

Enigmas, etc.

Input Impedance

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The diode rectifier of this enigma series is shown in Figure 1. We now observe the input impedance $R + jX$. Assuming the nominal dc load $R_O = \pi\omega L$ for half-wave rectification, estimate the reactance X . Which of the following is correct?

- (a) $X = 0$
- (b) $X = \omega L$
- (c) $X = 2\omega L$
- (d) $X > 2\omega L$

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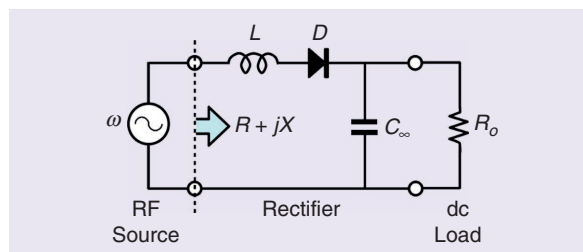


Figure 1. The half-wave rectifier of this enigma series, now focusing on the input impedance.

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