Diode calibration. Figure 1 shows a plot of the diode voltage versus temperature for three diodes with a wide variation in their room temperature voltages. The difference in voltage between these units was discovered to be almost linear in temperature. (See figure 2.) This allows for a single point calibration of the diodes. The room temperature voltage of 'your' diode is compared to the standard diode, (diode C in the figures). The voltage at any other temperature is then calculated from the known voltage of the standard diode at that temperature and recorded in the table below. A linear extrapolation between the recorded temperatures will give the voltage at any temperature. For the best accuracy you should also record the DC offset of the monitor output (typically +/-1 mV)

NF131

Temperature (K)	Voltage (mV)
77.320	993.514
90.000	965.978
100.000	943.306
110.000	920.018
120.000	896.211
130.000	871.895
140.000	847.226
150.000	822.208
160.000	796.819
170.000	771.224
180.000	745.378
190.000	719.310
200.000	693.023
210.000	666.544
220.000	639.874
230.000	613.057
240.000	586.098
250.000	558.911
260.000	531.613
270.000	504.152
280.000	476.605
290.000	448.865
300.000	420.955
310.000	393.018
320.000	364.987
330.000	336.764
340.000	308.563
350.000	280.110
360.000	251.643
370.000	223.099
380.000	194.494
390.000	165.900
400.000	137.444

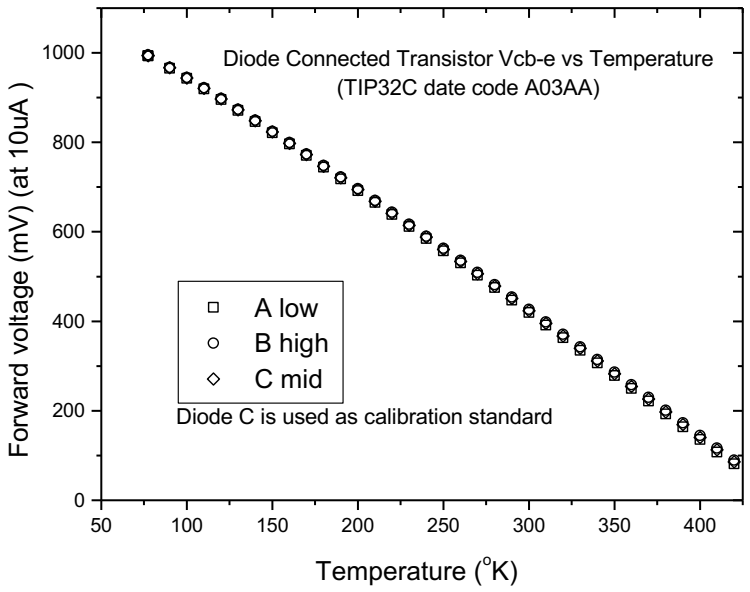

Figure 1. Diode voltage vs. Temperature

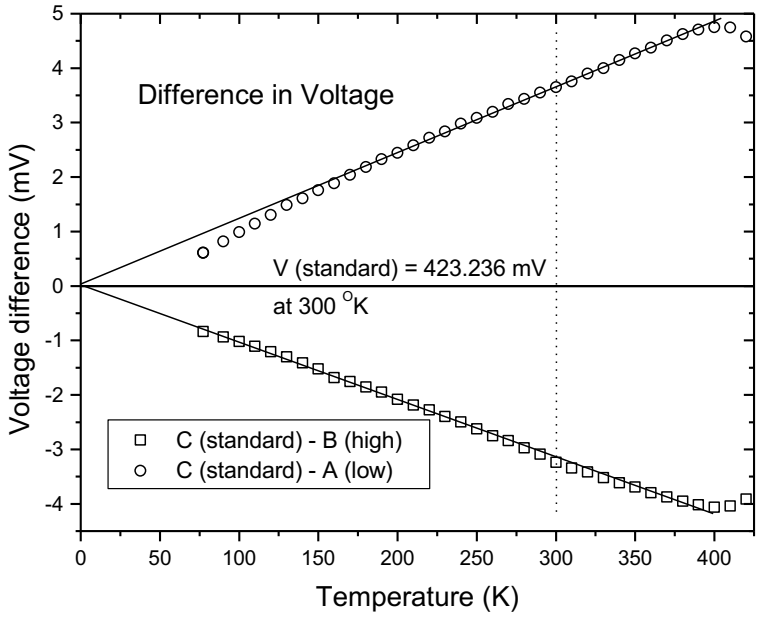

Figure 2. Difference in diode voltage