Lecture 21

2.Given v(t) = 200cos(100$\pi t - 60^0$) volts. Obtain the phasor form of the given voltage in both rectangular and polar forms.

Solution

$v(t) = 200\sin(100\pi t + 30) = V_m(\sin\omega t + \phi)$

$\vec{V} = \frac{V_m}{\sqrt{2}}\angle 30 = \frac{200}{\sqrt{2}}\angle 30 = 141.42\angle 30$

Polar form = $141.42\angle 30$

Rectangular form = $122.47 + j70.71$