

Time Domain and Phasor Domain

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Time Domain

$$V = 37\cos(\omega t + 53^\circ)$$

Using Euler's Formula ($e^{\theta j} = \cos\theta + i \sin\theta$) we can derive...

Rectangular

$$V = 37\cos(53^\circ) + j37\sin(53^\circ)$$

Phasor

$$V = 37\angle 53^\circ$$

Polar

$$V = 37e^{53j}$$