



Family name:
ID:

Name:

QUESTION	a	b	c
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10			

*All the items have been prepared thinking of the field of Industrial Electronic Equipment.
Correct answer: +1 Wrong answer: -1/3 No answer: 0*

1.- Which of the following capacitors CANNOT be used at 100kHz



Fig 1



Fig. 2

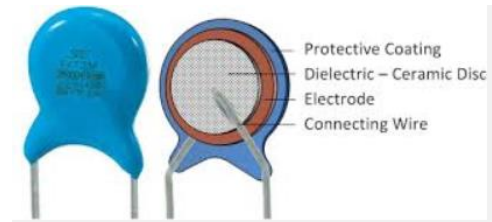
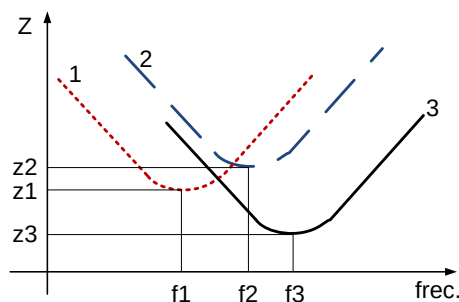


Fig. 3

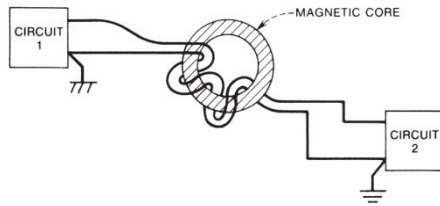
- a) The one in Fig. 1.
- b) The one in Fig. 2.
- c) The one in Fig. 3.

2.- The drawing shows the impedance plot of three capacitors. Which of them has a lower series resistance?



- a) Capacitor number 1
- b) Capacitor number 2
- c) Capacitor number 3

3.- The inductor placed in the cables



- a) attenuates the common mode currents.
- b) attenuates the differential mode currents.
- c) attenuates both common mode and differential mode currents.

4. Conductors that operate at

- a) low frequency present large parasitic inductance.
- b) high frequency present large parasitic inductance.
- c) any frequency present the same parasitic inductance whatever the frequency considered.

5. The current in a conductor will flow mainly through its surface if

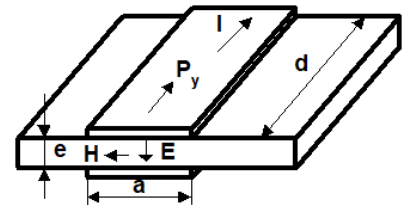
- a) the operation frequency is high.
- b) the operation frequency is low.
- c) This phenomenon does not depend on the frequency.

6. When an electronic system operates with very high currents and low voltage,

- a) the parasitic capacitance cannot be neglected.
- b) the parasitic inductance cannot be neglected.
- c) both the parasitic capacitance and the parasitic inductance can be neglected.

7.- To increase the propagation time in a PCB

- a) the thickness of the insulator (e) should be increased.
- b) the track width (a) should be increased.
- c) the track length (d) should be increased.



8. If the magnetic core in an inductor is saturated,

- a) the current flowing through the device increases.
- b) the current flowing through the device decreases.
- c) the effect of parasitic capacitance increases.

9. To reduce parasitic capacitance, conductors in an inductor winding

- a) should be wound as close together as possible.
- b) should be wound as separate as possible.
- c) The winding distribution does not affect parasitic capacitance.



10. Increasing the gap in an inductor

- a) makes the inductance value decrease.
- b) makes the inductance value increase.
- d) makes saturation be reached with lower currents.