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- perfect device** A device with characteristics that correspond to a theoretical perfection. An example is an engine which converts 100% of its input power or energy into useful power or energy, such as work. Also called **ideal device**.
- perfect dielectric** A dielectric through which an electric field may be applied with no energy losses. A vacuum is an example, and its dielectric constant is defined as 1. Also called **ideal dielectric**.
- perfect inductor** An inductor with characteristics that correspond to a theoretical perfection. Such an inductor, for instance, would have zero losses. Also called **ideal inductor**.
- perfect radiator** An ideal body which would be a perfect emitter of radiant energy, its distribution of energy depending solely on its absolute temperature. It would also absorb all the radiant energy incident upon it. Also called **black-body**, **ideal radiator**, or **full radiator**.
- perfect transducer** A transducer with characteristics that correspond to a theoretical perfection. Such an transducer, for instance, would have zero losses. Also called **ideal transducer**.
- perfect transformer** A transformer with characteristics that correspond to a theoretical perfection. Such an transducer, for instance, would have a coupling coefficient of 1. Also called **ideal transformer**.
- perfect vacuum** A hypothetical space which contains no matter, and whose absolute pressure is defined as zero. Empty outer space approaches a perfect vacuum. Also called **absolute vacuum**, or **vacuum (1)**.
- perforated board** A plastic, resin, or laminated board with rows and columns of equally-spaced holes, upon which electronic devices and components can be mounted and interconnected, for testing, experimenting, and preparation of prototype circuits. Its abbreviation is **perfboard**.
- performance** 1. The level of functioning of a component, circuit, device, piece of equipment, system, material, or the like. Also, the act of functioning. 2. A comparative measure of the level of operation or function of a component, circuit, device, piece of equipment, system, material, or the like. For instance, high-performance, or small-signal performance.
- performance characteristics** Measurable features that help describe and distinguish the level of operation of components, circuits, devices, systems, materials, or the like.
- performance chart** A chart that describes, and helps evaluate, the level of operation of a component, circuit, device, system, material, or the like.
- performance curve** A curve that describes, and helps evaluate, the level of operation of a component, circuit, device, system, material, or the like. For example, a curve plotting the harmonic distortion of an amplifier as a function of frequency.
- performance data** Data which describes, and helps evaluate, the level of operation of a component, circuit, device, system, material, or the like. For example, such data gathered under harsh operating conditions.
- performance monitor** Software and/or hardware which enables the supervision of one or more performance aspects of a process, mechanism, system, or the like. For example, an onboard computer evaluating the operation of a car.
- performance test** A test that evaluates the level of operation of a component, circuit, device, system, material, or the like. For instance, tests performed keeping a load stable while varying other system parameters, so as to optimize performance.
- performance testing** The carrying out of performance tests.
- period** 1. An interval of time during which one or more phenomena, conditions, or events occur. For example, a busy period, or an early-failure period. 2. The interval of time that elapses between two consecutive events of a periodically repeated phenomenon. For instance, the duration of a complete cycle. Also, the time interval elapsing between successive occurrences of the same phases of a cyclic event. Its symbol is *T*. 3. A series of elements which form a horizontal row within a periodic table of chemical elements.
- periodic** 1. Occurring, appearing, or characterized by regular and repetitive intervals or cycles. For instance, AC, the chopping of a signal, or the oscillation of a crystal. 2. Occurring, appearing, or characterized by irregular intervals. For example, the backing up of data occasionally. 3. Characterized or ordered by repeated properties. For instance, the sequencing of elements within a periodic table.
- periodic and random deviation** For a power supply, the total variation in output factoring in components such as ripple, load, noise, hum, stability, and temperature coefficient. Its acronym is **PARD**.
- periodic antenna** An antenna whose input impedance varies as a function of the operating frequency. An example is a dipole array.
- periodic curve** A curve or graph representing a periodic function. An example is a sine curve.
- periodic duty** A form of intermittent duty in which the work or operation of a device, piece of equipment, or system, occurs in regular and repetitive intervals or cycles.
- periodic filter** A filter whose response reflects its alternately passing and rejecting frequency bands. A comb filter is an example.
- periodic function** A function, such as a sine function, characterized by regular and repetitive intervals or cycles.
- periodic law** A law which states that the physical and chemical properties of chemical elements are a periodic function of their atomic number. Thus, when the elements are arranged in order of atomic number, as occurs in a periodic table, elements with similar properties will recur at regular intervals. This enables, for instance, to calculate properties of elements yet to be discovered.
- periodic magnitude** A magnitude whose variations are characterized by regular and repetitive intervals or cycles.
- periodic noise** Noise whose variations are characterized by regular and repetitive intervals or cycles.
- periodic quantity** A quantity whose variations are characterized by regular and repetitive intervals or cycles.
- periodic resonance** Resonance in which the period of oscillation of the external driving force is the same as the natural period of a given body or system. Also called **natural resonance (2)**.
- periodic signal** A signal whose variations are characterized by regular and repetitive intervals or cycles.
- periodic table** A table in which chemical elements are arranged so as to exploit patterns in physical and chemical properties, as provided by periodic law. A typical periodic table is arranged in columns and rows, where the columns represent groups of elements with the same electronic configuration in their outermost shell, which gives them similar properties. As each outer shell is filled, a new row of elements is started, and there is a one-by-one increase in atomic number as the elements progress from left to right.
- periodic value** A value whose variations are characterized by regular and repetitive intervals or cycles.
- periodic wave** A wave whose variations are characterized by regular and repetitive intervals or cycles.
- periodic waveform** 1. A waveform which occurs in a regular and repetitive pattern. 2. A repetitive waveform.
- periodicity** 1. The quality or state of being periodic. 2. The manner in which something is periodic. Also, that which makes something periodic.