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TECHNICAL SPECIFICATION

FOR

MAXIMUM POWER ALKALINE BATTERY

9V-6LR61-Alkaline-905

PROMULGATE DATE: November, 2021

SPEC. No.: TS-AlZnMn-905

1. Scope

This specification defines the technical requirements for 6LR61 alkaline battery.

Cross Reference:	Allmax	IEC	GB	JIS	ANSI	Common
	905	6LR61	6LR61	1604A	1604A	9V

2. Purpose

To assure that any Allmax Maximum Power Alkaline 6LR61 battery will meet and exceed our customers' expectation.

3. Normative Reference

IEC 60086-1: 2021 *Primary Batteries—Part 1: General*

IEC 60086-2: 2021 *Primary Batteries—Part 2: Physical and Electrical Specifications*

IEC 60086-5: 2021 *Primary Batteries—Part 5: Safety of batteries with aqueous electrolyte*

GB 24427-2021 *Content limitation of mercury, cadmium and lead for zinc anode primary battery*

4. Fundamental Parameter

Item	Data
Item NO.	905
Chemical System	Alkaline Zinc-Manganese Dioxide (Potassium hydroxide electrolyte)
Primary Component	Zinc, Manganese dioxide, Graphite, Potassium hydroxide
Nominal Voltage	9 volt

Item	Data
Average Weight	46 g
Jacket	Aluminum Foil Jacket
Nominal Capacity	690 mAh [a]
Hazardous Material Content [b]	Hg≤1 ppm, Cd≤10 ppm, Pb≤40 ppm
Packing	1 battery/blister card [c]

Note:

a) Discharge condition: 620 Ω 2 h/d, end point voltage 4.8V at 20±2 ℃.

b) No Hg, Cd, or Pb is added in the products during manufacture.

c) We can make various kinds of packages as per the customers' request.

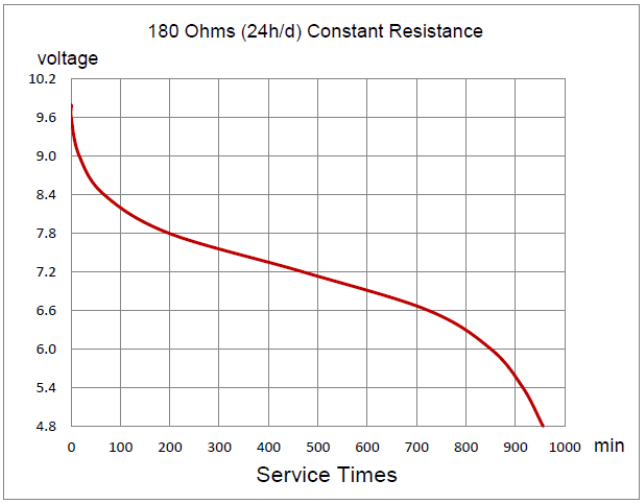
5. Electrical Characteristics

/	Off-load Voltage	Short Circuit Current	Acceptance Standard
Initial [a]	9.48 ~ 9.9 V	≥ 4.0A	GB/T 2828.1-2012 commonly Ⅰ sampling AQL=0.4
After 12 months	9.36 ~ 9.9 V	≥ 3.6A	

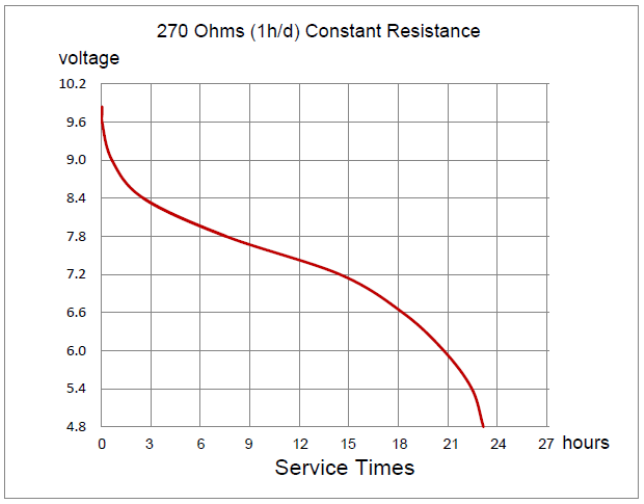
Note:

a) Initial means that within 60 days after manufacture date, at temperature 20±2 ℃, with relative humidity of (55±20)%.

