

TECHNICAL INFORMATION

ALKALINE MANGANESE BATTERY

LR6G

Made in Indonesia

April 9, 2012

FDK CORPORATION

FDK ENERGY CO., LTD.

QUALITY CONTROL DEPARTMENT



1. Type

LR6 (IEC : LR6, JIS : LR6)

2. Nominal value

(1) Nominal voltage : 1.5 volts

(2) Standard capacity : 2,800 mAh (75 Ω continuously discharge at 20°C,
End point voltage = 0.9 volts)

3. Structure

Show Fig.1.

4. Dimension

Show Fig.2.

5. Electric characteristics

	Initial	After 1 year	After 5 years
Off-load voltage (V)	1.60	1.59	1.55
On-load voltage (V)	1.57	1.55	1.45
Short-circuit current (A)	15.0	14.0	7.5

1) Load resistance : 5 Ω (The resistance shall be adjusted within $\pm 0.05\%$),
Measure time : 0.3 seconds

2) Test temperature : 20 \pm 2°C, Storage temperature : 20 \pm 2°C.

6. Service out-put

(1) Average duration

Discharge condition		Initial	After 1 year	After 5 year
43 Ω 4hr./day(hr) EPV=0.9V	IEC,JIS	Above 60	Above 54	Above 54
	Normal	88	86	83
3.9 Ω 1hr./day(hr) EPV=0.8V	IEC,JIS	Above 4.0	Above 3.6	Above 3.6
	Normal	7.4	6.8	6.3
10 Ω 1hr./day(hr) EPV=0.9V	IEC,JIS	Above 11.5	Above 10	Above 10
	Normal	18.4	17.8	16.6
250mA 1hr./day(hr) EPV=0.9V	IEC,JIS	Above 4.5	Above 4.0	Above 4.0
	Normal	7.7	7.6	7.1
1000mA 10s on/50s off 1hr/day (cycles) EPV=0.9V	IEC,JIS	Above 200	Above 180	Above 180
	Normal	485	461	437
{(1500mW2s on / 650mW 28s on) \times 5m on / 55m off } Repeat. (Cycle) EPV=1.05V	IEC,JIS	Above 31	Above 27	Above 27
	Normal	99	95	90
24 Ω 15s on/45s off \times 8hr/day (hr) EPV=1.0V	IEC,JIS	Above 31	Above 27	Above 27
	Normal	45	43	41

1) EPV : End point voltage

2) Test temperature : 20 \pm 2°C, Storage temperature : 20 \pm 2°C.



- (1) Service life at various temperatures
Show Fig.3.

- (2) Shelf life
Show Fig.4.

*This data are not intended to make or imply any guarantee or warranty.

7. Electrolyte leakage proof characteristics

- (1) Over-discharge test

Visual check at the time when the on-load voltage of test cell first decreases below 40% of the nominal voltage.

Discharge condition	n	Leakage
43Ω 4hr./day	n=9 × 5lots	none
3.9Ω 1hr./day	n=9 × 5lots	none
10Ω 1hr./day	n=9 × 5lots	none
250mA 1hr.	n=9 × 5lots	none
1000mA 10s on/50s off 1hr/day	n=9 × 5lots	none
{(1500mW2s on / 650mW 28s on) × 5m on / 55m off } Repeat.	n=9 × 5lots	none
24Ω 15s on/45s off × 8hr/day	n=9 × 5lots	none

- (2) Storage at 45°C, below 70%RH

Period	n	10days	20days	30days	60days	90days
Leakage	40	none	none	none	none	none

- (3) Storage at 60°C, 90%RH

Period	n	10days	20days	30days	40days
Leakage	40	none	none	none	none

8. Safety characteristics (abuse test)

- (1) Short circuit test

Shorted time	n	12hours	24hours
Explosion	20	none	none

- (2) Charging test (150mA)

Charging time	n	12hours	24hours
Explosion	20	none	none

*This data are not intended to make or imply any guarantee or warranty.

