

Capacitor Parallel Value Calculator

Combines two or three ideal parallel capacitors into equivalent capacitance while keeping ripple current, ESR, tolerance, and ratings separate.

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<https://www.elecatrrix.com/circuits-components/capacitor-parallel-value-calculator/>

Inputs

Input	Value	Unit
Capacitance 1	10	uF
Capacitance 2	10	uF
Capacitance 3 (optional)	N/A	uF

Results

Result	Value	Unit
Equivalent capacitance	20	uF

Calculation details

Detail	Value	Unit
Calculation basis	Parallel capacitance values add directly.	
Boundary	Ideal component arithmetic only; verify voltage rating, tolerance, ESR, ripple current, and manufacturer limits.	

Formulas

$$C_{eq} = C_1 + C_2 + C_3$$

$$C_3 = 0 \rightarrow C_{eq} = C_1 + C_2$$

Warnings and limitations

This is ideal component arithmetic. Verify voltage rating, polarity, tolerance, ESR, ripple current, and manufacturer limits before use in equipment.