



What is ripple?

Ripple is a byproduct of converting AC to DC.

Ripple = (RMS of ripple voltage/average DC output voltage).

Ripple is an AC voltage superimposed on top of the DC output voltage.

Every type of rectifier circuit will have some amount of ripple present on the output.

Amount of ripple varies with type of rectifier circuit used and output voltage level. Most common single-phase power supplies use Center Tapped and Bridge output circuits. These power supplies have a ripple of 48% at full rated voltage if no additional filtering is added to the circuit.

Three Phase power supplies use either Bridge or Six-Phase output circuits. Ripple of 4.2% can be expected at full rated voltage. SCR type power supplies will have a greater amount of ripple present when not operated at full output voltage. Additional filtering is required to maintain low ripple throughout the operating range.

Required equipment: True RMS reading meter.

Set rectifier to desired output voltage and current.

Measure and record RMS AC voltage on the output.

Measure and record average DC voltage on the output.

Calculate % Ripple using the following formula:

% Ripple = (RMS of ripple voltage/average DC output voltage) * 100