Fig.1 LR6 STRUCTURE

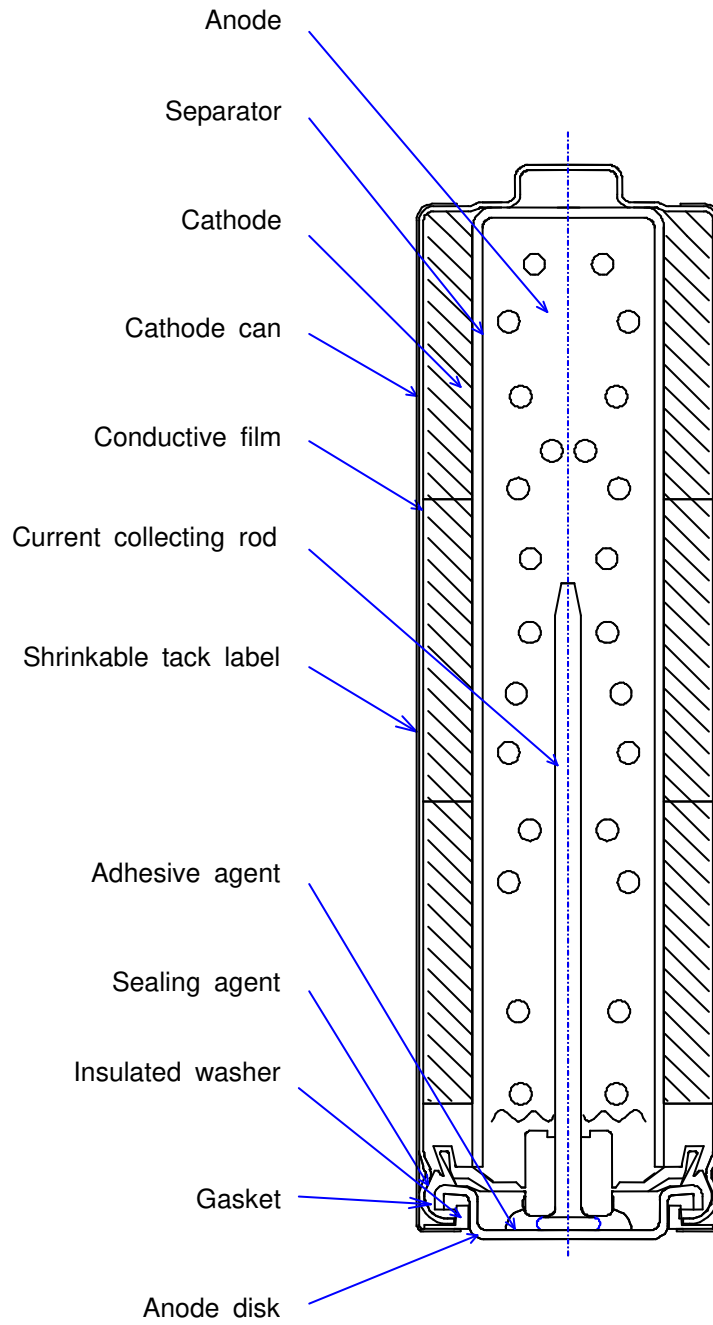
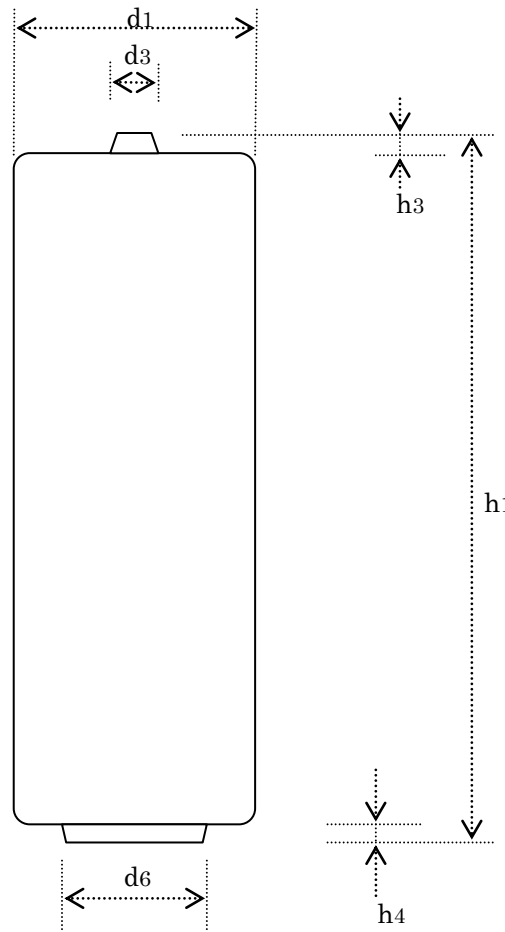


Fig.2 LR6 DIMENSION



Unit : mm

h1	Overall height	50.5 max. (49.2 min.)
d6	Outer diameter of the negative contact area	7.0 min.
h4	Recess of negative contact from enclosure	0.5 max.
d3	Diameter of the positive contact	5.5 max. (4.2 min.)
h3	Height of the projected flat contact from the next higher part	1.0 min.
d1	Diameter	14.5 max. 13.5 min.

The numerical values in parentheses are informative reference values.

