

Labels

R_s - Resistor

V_s - Voltage source

V_{out} - stabilized output voltage

R_L - load resistance

I_Z - load current across Zener diode

2 Max Power = S_{max} $I_Z = S_{max} / V_Z = 0.5A, 0.4V, 2V,$

Max current = $\frac{\text{Max Power}}{\text{Voltage}} = \frac{S_{max}}{V} = 0.5A$

$V_Z = 60 \text{ Volts}$

Minimum resistance = $\frac{V_s - V_Z}{I_Z}$

$$\begin{aligned} V_{dc} &= 0.037 V_{max} \\ &= 0.037 \times 20 \\ &= 12.74 \text{ Vdc} \end{aligned}$$