

ULTRA MAX[®]

TECHNOLOGY SPECIFICATION FOR ALKALINE MANGANESE BUTTON CELL

12V-27A ASSEMBLED BATTERY

APPROVED SIGNATURE	:	
YOUR NAME		
TITLE	:	
DATE	:	

Typed : _____

1. Summary

This technical specification applies to 12V-27A assembled battery made by Baruch Enterprises Ltd LTD

1.1 Model Control

Baruch Battery.: 27A Other Designate: L828
JIS: ----- ANSI: ----

1.2 Reference Standards

- IEC 60086-1 (2000-11) - primary batteries -Part 1: General
- IEC 60086-1 (2001-10) - primary batteries -Part 2: Physical and Electrical Specification
- IEC 60086-1 (2000-07) - primary batteries -Part 5: Safety of batteries with aqueous electrolyte

2. Chemical Composition

Zn(-) / MnO₂ (C) (+)

3. Nominal Voltage: 12.0V

4. Short Circuit Current: 200-400mA

5. Average Weight: 4.30g

6. Nominal Capacity:

25mAh (Discharge condition: Discharge 24 hours every day under 20±2°C, 20kΩ, termination voltage 7.2V)

7. Battery Performance:

	No-load Voltage (V)	Load Voltage (V)	Acceptance Standard
Production	12.3	12.2	MIL-STD105E, Class II, Double Sampling, AQL=0.4

(Condition: After receiving 30 days, measure 0.3 seconds under 20±2°C, 20kΩ)

8. Discharge Time

	Discharge Condition			Min average discharge time	
	discharge resistance	Discharge times per day	termination Voltage	Production	Store at room temperature for 1 year
standard	10kΩ	24 h	7.2V	55h	50h
	1kΩ	/	9.0V	50min	45min
	1kΩ	/	6.0V	100min	90min

(Condition: 30 days after manufacture 20 ± 2 °C)

Acceptance Standard:

- 1) Sample size 9 batteries
- 2) Average discharge time must be equal to or greater than the Min average discharge time.

3) If the above results are not qualified, test again please

9. Safety Performance

Item	Environmental conditions	Deadline	Require	Acceptance Standard
External Short-Circuit Test	$20 \pm 2^{\circ}\text{C}$	24 hours	Battery won't appear explosion	N=9, Ac=0; Re=1

10. Marks

Outside of the battery shell has the following content:

- 1) **Battery Type:** 27A
- 2) **Nominal Voltage:** 12V
- 3) **Manufacturer:** BARUCH ENTERPRISES
- 4) **Polarity sign:** The red film a party is “+”, and the black film a party is “-”
- 5) **Notes:** Do not charge or dispose of in fire.

11. Notes

- 1) Please don't charge the battery, it may cause leakage and damage the charging equipment.
- 2) Please install batteries correctly
- 3) Don't short circuit or heat the battery.
- 4) Don't disassemble the battery, the internal electrolyte is corrosive and volatile
- 5) Don't use new electricity and have used batteries at the same time
- 6) Please take the used batteries out from appliances, avoiding leakage from full discharge.
- 7) The battery should be kept away from children, beware of swallowing.

12. Storage Period

- 1) If battery is stored at ($20 \pm 2^{\circ}\text{C}$ $2.55 \pm 20\%$) Battery capacity is 90% after one year storage period.

13. Discharge Curve (Testing temperature : $20 \pm 2^{\circ}\text{C}$)

- 1) **Discharge method:** Discharge 24 hours per day under $20\text{k}\Omega$ (Diagram 1)
- 2) **Discharge method:** Discharge continuously under $1\text{k}\Omega$ to 9V and 6V. (Diagram 2)

