Temperature sensor Pt1000 with temperature coefficient 3850 ppm/°C, tolerance class A

Calculation of temperature "t" (-50°C to 0°C) $R = 1000\ (1 + At + Bt^2 + C\ (t-100)\ t^3\ )$

Calculation of temperature "t" (0°C to +400°C) $R = 1000\ (1 + At + Bt^2)$

where

$A = 3{,}9083 \cdot 10^{-3}\ °C^{-1}$

$B = -5{,}775 \cdot 10^{-7}\ °C^{-2}$

$C = -4{,}183 \cdot 10^{-12}\ °C^{-4}$

tolerance class A $\Delta T = +/-\ (0{,}15 + 0{,}002 * |t|)$

Relation Temperature t [°C] vs. Resistance R [ohm] and tolerance class:

temperature "t" °C	Resistance R ohm	tolerance delta T "+/-" °C
-40	842,7	0,23
-20	921,6	0,19
-10	960,9	0,17
0	1000	0,15
10	1039	0,17
20	1077,9	0,19
30	1116,7	0,21
50	1194	0,25
100	1385	0,35
150	1573,1	0,45
180	1684,6	0,51