6. Service Time

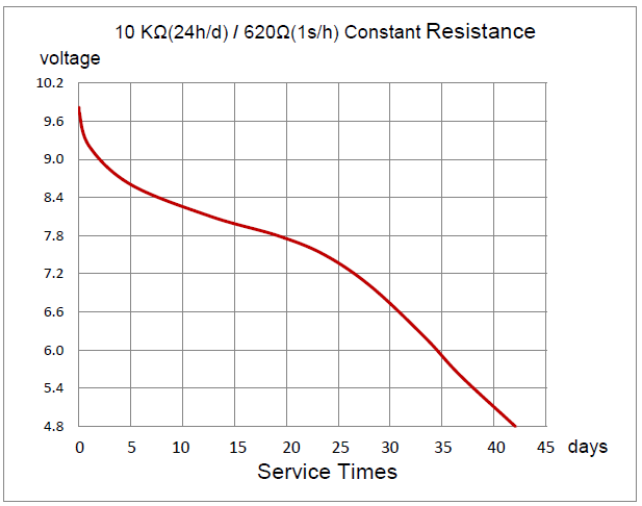


Application: Service Output Test



Application: Toy

Application: Clock / Radio



Application: Smoke Detector

Note:

Condition: temperature 20±2 ℃, relative humidity (55±20)%.

Explanation:

1) These are typical discharge curves for Allmax batteries.

2) 8 batteries were tested under each discharge condition.

7. Using Advice

The battery is applicable for high powered digital devices, such as smoke detectors, carbon monoxide detectors, toys, garage door openers, etc.

8. Electrolyte Leak Proof Characteristics

Item	Condition	End Period	Result	Acceptance Standard
Over-discharge	180 Ω 24 h/d discharge at 20±2 ℃, (55±20)% RH	E.P.V= 3.6 V	There shall be no deformation exceeding the specified dimensions, nor leakage [a] recognized by human eye.	N=8 Ac=0 Re=1
Leakage test under different conditions	At temperature 20±2 ℃, (55±20)% RH	36 months		Less than 50 ppm
Note: a) Leakage means unplanned escape of electrolyte, gas or other material from a battery.				

9. Safety Characteristics [a]

Item	Test Procedure	End Period	Result	Acceptance Standard
External short circuit	An undischarged battery is directly connected with its positive and negative polarity.	24 hours	There shall be no explosion of battery.	N=5 Ac=0 Re=1
Note: a) Condition: at temperature 20±2 ℃.				

10. Caution for Use

a) Improper use of batteries may result in explosion or leakage, causing personal injury and/or property damage.

b) Keep out of reach of children.

c) Do NOT charge or recharge the batteries.

d) Do NOT expose to heat or dispose of in fire.

e) Do NOT install backwards (+ and -), disassemble, or deform.

f) Do NOT short-circuit the batteries. When (+) and (-) terminals of the battery are connected, they become short-circuited.

g) Do NOT mix used and new batteries or batteries of different types or brands. Replace all batteries at the same time with the same brand and type.

h) Drained batteries should be removed and disposed of properly. Remove batteries from devices if they are not used for an extended period, unless it is for emergency equipment.

i) Store in a cool and dry location away from metal objects.

