

battery type:
battery size:
chemical system:

Alkaline Manganese Dioxide
 LR60; LR621; AG1; 164; 364
 Zn / KOH-H₂O / MnO₂



<https://www.mega-piles.com/>

nominal voltage: 1.5 V
open circuit voltage: 1.57...1.63 V
 1.53...1.63 V

Conditions

new battery
 after 1 year storage at 20°C

capacity

rated: 13 mAh

all measurements at 22 ± 2°C ambient

discharge at 68kΩ load; 24hours/day
 End Voltage (EV): 1.0V

minimum: 11 mAh

discharge at 68kΩ load; 24hours/day
 End Voltage (EV): 1.0V

Service Life

nominal: 680 h at 68kΩ load EV: 1.0V new battery
 (tested within 60 days after production)

MAD: (minimum average duration) 615 h at 68kΩ load EV: 1.0V new battery
 465 h EV: 1.2V (tested within 60 days after production)

555 h at 68kΩ load after 12 months storage at room temperature
 EV: 1.0V
 420 h EV: 1.2V

≥ 130 h at 15kΩ load for IQC measurement
 EV: 1.0V

shelf life: 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)
 ≥90 % of the capacity will remain after 12 months storage

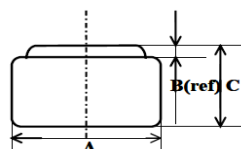
operating temperature range:

- 20...60 °C

mechanical specifications:

dimensions: 6.8 x 2.1mm nominal

Dimensions	Unit:mm
A	6.70-6.80
B	0.25(ref)
C	1.95-2.10



nominal weight: 0.3 g

main applications: watch
 photo
 electronic

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ANSMANN Specifications for model:

AG1 (LR60) Alkaline Button Cell

data sheet no. / part no.

supplier no.

703385

author / date

TG / 17.04.2014

Manufacturer reserves the right to alter or amend the design, model and specification without prior notice

battery type: Alkaline Manganese Dioxide
battery size: LR41; LR736; AG3; 192; 392
chemical system: Zn / KOH-H₂O / MnO₂

Conditions

nominal voltage: 1.5 V
open circuit voltage: 1.57...1.63 V new battery
 1.53...1.63 V after 1 year storage at 20°C

all measurements at 22 ± 2°C ambient

capacity
rated: 30 mAh discharge at 22kΩ load; 24hours/day
 End Voltage (EV): 1.0V

minimum: 27 mAh discharge at 22kΩ load; 24hours/day
 End Voltage (EV): 1.0V

Service Life

nominal: 505 h at 22kΩ load new battery
 EV: 1.0V (tested within 60 days after production)

MAD: at 22kΩ load new battery
 (minimum average duration) 455 h EV: 1.0V (tested within 60 days after production)
 340 h EV: 1.2V

410 h at 22kΩ load after 12 months storage at room temperature
 EV: 1.0V
 310 h EV: 1.2V

≥ 140 h at 6.8kΩ load for IQC measurement
 EV: 1.0V

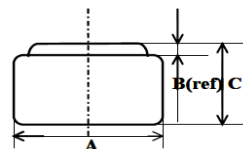
shelf life: 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)
 ≥90 % of the capacity will remain after 12 months storage

operating temperature range: - 20...60 °C

mechanical specifications:

dimensions: 7.9 x 3.6mm nominal

Dimensions	Unit:mm
A	7.75-7.90
B	0.40(ref)
C	3.40-3.60



nominal weight: 0.6 g

main applications: watch
 photo
 electronic



ANSMANN Specifications for model:

AG3 (LR41) Alkaline Button Cell

data sheet no. / part no.

supplier no.

703385

author / date

TG / 17.04.2014

battery type: Alkaline Manganese Dioxide
battery size: LR66; LR626; AG4; 177; 377
chemical system: Zn / KOH-H₂O / MnO₂

Conditions

nominal voltage: 1.5 V
open circuit voltage: 1.57...1.63 V new battery
 1.53...1.63 V after 1 year storage at 20°C

all measurements at 22 ± 2°C ambient

capacity
rated: 15 mAh discharge at 47kΩ load; 24hours/day
 End Voltage (EV): 1.0V

minimum: 13 mAh discharge at 47kΩ load; 24hours/day
 End Voltage (EV): 1.0V

Service Life

nominal: 540 h at 47kΩ load new battery
 EV: 1.0V (tested within 60 days after production)

MAD: at 47kΩ load new battery
 (minimum average duration) 490 h EV: 1.0V (tested within 60 days after production)
 370 h EV: 1.2V

445 h at 47kΩ load after 12 months storage at room temperature
 EV: 1.0V
 335 h EV: 1.2V

≥ 100 h at 10kΩ load for IQC measurement
 EV: 1.0V

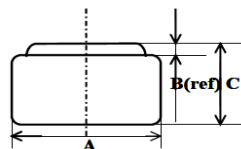
shelf life: 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)
 ≥90 % of the capacity will remain after 12 months storage

operating temperature range: - 20...60 °C

mechanical specifications:

dimensions: 6.8 x 2.6mm nominal

Dimensions	Unit:mm
A	6.70-6.80
B	0.25(ref)
C	2.40-2.60



nominal weight: 0.35 g

main applications: watch
 photo
 electronic



ANSMANN Specifications for model:

AG4 (LR66) Alkaline Button Cell

data sheet no. / part no.

supplier no.

