

$$V_{th} = V_{ref} (R_A + R_B + R_{C||RD}) / (R_B + R_{C||RD})$$

$$21 = 2.3 (501.12 + 42.83) / (R_B + 42.83)$$

$$R_B = 16.7K$$

$$R_B \approx 16K \quad \checkmark$$

$$R_A = 484.42K$$

$$R_A \approx 480K \quad \checkmark$$

$$I_{pre-CHG} = \frac{(V_{in} - V_{pre} - V_{DFT} - V_{BAT})}{R_T}$$

$$10 \times 10^{-3} = \frac{(26 - 2 - 0.7 - 22)}{R_T}$$

$$R_T = 130\Omega \quad \checkmark$$

$$I_{max-CHG} = V_{ILIM} / R_{SNS}$$

$$2.5 = 250 \times 10^{-3} / R_{SNS}$$

$$R_{SNS} = 100m\Omega \quad \checkmark$$

$$R_P = \frac{V_{in(min)} - 0.7}{I_{max-CHG}} \times h_{FE1} \times h_{FE2}$$

Power BJT ① 2N3055 - (NPN)

② MJ2955 (PNP)

or

TIP3055 (NPN)

TIP2955 (PNP)

$$R_P = \frac{(25 - 0.7)}{2.5} \times 5 \times 5$$

$$= 243$$

$$R_P \approx 240\Omega \quad \checkmark$$

$$P_D = [V_{in(max)} - 0.7] / (h_{FE1} \times h_{FE2}) \times I_{max-CHG}$$

$$= I_{max-CHG} - (I_{max-CHG})^2 \div (h_{FE1} \times h_{FE2})^2 \times R_P$$

$$P_D = 330mW \quad \checkmark$$

$$C_{comp} = 0.22\mu F \text{ with}$$

470 Ω series resistor to ground.