



58 Farads, 15 Volts

$$E = 1/2 * C * V^2$$

$$= 1/2 * 58F * 15V^2$$

$$= 6525 \text{ Joules}$$



$$.5 * (58 \text{ farads} * ((15 \text{ volts})^2)) = 6525 \text{ joules}$$



AAA

Joules/Cell*	
Alkaline	NiMh
5071	3456



AA

9360	9072
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C

34,398	19,440
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D

74,970	41,040
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*<http://www.allaboutbatteries.com/Energy-tables.html>
(similar to but more conservative than wikipedia)



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Capacitor advantages:



- $10^6 - 10^7$ charge/discharge cycles
- No chemical reaction in most cases
- Very simple charge circuit
- Can charge very quickly
- High efficiency
- Very high power (all energy / short time)



- $10^2 - 10^3$ charge/discharge cycles
- Chemical reaction
- Complex charging circuits in some cases
- Must be charged slowly
- Low efficiency in some cases
- Low to moderate power