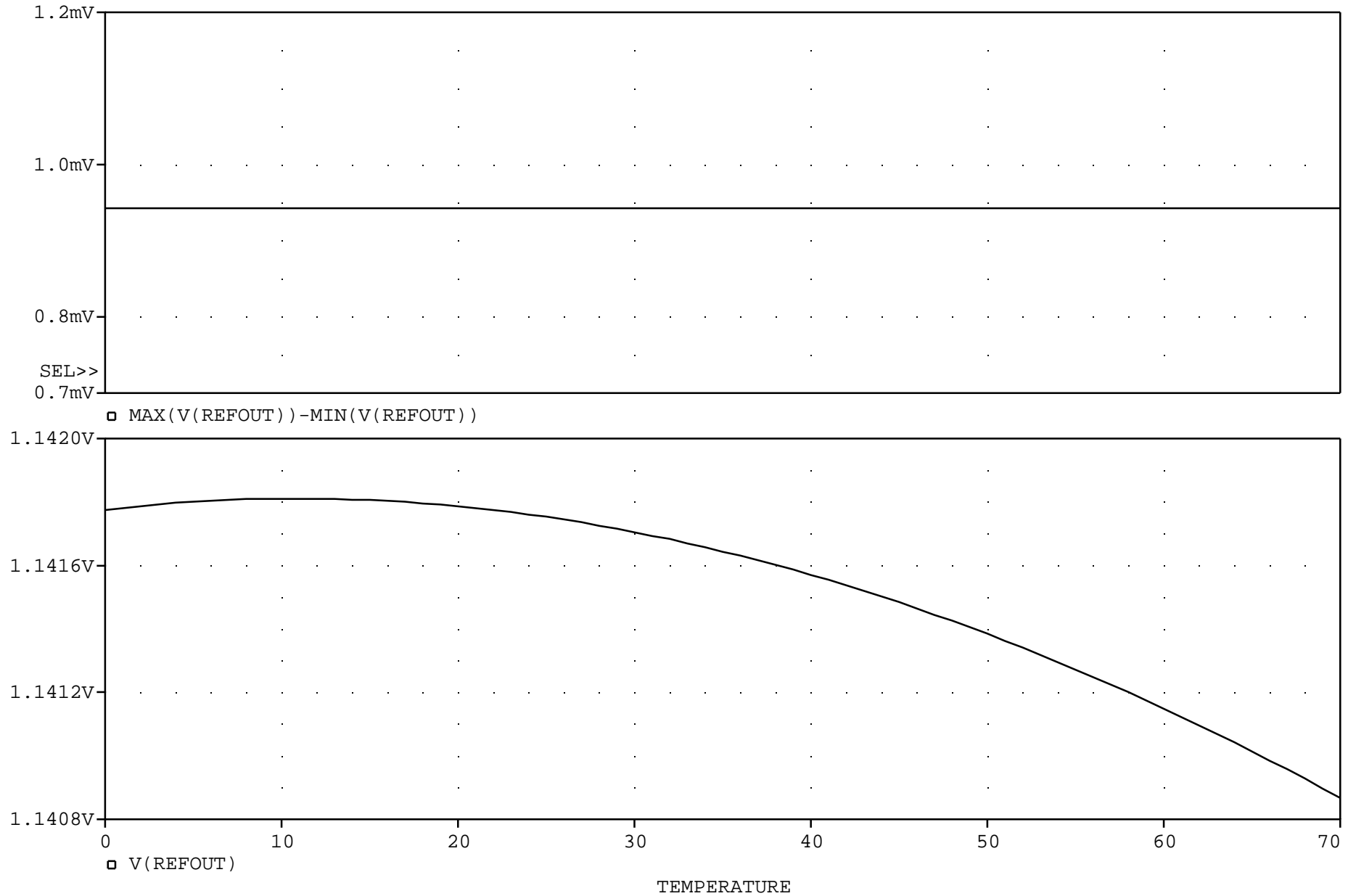
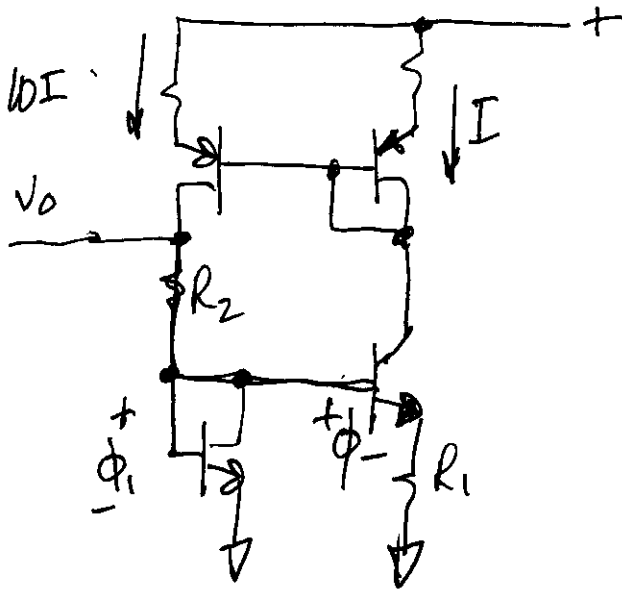
		ANALOG INNOVATIONS, Inc. 824 E. CATHEDRAL ROCK DRIVE PHOENIX, AZ 85048-6300 (480) 460-2350 FAX: (480) 460-2142	
Title: BandGap Made with Discrete Transistors			
Size A	FileName: D:\Projects\Expments\BandGapsEtc\DiscreteBandGap.sch		REV A
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DiscreteBandGap





$$\phi_1 = \phi_2 + IR_1$$

$$\phi_1 - \phi_2 = IR_1$$

$$\frac{kT}{q} \ln 10 = IR_1$$

$$V_0 = \phi_1 + 10IR_2 = \phi_1 + 10 \frac{kT}{qR_1} \cdot R_2 \ln 10$$

$$\dot{V}_0 = \dot{\phi}_1 + \frac{10k}{q} \frac{R_2}{R_1} \ln 10 = 0$$

\uparrow
 $-2\text{mV}/^\circ\text{C}$

$$\frac{R_2}{R_1} = \frac{2e-3}{\frac{10k}{q} \ln 10} = \frac{2.3077}{\ln 10} = 1$$

1st order