

Special Problem 3.3 -14

The voltage across a junction diode is known to be:

$$v_D(t) = 0.650 + 0.001 \cos \omega t \quad V$$

This junction diode has scale current of $I_s = 10^{-13} \text{ A}$, and an ideality factor of $n = 1.00$.

Determine (approximately) the **small-signal current** flowing through this junction diode. **Hint:** The small-signal current will be a function of **time t** .