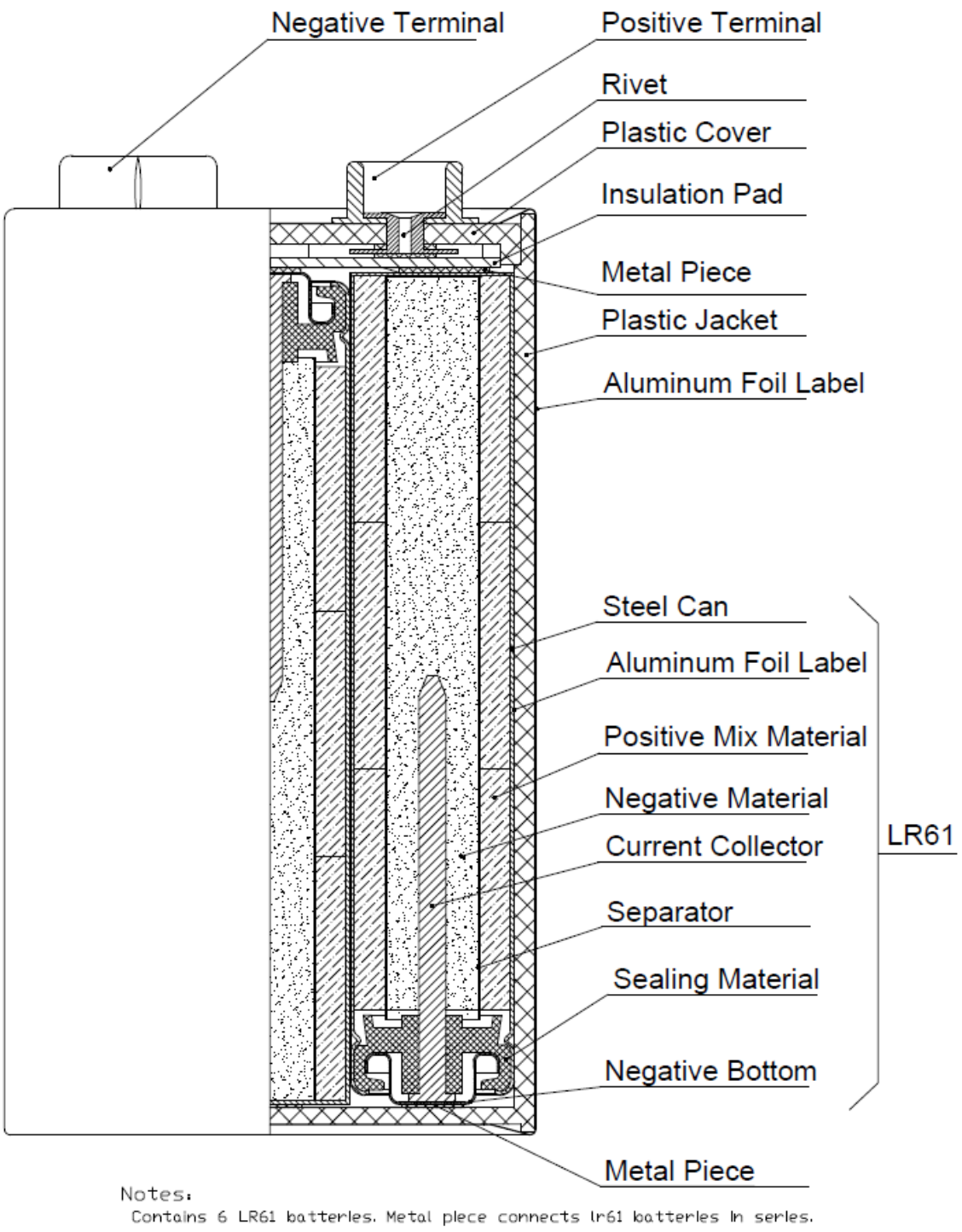
11. Shelf Life and Expiry Date Marking

Shelf Life: 7 years guaranteed under proper storage condition.