14. Battery Shape Dimension Drawing (Diagram 3)

Diagram 1 Discharge Characteristics 27A under 20K Ω

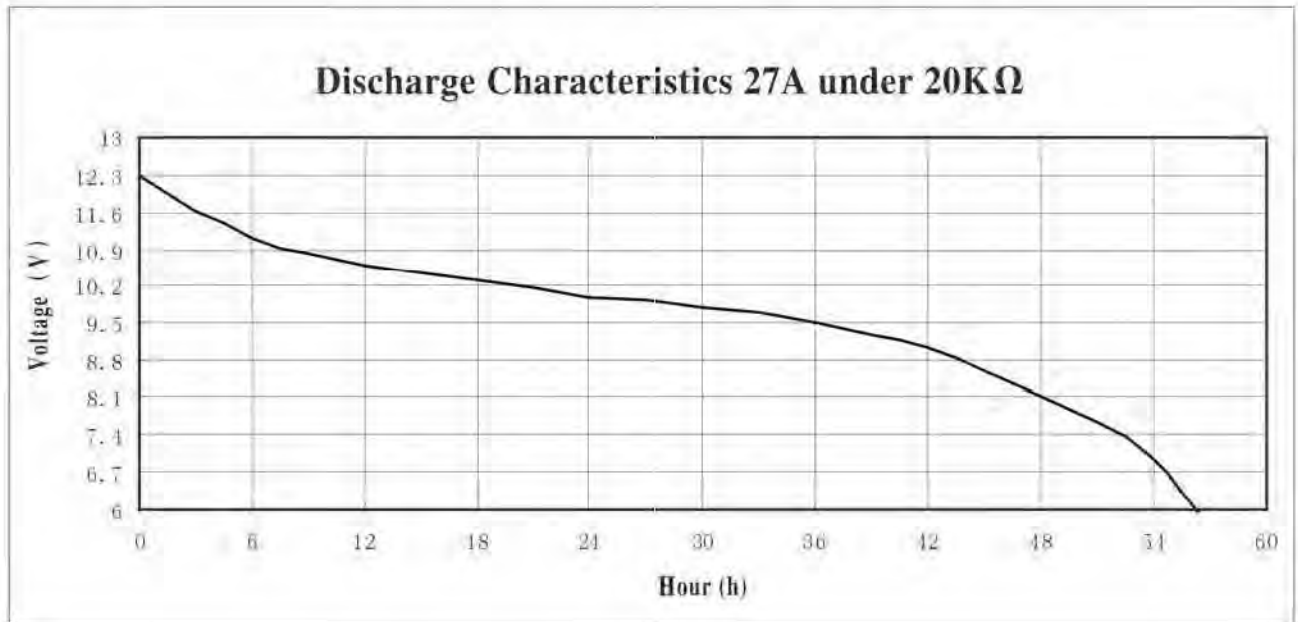
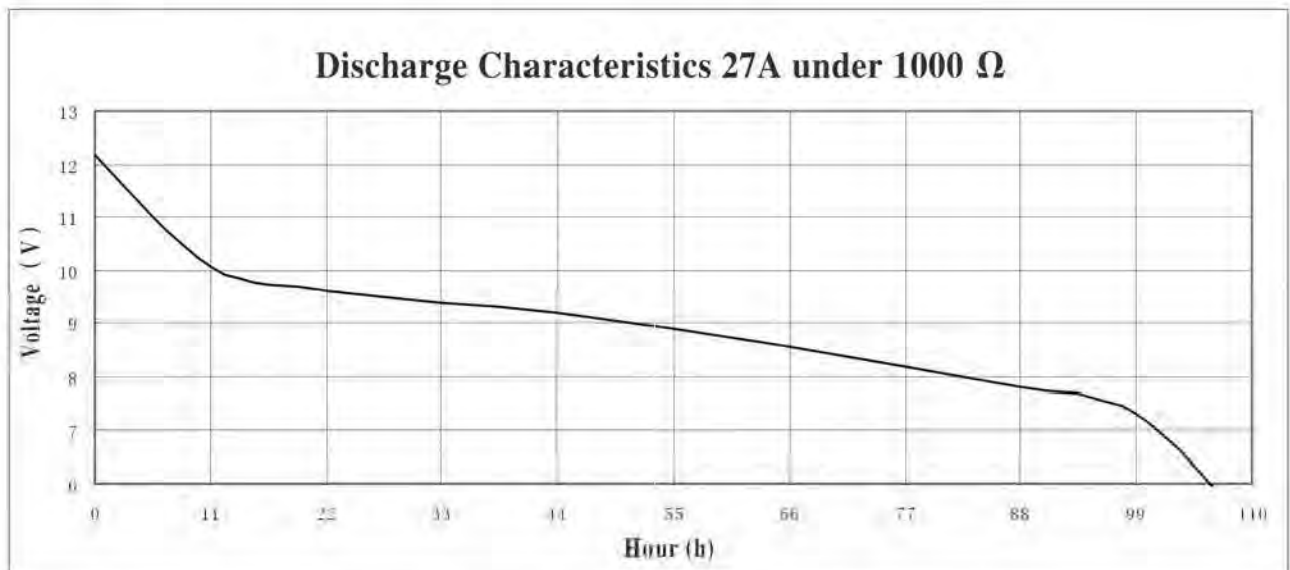
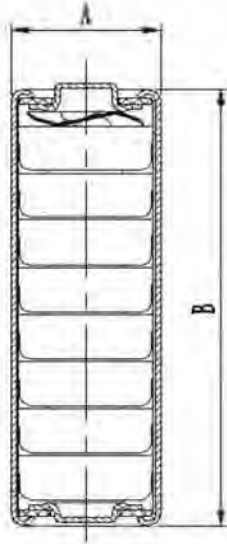


