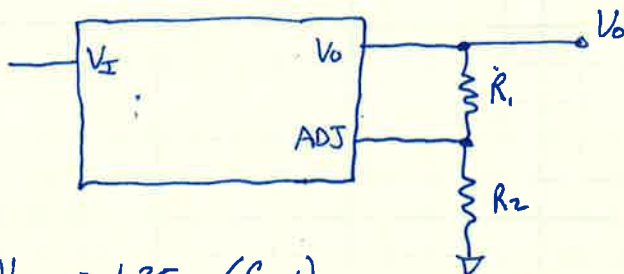


Texas Instr TL783CKCSE3 (70-220)

$$V_o = V_{REF} \left(1 + \frac{R_2}{R_1}\right)$$

$$I_{max} = 700mA$$

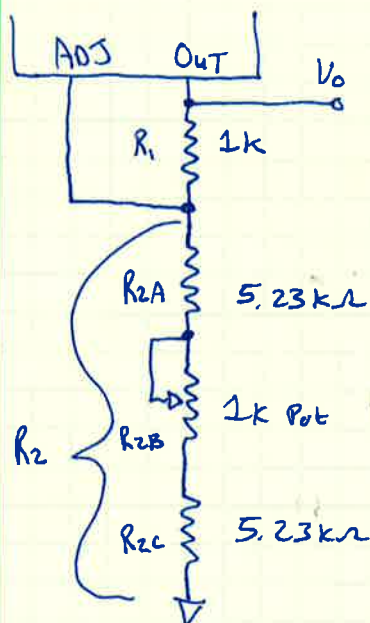


$$1.25V < V_o < 125V$$

$$V_{REF} = 1.25V \text{ (fixed)}$$

$$V_o = 15V$$

$$\frac{V_o}{V_{ref}} - 1 = \frac{R_2}{R_1} \quad \therefore R_2 = 11R_1 \rightarrow R_2 = 11K \quad R_1 = 1K$$

Adjustable range of $\approx 14.5V$ to $15.5V$

$$MIN: \left(\frac{14.5V}{1.25V} - 1\right) 1K = R_{2_{min}} = 10.6K\Omega$$

$$MAX: \left(\frac{15.5V}{1.25V} - 1\right) 1K = R_{2_{max}} = 11.4K\Omega$$

$$11.4K\Omega - 10.6K\Omega = 800\Omega$$

$$Min: \frac{10.6}{2} = 5.3 + 0\Omega \text{ from Pot}$$

$$Try R_{2A} = R_{2C} = 5.23K\Omega$$

$$Minimum = 5.23K + 0\Omega + 5.23K = 10.46K\Omega$$

$$\therefore V_{omin} = 14.325V$$

$$MAX: 5.23K + 1K + 5.23K = 15.575V$$

$$\therefore V_{omax} = 15.575V$$

$$I_{nom} \approx \frac{15V}{12K\Omega} = 1.25mA$$