

17180101038

(1)

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1 Command window

2 clear

3 clc

4 Close all

5 Syms t

6  $U = 110 * \cos(120 * \pi * t)$

7  $I = \text{diff}(U)$

8  $P = I * U$

9  $t = 0:0.001:0.25$

10  $Un = \text{subs}(U)$

11  $Unn = \text{double}(Un)$

12  $In = \text{subs}(I)$

13  $Inn = \text{double}(In)$

14  $Pn = \text{subs}(P)$

15  $Pnn = \text{double}(Pn)$

16  $\text{plot}(t, 'Unn', 'P')$

17 hold on

18  $\text{plot}(t, 'Inn', 'k')$

19  $\text{legend}('Voltage (V)', 'Current (A)', 'Power (W)')$

20 grid on

21 grid minor

22  $\text{xlabel}('Time (sec)')$

23  $\text{ylabel}('Variable')$

Command window

V =

$$110^{\text{t}} \cos(120^{\text{t}} \text{pi} \text{t} \text{E})$$

'Note': the semi-colon symbol is used to hide the outputting large output that is to display in the command window