Diagram 1 Discharge Characteristics 27A under 1000 Ω



Size (mm)



Code	Size
A	$\varnothing 8.10^{+0.30}$
B	$27.8^{+0.40}$

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SPECIFICATION

LR 1

ALKALINE BATTERY

APPROVED SIGNATURE :

YOUR NAME

TITLE :

DATE :

Typed _____

Approved _____

1 - Summary

This specification defines the Technology for Alkaline cells LR1.

1.1 Type

IEC : LR1 Other : N, MN9100, E90

JIS : AM-5

1.2 Reference standard

IEC 60086-1 (2000-11) --- Primary Batteries - Part 1: General

IEC 60086-2 (2001-10) --- Primary Batteries - Part 2: Physical and electrical specification

1.3 Execution standard

GB 8897.2-2005

2 - Chemistry composition

Zinc, EMD, Potassium hydroxide, Graphite

*0.00% Mercury & Cadmium

3. Normal voltage : 1.5V

4. Average weight : 9.2g

5. Normal capacity

800mAh (Test condition : Load Resistance ($\pm 0.5\%$) 300 Ω , Time: 12h/d, Temperature: $20 \pm 2^\circ\text{C}$, e.p.v=0.9V)

6. Electrical performance

(Test condition : Load Resistance ($\pm 0.5\%$) 5.0 Ω , Time: 0.3s, Temperature: $20 \pm 2^\circ\text{C}$.)

	O.C.V (V)	C.C.V (V)	*S.C.C (A)	Accept Level
≤ 30 days after delivery	1.55	1.35	4.0	MIL-STD105E - II : AQL=0.4
45 $^\circ\text{C}$ for 3 months	1.52	1.30	3.0	
Normal temperature for 12 Months	1.52	1.30	3.0	

7 - Service Life

(Test condition: $+20^\circ\text{C} \pm 2^\circ\text{C}$ and $60 \pm 15\% \text{RH}$)

	Discharge Method			Minimum Average Duration		
	Load Resistance	Time	Cutoff Voltage (V)	≤ 30 days after delivery	45 $^\circ\text{C}$ for 3 months	Normal Temperature for 12 Months
IEC Item	300 Ω	12h/d	0.9	200h	180h	180h
	5.1 Ω	5min/d	0.9	130min	117min	117min
	3000 Ω	24h/d	0.9	1100h	990h	990h

Satisfaction Standard:

- 1) 9 pieces of battery will be tested for each discharging standard.
- 2) The result of the Minimum Average Duration from each discharging standard shall be equal to or more than the Minimum Average Duration requirement; and no more than one battery has a service output less than 80% of the specified requirement.
- 3) One re-test is allowed to confirm the previous result.

