Single Phase AC

AC Wave Form

Current or Voltage

The Waveform can represent current or voltage. Typically voltage for series circuits and current for parallel circuits.

Time and Angle

Horizontal of any waveform is measured in time (mS) and or Angle (0-360 degrees). We also often use Frequency or cycles per second. F=1/T also T=1/F

RMS

RMS (Root Mean Squared) is a mathematical way to turn a wave into a straight line. From a physics perspective the straight line becomes an effective DC value, making AC calcs much easier. RMS= Max X 0.707

Peak to Peak

Peak-Peak (pk-pk) is a measurement of the waves vertical value from max in the positive direction to max in the negative. Pk-Pk = 2 X Max value

Instantaneous Value

Instantaneous value is the vertical hight of the wave at a particular horizontal position. That position can be in Time (mS) or Angle (degrees) Inst value = Max X sineø

Maximum Value

Maximum value is measured from centre vertically, up = positive and down = negative. The two maximum points occur at 90 and 270 degrees respectively . Max = pk-pk/2