

**d)**

$V_{\text{def}} \text{ (}\mu\text{V)}$

200

0

-200

-1

0

1

$V \text{ (mV)}$

$V_{\text{gap}}$



The figure shows a plot of the differential conductance  $V_{\text{def}}$  in  $\mu\text{V}$  as a function of the bias voltage  $V$  in  $\text{mV}$ . The x-axis ranges from approximately -1.5 to 1.5  $\text{mV}$ , with major ticks at -1, 0, and 1. The y-axis ranges from -250 to 250  $\mu\text{V}$ , with major ticks at -200, 0, and 200. A blue curve represents the data, showing a sharp transition from a negative value of about -250  $\mu\text{V}$  at  $V = -1.5 \text{ mV}$  to a positive value of about 250  $\mu\text{V}$  at  $V = 1.5 \text{ mV}$ . The transition occurs around  $V = 0$   $\text{mV}$ . A red horizontal line is drawn at the top of the plot, at approximately 250  $\mu\text{V}$ , and is labeled  $V_{\text{gap}}$  in red text. The label is positioned above the line, with a small red triangle pointing down to the line.

$V \text{ (mV)}$	$V_{\text{def}} \text{ (}\mu\text{V)}$
-1.5	-250
-1.0	-250
-0.5	-200
0.0	0
0.5	200
1.0	250
1.5	250