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ELECTROMAGNETIC VIBRATIONS AND WAVES

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Abstract: This in the article electromagnetic vibrations, waves, electromagnetic of the waves properties,high frequency vines application, today on the day waves, different natural waves ; sound waves, light waves, the human in life and technology importance about information given.
Keywords: electromagnetic vibrations, waves, frequency, sound waves, light, receiver, dielectric, conductor, power.

Vibrations what we said in the study was, physically to nature looking at vibrations for two, that is mechanical and electromagnetic to vibrations Electromagnetic vibrations as charges, currents, electric and magnetic fields their strength mutual related periodic to change It is said. Similar processes vibration so- called contour in the system electricity vibrations harvest when event gives. Vibration outline every how radio technician of the device inseparable part is considered. In radio transmitters vibration outline in space electromagnetic the waves irradiation for, radio reception electromagnetic in radio receivers waves from the spectrum necessary separate to take for service does. Vibration each other as the outline with conductors using consists of a connected capacitor C and an inductance L electricity to the chain (Fig. 1). Let us consider the formation of oscillations in an ideal oscillating circuit (with an active resistance R of zero). To create oscillations in such a circuit, it is necessary to give a certain amount of electric charge to the capacitor plates or to excite an inductor. Suppose we open the circuit and charge the capacitor. An electronic field is formed between the capacitor plates, the energy of which is equal to:

Waves — in space limited speed with spreading substance or of the environment situation are the changes of the waves. spread in the process energy of space one from the point second to the point is transmitted, but particles It doesn't move.

Wave length - one in the environment somehow known in the direction spreading vibration of the movement two consecutively coming, one kind in phase vibrating points between distance. Oscillatory motion in the medium v speed with spreading if, wave length, X- wave one period

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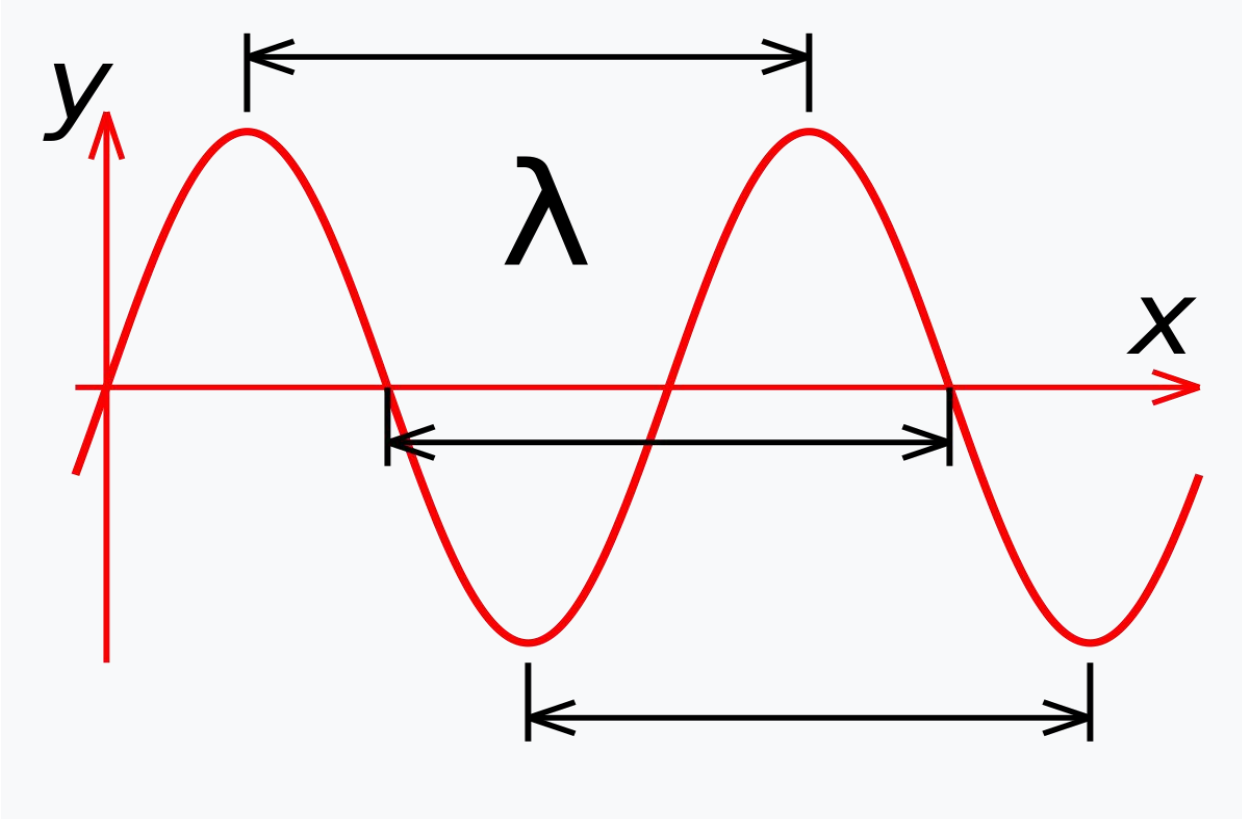
inside spread to the distance equal to. The waves physicist to nature looking at their Wave length one how many from kilometer The angstrom ($\lambda A = 10^{-10}$ m) is known up to their shares was to values has to be possible. Same -sex in the environment and in the air sound and electromagnetic waves unchanging speed propagates with (c=331 m/s; c =300000 km/s), so for wave length vibration period wave to the length related will be.