LR1 DISCHARGE CURVE

Load Resistance : 300Ω Discharge Method : 12h/d
E.P.V: 0.9v Condition : 20 ± 2°C RH : 45-75%

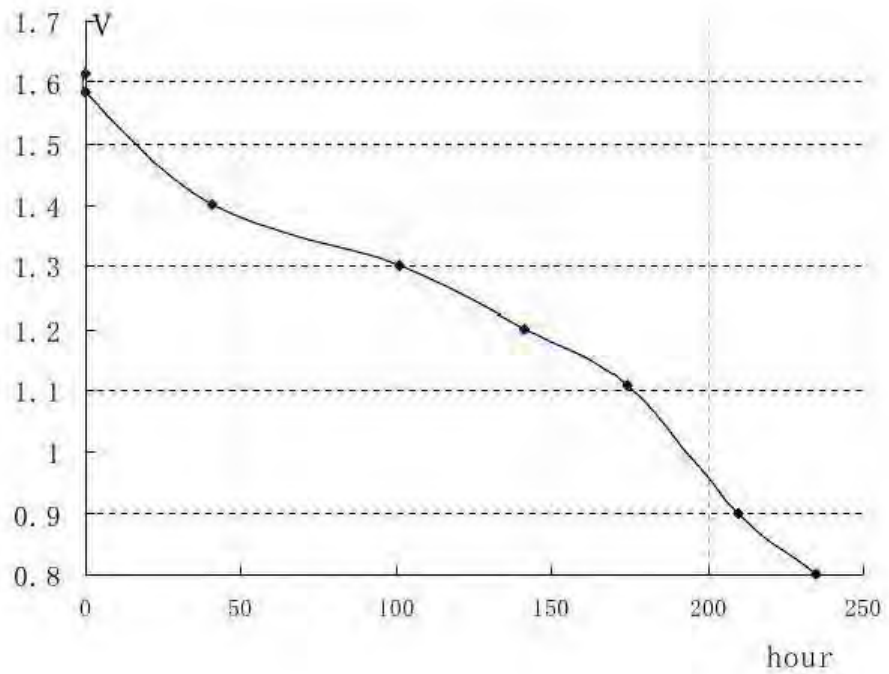


Figure : 1

LR1 Structure & Dimensions

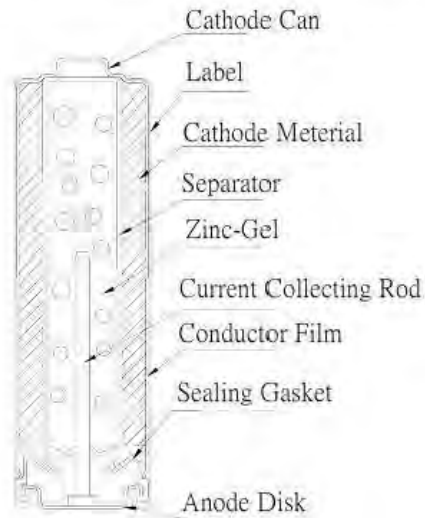


Figure:2

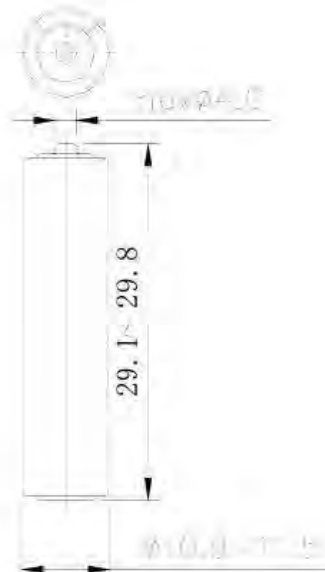


Figure: 3

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TECHNOLOGY SPECIFICATION FOR ALKALINE MANGANESE BUTTON CELL

12V-23A ASSEMBLED BATTERY

APPROVED SIGNATURE	:	
YOUR NAME		
TITLE	:	
DATE	:	

