

G002 Online Test

Ref149

A sine wave voltage of 240V RMS is applied to a resistive circuit of 60Ω. Calculate(a) RMS value of current (b) Maximum value of current.

A	4A, 5.65A	B	2A, 4A
C	2A, 2.8A	D	1A, 2A
Answer			

Ref150

A coil of negligible resistance draws a current of 0.2A (RMS) when connected to 240V, 50HZ.
(a) Determine inductive reactance (b) Coil inductance.

A	600Ω , 3.8 H	B	1200Ω , 3.8 H
C	1200Ω , 1.9 H	D	1800Ω , 7.6 H
Answer			

Ref151

A 64 mH inductor is connected in series with a 300Ω resistor to a 1000HZ AC supply voltage of 10V rms. Find (a) the impedance (b) The phase angle (c) The current (d) the potential drop across resistor.

A	500Ω ,(90 Deg), 0.002A (-90 Deg), 6V,8V	B	500Ω ,(36.8 Deg), 0.001A (+53.2Deg), 8V,6V
C	500Ω ,(0 Deg), 0.002A (-0 Deg), 6V,8V	D	500Ω ,(53.2 Deg), 0.002A (-53.2Deg), 6V,8V
Answer			

Ref152

Find the current in the circuit when an AC voltage 10V rms at 1000HZ is applied to 2 μF capacitor.

A	0.125A	B	0.25A
C	0.375A	D	0.5A
Answer			

Ref153

A 1 μF capacitor is connected in series with 200 Ω resistor to 10V rms. 1600HZ supply. Find (a) the impedance (b) The phase angle (c) The current (d) Potential drop across resistor (e) Potential drop across capacitor.

A	222.6 Ω ,(-26.5 Deg), 0.0448A (+26.5Deg), 9V ,4.48V	B	222.6 Ω ,(+26.5 Deg), 0.0224A (-26.5Deg), 9V ,4.48V
C	222.6 Ω ,(0 Deg), 0.0224A (0 Deg), 9V ,4.48V	D	111.3 Ω ,(-26.5 Deg), 0.0224A (-26.5Deg), 4.5V,2.24V
Answer			

Ref154

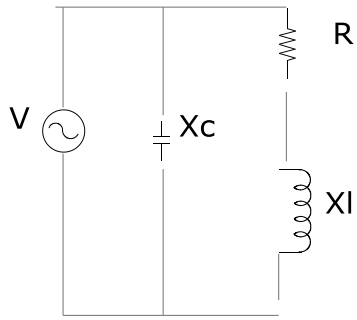
A series circuit is connected to a 10V rms AC supply. The circuit has resistance 100 Ω , inductive reactance 300 Ω , capacitive reactance 400 Ω . Find (a) Impedance (b) Current (c) Phase angle (d) Voltage drop across resistor (e) Voltage drop across inductor (f) Voltage drop across capacitor.

A	70.7 Ω (Angle +45 Deg), 0.035A, 45 Deg, 3.35V, 10.65V,14.2V	B	141 Ω (Angle -45 Deg), 0.071A, 45 Deg, 7.1V, 21.3V,28.4V
C	141 Ω (Angle 45 Deg), 0.071A,-45 Deg 7.1V, 28.4V, 21.3V	D	141 Ω (Angle 0 Deg),0.071A, 0 Deg, 7.1V, 21.3V, 28.4V
Answer			

Ref155

The following is a diagram of a parallel circuit with a supply voltage 100V rms at 50Hz. Determine the followings.

(a) Total circuit current (b) Total circuit impedance (c) Phase angle between circuit current and applied voltage (d) Power factor of circuit.



$X_c = 318.5 \Omega$, $R = 100 \Omega$, $X_L = 94.2 \Omega$, $V = 100 \text{ V}$, 50 Hz

A	1.8A (Angle -36.8 Deg), 206 Ω , 56.86 Deg, 0.8	B	0.97A (Angle -36.8 Deg), 103 Ω , 36.8 Deg 0.59
C	0.97A (Angle +36.8 Deg), 103 Ω , 36.8 Deg 0.59	D	0.97A (Angle +53.2 Deg), 206 Ω , 53.2 Deg 0.59
Answer			

Ref156

A capacitor draws 0.971 Amp at PF 0.34 from 100V supply. Total power is

A	52.43W	B	100W
C	36.8W	D	70.7 W
Answer			

Ref157

The phase voltage and current in 3 phase star connected current are 240V and 50A. Find the line voltage and line current.

A	240V rms, 50A	B	415V rms, 86.5A
C	415V rms, 50A	D	240V rms, 86.5A
Answer			

Ref158

A delta connected load takes a line current 40A and line voltage 415V. Find (a) Phase current (b) Phase voltage

A	40A, 415V	B	23.1A, 240V
C	40A, 240V	D	23.1A, 415V
Answer			

Ref159

Three phase 415V, 37.3 KW, Delta connected alternator has efficiency 90% and PF 0.88 Lagging. Find
(a) Line current (b) Phase current.

A	65.5A, 37.8A	B	65.5 A, 75.6A
C	130A, 75.6A	D	130A, 37.8A
Answer			