12. Battery Structure (Page 6)

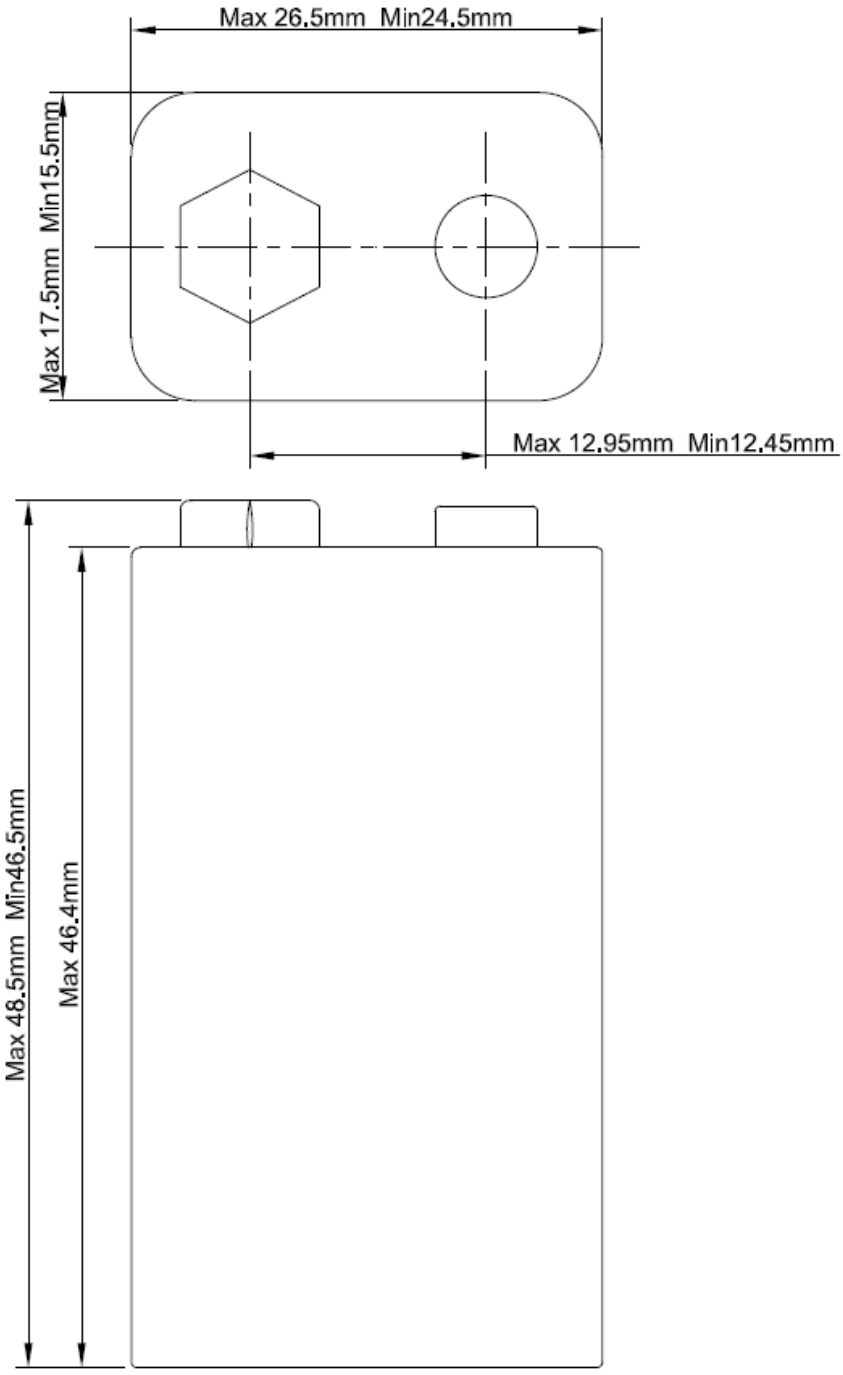
13. Battery Dimension (Page 7)

Battery Structure



Battery Structure
6LR61-905

Battery Dimension



Battery Dimension
6LR61-905