Capacitance, Inductance and Charge Converter (µF, mH, mAh)

Convert capacitance between F, mF, µF, nF and pF, inductance between H, mH, µH and nH, and electric charge between coulombs, µC, ampere-hours and milliampere-hours.

Method: Unit definitions per NIST SP 811 and the SI Brochure (exact where defined)

Input parameters

Unit system: SI

Parameter	Value	Unit
Capacitance (choose its unit)	1.0000	µF
Inductance (choose its unit)	1.0000	mH
Charge (choose its unit)	1.0000	Ah

Calculated results

Parameter	Value	Unit
F	1.0000e-06	F
µF	1.0000	µF
nF	1,000.0	nF
pF	1,000,000	pF
H	0.001000	H
mH	1.0000	mH
µH	1,000.0	µH
C	3,600.0	C
Ah	1.0000	Ah
mAh	1,000.0	mAh

Notes for this case

• Each prefix step is a factor of 1,000: 1 µF = 1,000 nF = 1,000,000 pF. Capacitor codes such as 104 mean 10 × 10^4 pF = 100 nF. Charge in ampere-hours is current × time: 1 Ah = 3,600 C, so a 2,000 mAh cell holds 7,200 C; for energy multiply by voltage.

Formula and method

$$1\ \mu\mathrm{F} = 10^3\ \mathrm{nF} = 10^6\ \mathrm{pF}, \quad 1\ \mathrm{Ah} = 3600\ \mathrm{C}$$

Variables

C	Capacitance (choose its unit)	F
L	Inductance (choose its unit)	H
Q	Charge (choose its unit)	C

Method and standards

Electrical units.

Assumptions and limits

- Exact factors.

References

Unit definitions per NIST SP 811 and the SI Brochure (exact where defined)

Report details

Report reference	FCC-3PAA-JET9 (the same inputs always give the same reference)
Generated	23 November 2026, 17:50 UTC
Calculator	Capacitance, Inductance and Charge Converter (µF, mH, mAh)
Method last reviewed	17 November 2026
Software release	FireCAD Calc, release of 22 November 2026
Release checks	2 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/general/unit-conversions/capacitance-inductance-charge-converter

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.