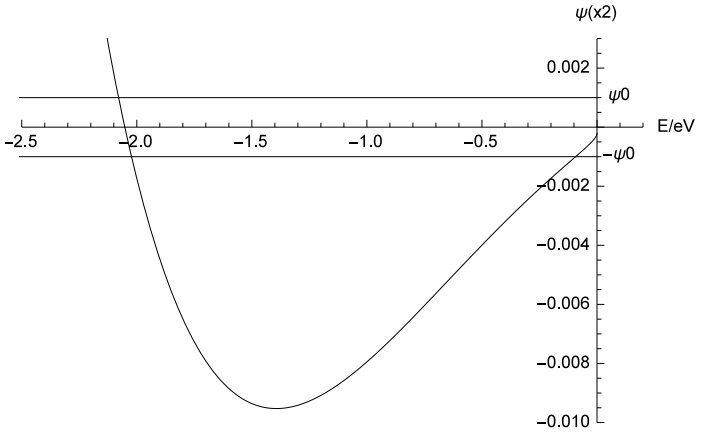
```
V0 = -3; a = 2; α = 0.262713; ψ0 = 10^-3; x0 = 2a;
V[x_]:=Which[Abs[x] ≤ a, V0, True, 0]
f[e_?NumberQ]:=
Block[{ψ, x, x1 = -x0, x2 = x0},
First[ψ[x2]/.
NDSolve[{ψ''[x] + α(e - V[x])ψ[x] == 0, ψ[x1] == ψ0,
ψ'[x1] == √(-α(e - V[x1])) ψ0}],
ψ, {x, x1, x2}]]]
Plot[{f[e], ψ0, -ψ0}, {e, V0, 0},
PlotRange → {{-2.5, 0.2}, {3ψ0, -10ψ0}},
AxesLabel → {"E/eV", "ψ(x2)"},
Epilog → {Text["ψ0", {0.1, ψ0}], Text["-ψ0", {0.1, -ψ0}]},
PlotStyle → Black, PlotPoints → 100]
FindRoot[f[e] == ψ0, {e, -2.2, -2.0}]
FindRoot[f[e] == -ψ0, {e, -0.2, 0}]
Clear["Global`*"]
```



$\{e \to -2.07927\}$

$\{e \to -0.0930281\}$