```
EP = Function [{f, param}, Sqrt[Total@((∂_# f u_#)^2 &/@param[[;;, 1]])]/.
 Thread[param[[;;, 1]] -> param[[;;, 2]]] ~Join~ Thread[(u_# &) /@param[[;;, 1]] -> param[[;;, 3]]]];
(*param{{}...}*)
EPF = Function [{f, param}, Sqrt[Total@((∂_# f u_#)^2 &/@param)]];
(*param{...}*)

EPF [n R T/V (*p*), {n, V, R, T}]

Sqrt[R^2 T^2 u_n^2/V^2 + n^2 T^2 u_R^2/V^2 + n^2 R^2 u_T^2/V^2 + n^2 R^2 T^2 u_V^2/V^4]

ρ1[v_, i_] := UnitConvert [2Pi 0.1cm Quantity[v, "Millivolts"]/Quantity[i, "Milliamperes"], "Ohms" "Centimeters

EPF[ρ1[v, i], {v, i}]

Sqrt[(0.394784 v^2/i^4 cm^2 Ω^2) u_i^2 + (0.394784/i^2 cm^2 Ω^2) u_v^2]

ρ2[v_, i_, d_] := UnitConvert[Quantity[d, "Centimeters"] * 1 * 4.5255 * Quantity[v, "Millivolts"]/Quantity[i, "Milli
"Ohms" "Centimeters"]

EPF [ρ2 [(v1+v2)/2, i, d], {v1, v2, i, d}]

Sqrt[(5.12004 (v1+v2)^2/i^2 cm^2 Ω^2) u_d^2 + (5.12004 d^2 (v1+v2)^2/i^4 cm^2 Ω^2) u_i^2 + (5.12004 d^2/i^2 cm^2 Ω^2) u_v1^2 + (5.12004 d^2/i^2 cm^2 Ω^2

EP [ρ2 [(v1+v2)/2, i, d], {{v1, 18.09, 0.025/Sqrt[3]}, {v2, 17.96, 0.025/Sqrt[3]}, {i, 0.9140, 0.02/Sqrt[3]}, {d, 0.0180, 0.0180 * 0.00

0.020568 cm Ω

U = k * %17/.k -> 2

0.0411359 cm Ω
```