Fig.3 LR6G SERVICE LIFE AT VARIOUS TEMPERATURES

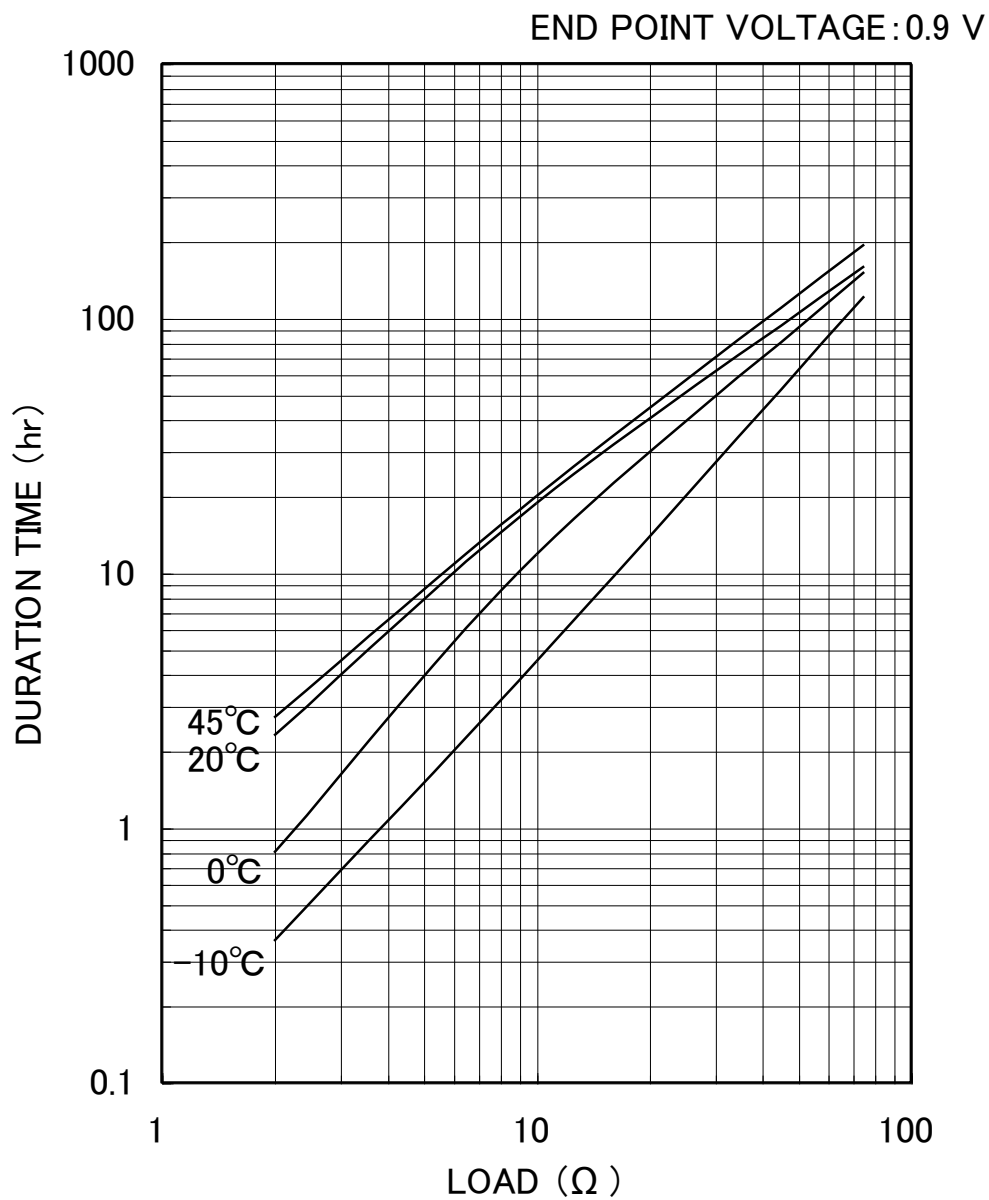
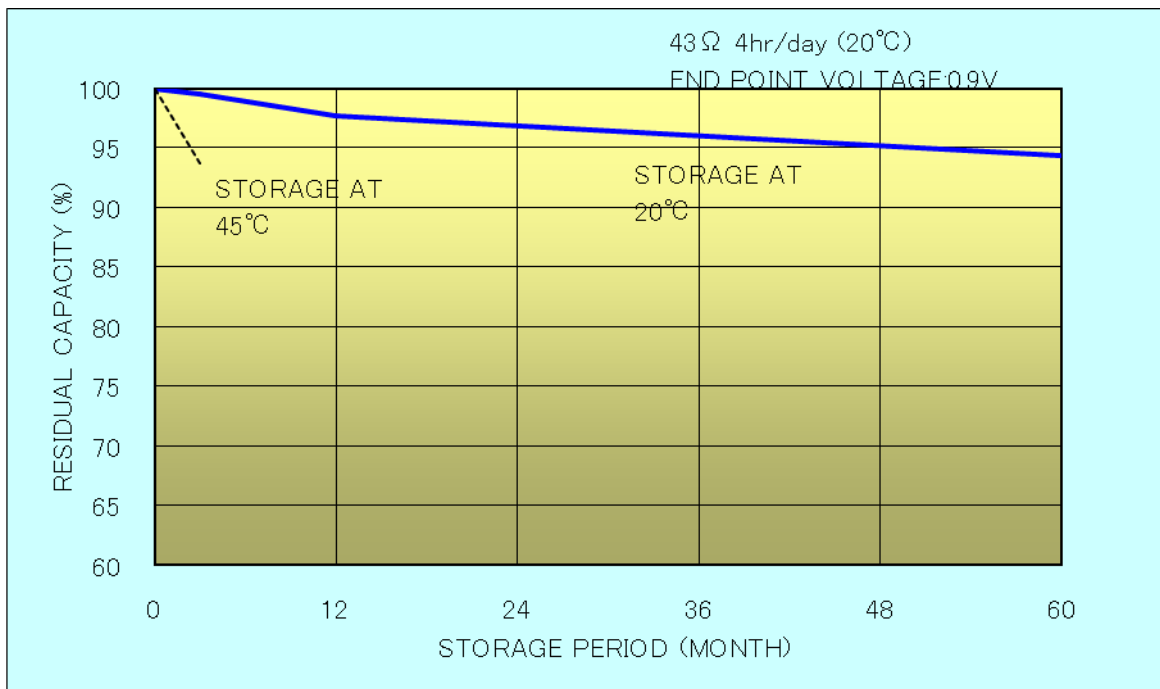
