Assessment 11

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-10-16, 23:59 IST.

1) A planar 2Ω resistance is to be realized using Nichrome which has a resistivity of $1.1 \times 10^{-3}$ Ohm/m. The resistor has a thickness of 0.5 micrometer and width of 2 micrometer. The length of the resistor is

- 2 mm
- 1 mm
- 20 micrometer
- 10 micrometer

No, the answer is incorrect.
Score: 0
Accepted Answers:
20 micrometer

2) A capacitor has a value of 10 pF and it is associated with a stray inductance of 0.01 nH. The effective value of the capacitor at a frequency of 2 GHz is

- 9.5 pF
- 10.16 pF
- 10.06 pF
- 11 pF

No, the answer is incorrect.
Score: 0
Accepted Answers:
10.16 pF

3) A microstrip line has dielectric constant $\varepsilon_r = 2$ and thickness 0.8 mm. If the effective dielectric constant is 1.8, the width of the line is

- 4.6 mm
- 5.4 mm
- 3.8 mm
- 2.4 mm

No, the answer is incorrect.
Score: 0
Accepted Answers:
5.4 mm

4) For a coupled line, let $C_{11}$ and $C_{22}$, the capacitances between the strip conductors and ground plane are equal, i.e., $C_{11} = C_{22} = C$, and $C_{12}$ represents the capacitance between the two conductors. If $C_0$ is the capacitance of the coupled line for odd mode excitation, then $C_{12}$ is

- $C_{0}/2 + C$
- $C_{0}/2 - C$
- $(C_{0} - C)/2$
- $(C_{0} + C)/2$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$(C_{0} - C)/2$

5) Suppose, an inductance of 1 nH is 10% higher than its nominal value at 1 GHz. Assume that the series resistance of the inductor can be neglected. The value of the parasitic capacitance associated with inductor is

- 0.23 pF
- 1.3 pF
- 2.3 pF
- 3.5 pF

No, the answer is incorrect.
Score: 0
Accepted Answers:
2.3 pF