703385

author / date

TG / 17.04.2014

battery type: Alkaline Manganese Dioxide
battery size: LR54; LR1130; AG10; 189; 389
chemical system: Zn / KOH-H₂O / MnO₂

Conditions

nominal voltage: 1.5 V
open circuit voltage: 1.57...1.63 V new battery
 1.53...1.63 V after 1 year storage at 20°C

all measurements at 22 ± 2°C ambient

capacity
rated: 65 mAh discharge at 15kΩ load; 24hours/day
 End Voltage (EV): 1.0V

minimum: 60 mAh discharge at 15kΩ load; 24hours/day
 End Voltage (EV): 1.0V

Service Life

nominal: 750 h at 15kΩ load new battery
 EV: 1.0V (tested within 60 days after production)

MAD: at 15kΩ load new battery
 (minimum average duration) 680 h EV: 1.0V (tested within 60 days after production)
 510 h EV: 1.2V

at 15kΩ load after 12 months storage at room temperature
 610 h EV: 1.0V
 460 h EV: 1.2V

≥ 45 h at 1kΩ load for IQC measurement
 EV: 1.0V

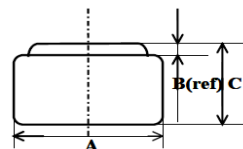
shelf life: 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)
 ≥90 % of the capacity will remain after 12 months storage

operating temperature range: - 20...60 °C

mechanical specifications:

dimensions: 11.6 x 3.1mm nominal

Dimensions	Unit:mm
A	11.40-11.60
B	0.40 (ref)
C	2.90-3.10



nominal weight: 1.1 g

main applications: watch
 photo
 electronic



ANSMANN Specifications for model:

AG10 (LR54) Alkaline Button Cell

data sheet no. / part no.

supplier no.

703385

author / date

TG / 17.04.2014

battery type: Alkaline Manganese Dioxide
battery size: LR43; LR1142; AG12; 186; 386
chemical system: Zn / KOH-H₂O / MnO₂

Conditions

nominal voltage: 1.5 V
open circuit voltage: 1.57...1.63 V new battery
 1.53...1.63 V after 1 year storage at 20°C

all measurements at 22 ± 2°C ambient

capacity
rated: 95 mAh discharge at 10kΩ load; 24hours/day
 End Voltage (EV): 1.0V

minimum: 90 mAh discharge at 10kΩ load; 24hours/day
 End Voltage (EV): 1.0V

Service Life

nominal: 730 h at 10kΩ load new battery
 EV: 1.0V (tested within 60 days after production)

MAD: (minimum average duration) 690 h at 10kΩ load new battery
 520 h EV: 1.0V (tested within 60 days after production)
 EV: 1.2V

625 h at 10kΩ load after 12 months storage at room temperature
 475 h EV: 1.0V
 EV: 1.2V

≥ 65 h at 1kΩ load for IQC measurement
 EV: 1.0V

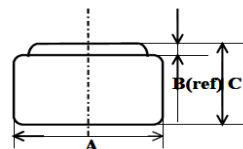
shelf life: 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)
 ≥90 % of the capacity will remain after 12 months storage

operating temperature range: - 20...60 °C

Mechanical specifications:

dimensions: 11.6 x 4.2mm nominal

Dimensions	Unit:mm
A	11.40-11.60
B	0.40(ref)
C	3.90-4.20



nominal weight: 1.5 g

main applications: watch
 photo
 electronic



ANSMANN Specifications for model:

AG12 (LR43) Alkaline Button Cell

data sheet no. / part no.

supplier no.

703385

author / date

TG / 17.04.2014

battery type: Alkaline Manganese Dioxide
battery size: LR44; LR1154; AG13; A76; 357
chemical system: Zn / KOH-H₂O / MnO₂

Conditions

nominal voltage: 1.5 V
open circuit voltage: 1.57...1.63 V new battery
 1.53...1.63 V after 1 year storage at 20°C

all measurements at 22 ± 2°C ambient

capacity
rated: 130 mAh discharge at 6.8kΩ load; 24hours/day
 End Voltage (EV): 1.0V

minimum: 115 mAh discharge at 6.8kΩ load; 24hours/day
 End Voltage (EV): 1.0V

Service Life

nominal: 680 h at 6.8kΩ load new battery
 EV: 1.0V (tested within 60 days after production)

MAD:
 (minimum average duration) 600 h at 6.8kΩ load new battery
 450 h EV: 1.0V (tested within 60 days after production)
 EV: 1.2V

540 h at 6.8kΩ load after 12 months storage at room temperature
 405 h EV: 1.0V
 EV: 1.2V

≥ 90 h at 1kΩ load for IQC measurement
 EV: 1.0V

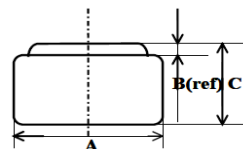
shelf life: 3 years under proper storage conditions (ta: ≤ 22°C; RH: 60 ± 15%)
 ≥90 % of the capacity will remain after 12 months storage

operating temperature range: - 20...60 °C

mechanical specifications:

dimensions: 11.6 x 5.4mm nominal

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



nominal weight: 1.9 g

main applications: watch
 photo
 electronic



ANSMANN Specifications for model:

AG13 (LR44) Alkaline Button Cell

data sheet no. / part no.

supplier no.

703385

author / date

TG / 17.04.2014