Typed : _____

Approved : _____

1. Summary

This technical specification applies to 12V-23A assembled battery made by Baruch Enterprises Ltd

1.1 Model Control

Baruch Battery.: 23A

Other Designate: L1028

IEC: ---

JIS: ---

ANSI: ---

1.2 Reference Standards

IEC 60086-1 (2000-11) - primary batteries -Part 1: General

IEC 60086-1 (2001-10) - primary batteries -Part 2: Physical and Electrical Specification

IEC 60086-1 (2000-07) - primary batteries -Part 5: Safety of batteries with aqueous electrolyte

2. Chemical Composition: Zn(-) / MnO₂ (C) (+)

3 Nominal Voltage: 12.0V

4. Short Circuit Current: 400-800mA

5. Average Weight: 7.90g

6. Nominal Capacity:

50mAh (Discharge condition: Discharge 24 hours every day under $20 \pm 2^\circ\text{C}$, $20\text{k}\Omega$, termination voltage 7.2V)

7. Battery Performance:

	No-load Voltage (V)	Load Voltage (V)	Acceptance Standard
Production	12.3	12.2	MIL-STD105E, Class II, Double Sampling, AQL=0.4

(Condition: After receiving 30 days, measure 0.3 seconds under $20 \pm 2^\circ\text{C}$, $20\text{k}\Omega$)

8. Discharge Time

	Discharge Condition			Min average discharge time	
	discharge resistance	Discharge times per day	termination Voltage	Production	Store at room temperature for 1 year
Standard	$20\text{k}\Omega$	24 h	7.2V	110h	100h
	1 k Ω	/	9.0V	150min	120min
	1 k Ω	/	6.0V	250min	220min

(Condition: 30 days after manufacture $20 \pm 2^\circ\text{C}$)

Acceptance Standard:

1) Sample size 9 batteries

2) Average discharge time must be equal to or greater than the Min average discharge time.

3) If the above results are not qualified, test again please

9. Safety Performance

Item	Environmental conditions	Deadline	Require	Acceptance Standard
External Short-Circuit Test	$20 \pm 2^{\circ}\text{C}$	24 hours	Battery won't appear explosion	N=9, Ac=0; Re=1

10. Marks

Outside of the battery shell has the following content:

- 1) **Battery Type:** 23A
- 2) **Nominal Voltage:** 12V
- 3) **Manufacturer:** BARUCH ENTERPRISES
- 4) **Polarity sign:** The red film a party is “+”, and the black film a party is “-”
- 5) **Notes:** Don't used in charge or put into the fire

11. Notes

- 1) Please don't charge the battery; it may cause leakage and damage the charging equipment.
- 2) Please install batteries correctly
- 3) Don't short circuit or heat the battery.
- 4) Don't disassemble the battery, the internal electrolyte is corrosive and volatile
- 5) Don't use new electricity and have used batteries at the same time
- 6) Please take the used batteries out from appliances, avoiding leakage resulted from discharge.
- 7) The battery should be kept away from children, beware of swallowing.
- 8) In order to use and protect appliances better, wipes cover face with alcohol before taking in appliances.

12. Storage Period

- 1) Storing for one year In normal and reasonable environment ($20 \pm 2^{\circ}\text{C}$, $55 \pm 20\%$)
- 2) Battery capacity can be kept more than 90% in one year storage period

13. Discharge Curve (Testing temperature : $20 \pm 2^{\circ}\text{C}$)

- 1) **Discharge method:** Discharge 24 hours per day under $20\text{k}\Omega$ (schedule 1)
- 2) **Discharge method:** Discharge continuously under $1\text{k}\Omega$ to 9V and 6V. (schedule 2)