Different (mechanical, thermal, electromagnetic) conditions to changes various kind waves suitable comes. Elastic waves, surface waves, electromagnetic waves types wide scattered. Elastic deformations gas, liquid and solid in bodies spread elastic waves It is called. Sound waves and the earth from the shell seismic waves elastic of the waves private empty is considered. Two environment border surface along spreading waves extramural waves Electromagnetic waves - especially radio waves, light waves, ultraviolet waves,
X-ray and gamma rays — spreading variable electromagnetic from the fields consists of. Of these outside gravitational waves too there is. Wave processes physicist of events almost all in the fields occurs. Waves to learn physics and technology sciences three flours important.

$$T = \frac{2\pi}{\omega_0} = 2\pi\sqrt{\frac{I}{mgl}}$$

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$$T = 2\pi\sqrt{LC}$$

Electromagnetic vibrations calculation formula. (Thomson formula)

Electromagnetic of the waves properties one how many centimeter long electromagnetic waves distributor extreme high a frequency generator is a transmitter and this the waves acceptance doer from the receiver consists of device using to study possible. Signal from the receiver to the amplifier passing by, then from reinforcement then to the speaker A signal sounds from the speaker. to be is heard. Transmitter with receiver between spreading electromagnetic waves metal plank for the road If you put it on, the radio signals will be sent to the receiver. arrival stops, This and of conductors electromagnetic the waves not to pass shows. Dielectrics electromagnetic transmits waves, but their intrepidity reduces. Electromagnetic waves from conductors returns., someone dielectric from the substance made from a prism when passing and their own spread changes direction, that is breaks. Electromagnet waves various natural waves, sound, light to the waves typical was to properties has will be.

Electromagnetic of the waves return, refraction, interference from its properties various technician on devices used. Various electromagnetic of the waves spread these are the features to properties is related. For example, long electromagnetic waves mainly land surface along spreads and is absorbed. If long the waves land surface along any corner under if we direct this waves into space gone to the ground will not return. electromagnetic waves on the surface further stronger are swallowed, but they of the atmosphere the highest ionized from layers to the ground returns. Therefore, short waves using radio station less powerful Even though there are very large distances with communication to do possible. But short communication even in waves long in the waves such as stable It's not possible, that's it. reason of the waves returns conditions everyone time changing Ultrashort waves obstacles around extreme cannot. Distributor and receiver doer between this the waves return them and spread direction changing obstacles not only in cases ultrashort waves with communication installation possible.

High frequency vibrations mainly on the radio is used, this with together such application current on the day very expanding is going on. The reason technique in the century all on the fronts development extreme high at the level continue is going on. frequency vines in industry, medicine and people practical of activity other in the fields wide is being used. High frequency vine often conductor surface along flows. With this unchanging from the vine difference does. This event " correspondence "effect" is called. Frequency this one per second vibrations is the number. and from himself electricity current conductor substances. The current flows into the metal to enter depth of the vine frequency, the metal comparison resistance and its magnet to the input related. For example, frequency 50 Hz when the copper conductor. The thickness of the layer is 10mm, the frequency is 50000 Hz, 0.1 mm, and the frequency is 150 MHz, 0.006 mm. will be. Surface effect steel to products thermal processing in giving used. Various in engines and cars very hard superficial details need will be.(they correspondence to eat, to shake and various to blows resistant (It will be.) But such characteristic the details simple heating methods with create very difficult., because this in methods detail hot and he manages to leave. then fragile to be remains. In the industry steel melting for high frequency vines using heated induction ovens used. Current at the time plastics welding also high for frequency from vines in use. High frequency generators, as well as spool items, wood in drying is used.

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