Alternating currents

A-Level Physics · Vocabulary in context

Word	Example
alternating current /ˈɔːltəneɪtɪŋ ˈkʌrənt/	The mains gives **alternating current**.
current /ˈkʌrənt/	The **current** in the lamp is 0.5 A. 0.5 A
voltage /ˈvəʊltɪdʒ/	The battery has a **voltage** of 1.5 V. 1.5 V
load /ləʊd/	Hang a 2 N **load** on the wire. 2 N
period /ˈpɪərɪəd/	The **period** of the wave is 0.02 s. 0.02 s
frequency /ˈfriːkwənsi/	A **frequency** of 50 Hz means 50 waves every second. 50 Hz 50
angular frequency /ˈæŋgjʊlə ˈfriːkwənsi/	The **angular frequency** is 2π times the frequency. 2π
peak value /piːk ˈvæljuː/	The **peak value** of the current is 2 A. 2 A
peak-to-peak value /piːk tə piːk ˈvæljuː/	The **peak-to-peak value** is twice the peak value.
radians /ˈreɪdɪənz/	Half a turn is π **radians**. π
cathode-ray oscilloscope /ˈkæθəʊd reɪ ɒˈsɪləskəʊp/	A **cathode-ray oscilloscope** shows the wave on a screen.
time-base /taɪm beɪs/	The **time-base** sets the time for each square across the screen.
power /ˈpaʊə/	A 60 W lamp has a **power** of 60 watts. 60 W 60

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root-mean-square /ruːt miːn skweə/	The **root-mean-square** speed is the square root of the mean-square speed.
resistance /rɪˈzɪstəns/	A thin wire has a high **resistance**.
square wave /skweə weɪv/	A **square wave** jumps between two values.
rectification /ˌrektɪfɪˈkeɪʃn/	**Rectification** turns a.c. into d.c. a.c. d.c.
diode /ˈdaɪəʊd/	The **diode** stops current flowing the wrong way.
forward-biased /ˈfɔːwəd ˈbaɪəst/	A **forward-biased** diode lets current flow.
reverse-biased /rɪˈvɜːs ˈbaɪəst/	A **reverse-biased** diode stops the current.
half-wave rectification /hɑːf weɪv ˌrektɪfɪˈkeɪʃn/	**Half-wave rectification** keeps only one half of each cycle.
smoothing /ˈsmuːðɪŋ/	A **smoothing** capacitor makes the output steadier.
capacitor /kəˈpæsɪtə/	A **capacitor** stores charge.
full-wave rectification /fʊl weɪv ˌrektɪfɪˈkeɪʃn/	**Full-wave rectification** uses both halves of each cycle.
bridge rectifier /brɪdʒ ˈrektɪfaɪə/	A **bridge rectifier** has four diodes.
time constant /taɪm ˈkɒnstənt/	The **time constant** is RC. RC
ripple /ˈrɪpl/	The output still has a small **ripple**.

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