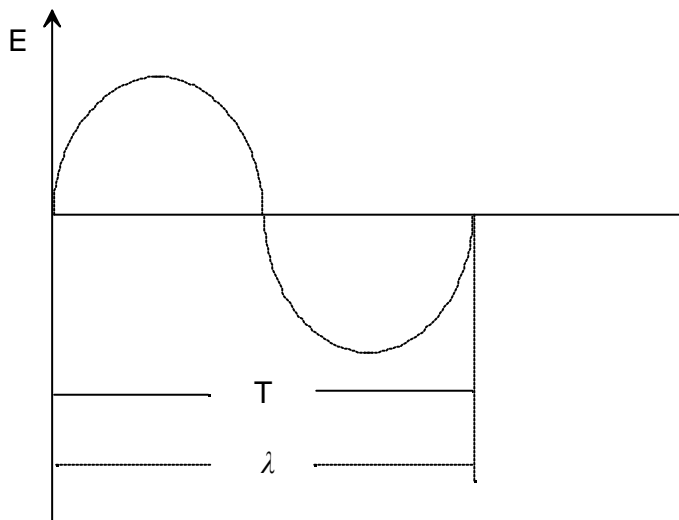


# EMC-Shielding Systems

## Electromagnetic Waves

An electromagnetic wave is a periodically alternating electric field, which is combined with a periodically alternating magnetic field.

Both fields are emitted from a signal point and spread out at the speed of light (300,000 km/s). Without the influence of metal particles electrical radiation is transmitted in the room, which can be detected and measured, by way of measuring the strength of the electromagnetic wave by electrical field strength. The unit of measurement used is mV/m (millivolts per metre). The electrical field strength determines the power of the waves.



A = Amplitude

T = Cycle Time

$\lambda$  = Wavelength (Lambda)

$$T = \frac{1}{f} = \frac{1}{100 \text{ MHz}} = \frac{1}{100 \cdot 10^6 \text{ Hz}} = 1 \cdot 10^{-8} \text{ s} = 10 \text{ ns}$$