14. Battery Shape Dimension Drawing (Appended drawings)

Diagram 1 Discharge Characteristics 23A under 20K Ω

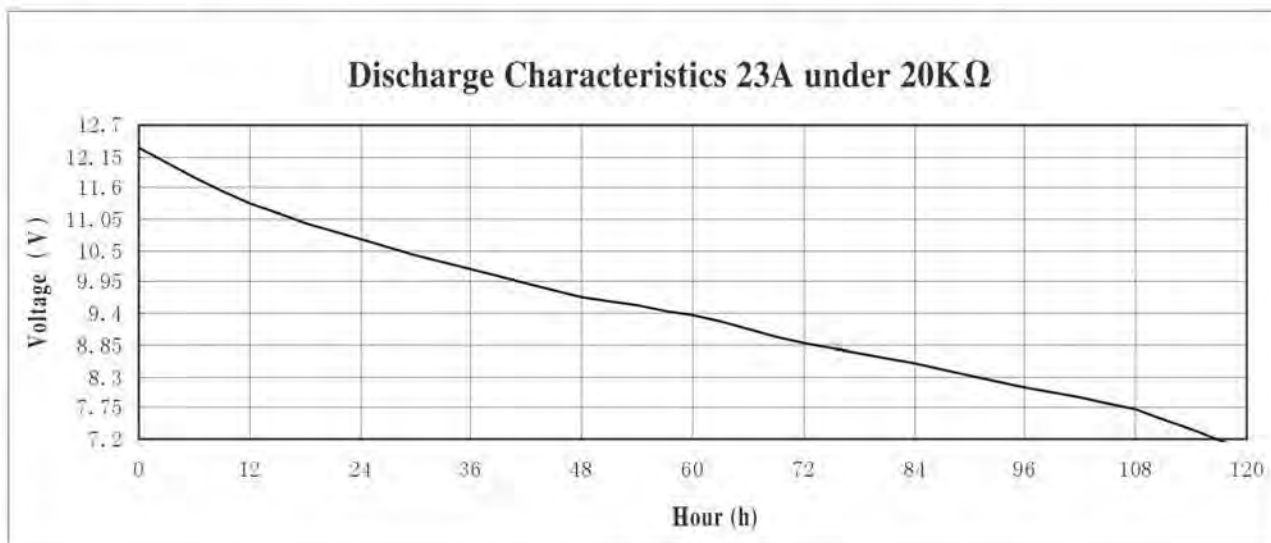
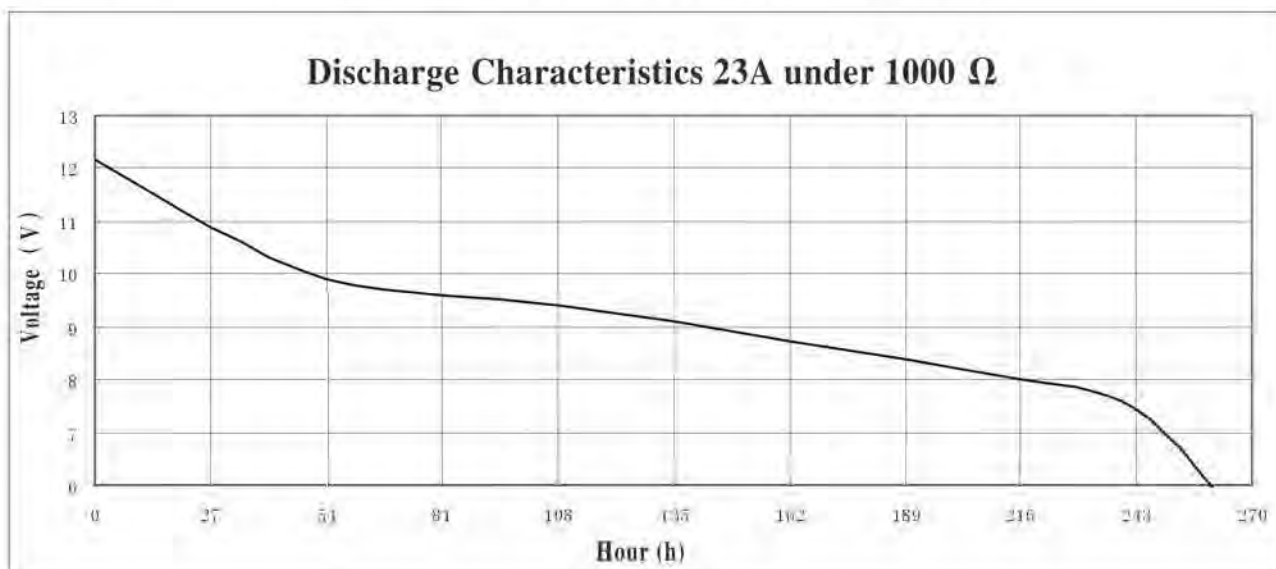
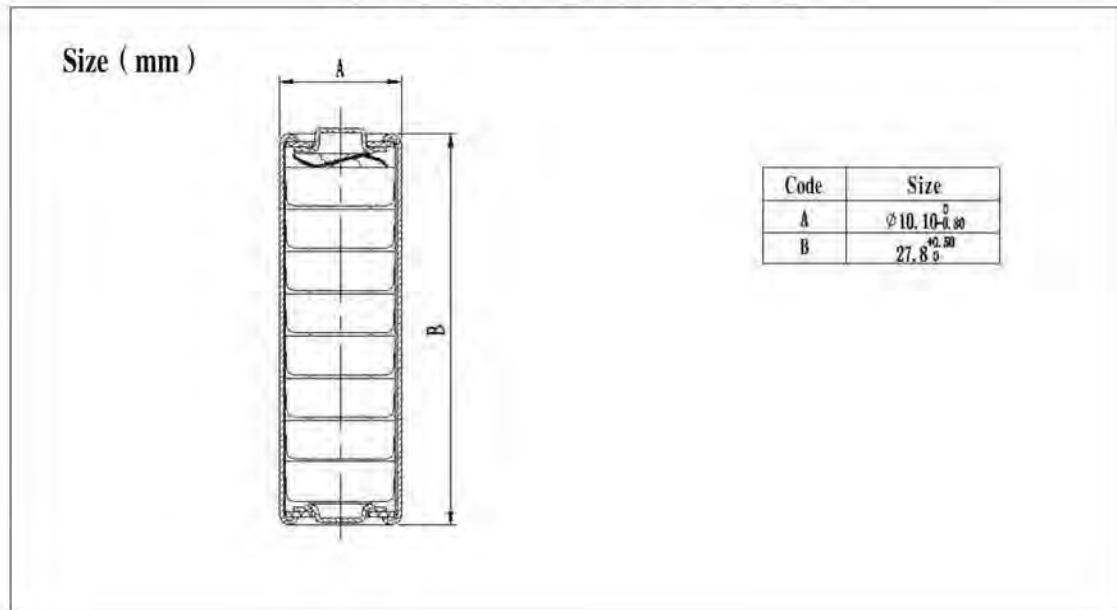


