Question: 4-5 The FET input voltmeter circuit in Figure 4-4 has the followi...

4-5 The FET input voltmeter circuit in Figure 4-4 has the following components: $R_1 = 6.8\ \text{k}\Omega$, $R_2 = R_3 = 4.7\ \text{k}\Omega$, $R_4 = 1.5\ \text{k}\Omega$, $R_5 = 500\ \Omega$, $R_6 = 3.3\ \text{k}\Omega$, $R_x + R_m = 20\ \text{k}\Omega$. The meter full-scale current is 50 μA, the supply voltage is ±10 V, the transistors have $h_{FE} = 80$, and the FET gate–source voltage is $V_{GS} = -3$ V. Determine V_p, I_1, I_2, I_3, and I_4 when $E = 0$. Also, calculate the range of adjustment for V_p.

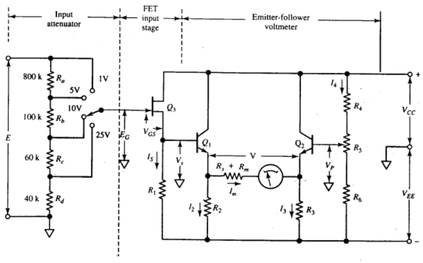

Figure 4-4 A voltmeter input attenuator is simply a potential divider that accurately divides the voltage to be measured. The FET input stage (Q_1) gives the emitter follower a very high input resistance.

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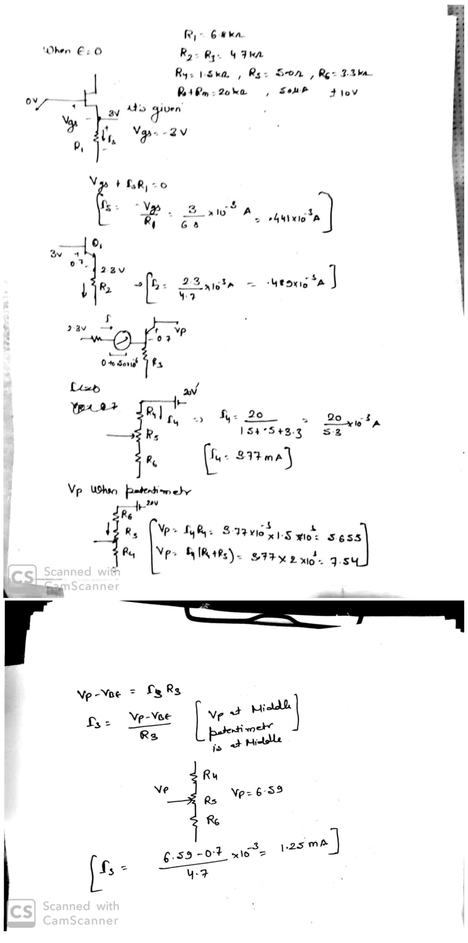
Expert Answer

Anonymous answered this
26 answers



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Q: The FET input voltmeter circuit has the following components. R =6.8 K2, R2=R3=4.7 K , Ra=1.5 KQ, R5=500 Rs=3.3 KO. The meter's full-scale current is 40 A, the supply voltage (Vcc) is 15 V, and the FET gate-source voltage is Vos=-2 V. A 3.5V input (E) is applied to the input attenuator shown. Calculate the voltage EG on each range selection (2 marks) Determine the value of Rs,Rm...

A: See answer

Q: EE 303 solve all this problem please

A: See answer 100% (1 rating)

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