ω, 0.1~0.5S)

6.4 Service Output

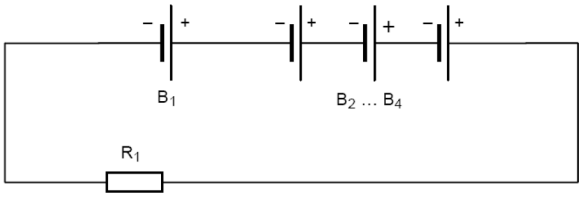
Load	1.2 W/0.65 W	400 mW	50 mA
Test Mode	2s/28s, 5m/h, 24h/d	4m/15m, 8h/d	1h/12h, 24h/d
End Voltage	1.05V	1.0V	0.9V
Unit	pulse	min	h
Normal (Initial)	160	190	20.0
MAD (Initial)	140	140	16.0
Normal (Stored 1 year)	150	180	19.0
MAD (Stored 1 year)	130	130	14.0

6.5 Mechanical and Security Characteristics

Item	Test Conditions	Criteria
User Drop Test	Undischarged batteries dropped from 1m onto concrete. 6 times (twice in each of 3 axes). Stored for 1h afterwards.	No fire, No explosion
Short-circuit	Positive and negative terminals connected directly for 24h or until returned to ambient. Resistance < 0.1 Ω.	No fire or explosion; Leakage is allowable
Incorrect Installation	4 undischarged batteries: 3 correctly in series, 1 reversed. Maintained until venting or returned to ambient.	No fire or explosion; Leakage is allowable

6.6 Leakage Resistance

Item	Test Conditions	Criteria
Overdischarge	Test battery (B1) predischarged to 50% depth, connected in series with 3 undischarged cells (B2-B4). 3.9Ω (R1) load connected for 24h.	No explosion, No fire
High Temp Leakage	Store 20 days at 60±2°C, then 4~24h under standard environment.	No visible leakage, No explosion

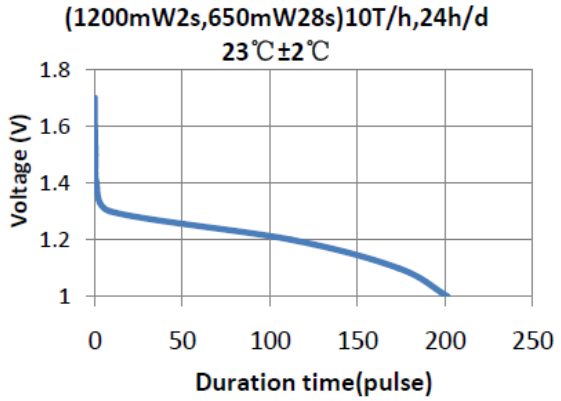


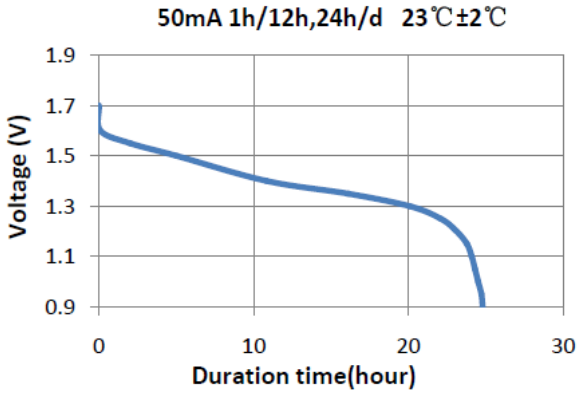
Major Applications

Digital still camera, High intensity lighting, Digital Audio.

Component / Information of Ingredients

Materials	Approximate % of Total Weight
FeS2 (Iron disulfide)	30
Fe (Iron)	27.5
Organic Electrolyte	11.5
Li (Lithium)	6.1
Al (Aluminum)	5.2
PE	4.6
Carbon	1.4
Ni (Nickel)	1.0





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