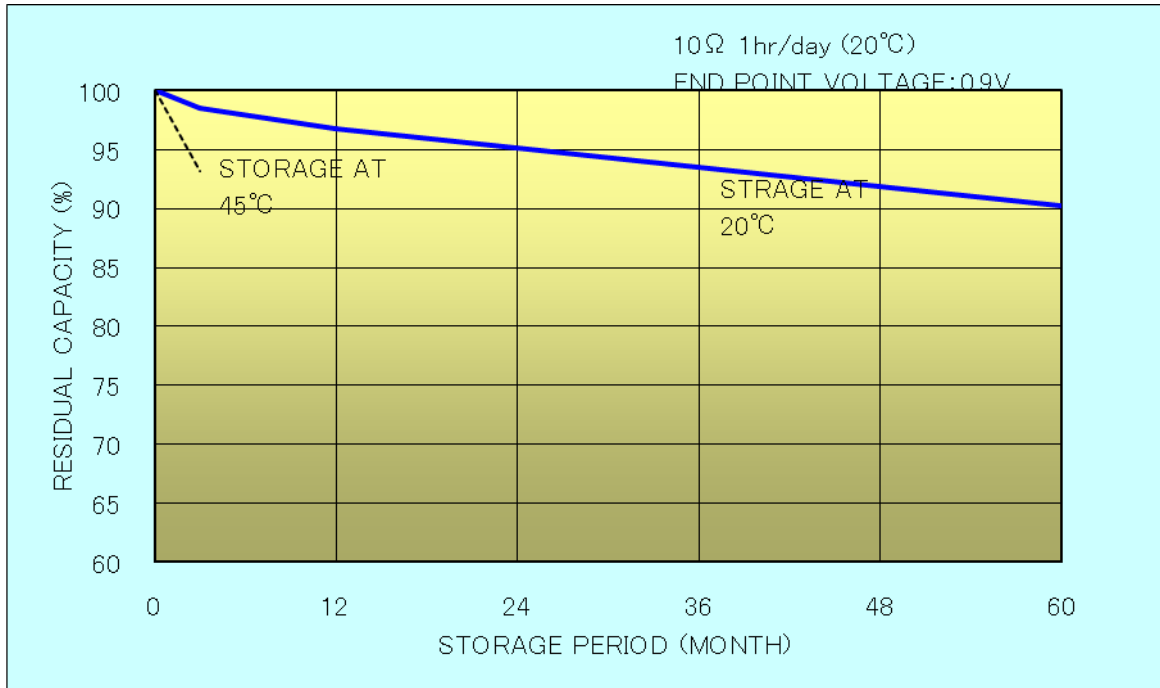


Fig.4 LR6G SHELF LIFE



The numerical values in parentheses are informative reference values.