Diagram 2 Discharge Characteristics 23A under 1000 Ω



23A Bize Structure





Product Specification

Model: LR44UMXB2 Alkaline Button Battery

Customer:

Customer Approval:

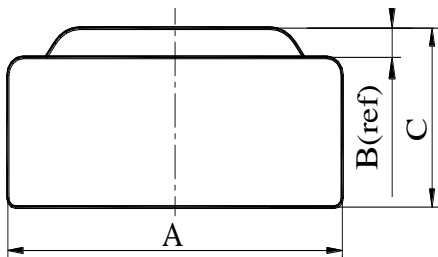
Date: 18- 07- 2014

Approval	Check	Prepare
		Marlon

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Technical Specifications

Chemical System	:	Alkaline manganese button batteries
Model No.	:	LR1154 (LR44 AG13 A76)
Nominal Dimensions	:	Φ11.60×5.40mm
Nominal Voltage	:	1.50V
Average Weight	:	1.92g
Applications	:	Watch, Calculator, Electronic toy etc.
Shelf Life	:	Not less than 90% of the Service capacity, following 1 st year storage at 20°C.
Loading	:	1000Ω (20°C)
Cut Off Voltage	:	0.90V
Capacity	:	180mAh



Dimensions	Unit: mm
A	11.40----11.60
B	0.50(ref)
C	5.10----5.40

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Typical Discharge Characteristics at 20 C

