

Wednesday, December 01, 2021, Time 13:25

Wintherm32v3 Version 3.31.143 Uni

Instrument: F200s

Instrument Program Version 290

Instrument Serial Number: 2520

Sample Name: RE_OSa.50.50.0.O#1

Thickness: 28.48mm

Rear Left : 28.45 mm Rear Right : 28.50 mm

Front Left: 28.45 mm Front Right: 28.52 mm

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Thickness obtained : from instrument

TEST RUN

Calibration used : User Type

Calibration File Id: IRMMCALIBRATION_sn2520

Number of transducers per plate: 1

Number of transducers used per plate: 1

Number of Setpoints: 3

Setpoint duration: 67 min

Block Averages for setpoint 1 in SI units

| Tupper [°C] | Tlower [°C] | Qupper [μV] | Qlower [μV] | Lambda [W/mK] |
|----------------|----------------|----------------|----------------|------------------|
| 16.06 | 24.60 | -10061 | 4365 | 0.6240 |
| 14.98 | 24.96 | -6338 | 2849 | 0.3409 |
| 14.99 | 25.00 | -5348 | 3227 | 0.3171 |
| 14.99 | 25.00 | -4921 | 3481 | 0.3107 |
| 15.00 | 25.00 | -4649 | 3644 | 0.3067 |
| 15.00 | 25.00 | -4483 | 3747 | 0.3043 |
| 15.00 | 25.00 | -4377 | 3810 | 0.3028 |
| 14.99 | 25.00 | -4313 | 3849 | 0.3018 |
| 15.00 | 25.00 | -4265 | 3874 | 0.3010 |
| 14.99 | 25.00 | -4247 | 3887 | 0.3006 |
| 14.99 | 25.00 | -4222 | 3905 | 0.3004 |
| 15.00 | 25.01 | -4203 | 3914 | 0.2999 |
| 15.00 | 25.01 | -4195 | 3919 | 0.2998 |
| 15.00 | 25.01 | -4189 | 3923 | 0.2998 |
| 15.00 | 25.01 | -4188 | 3923 | 0.2998 |
| 15.00 | 25.01 | -4189 | 3922 | 0.2998 |

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Setpoint No. 1

Setpoint Upper: 15.00 °C

Setpoint Lower: 25.00 °C

Temperature Upper: 15.00 °C

CalibFactor Upper: 0.026016

Results Upper: 0.3101 W/mK

Temperature Lower: 25.01 °C

CalibFactor Lower: 0.025934

Results Lower: 0.2895 W/mK

Percent Difference: 6.88%

Thermal Equilibrium Criteria:

Temperature Equilibrium: 0.20

Between Block HFM Equil.: 49

HFM Percent Change: 2.00

Min Number of Blocks: 4

Calculation Blocks: 3

Setpoint duration: 76 min

Block Averages for setpoint 2 in SI units

| Tupper [°C] | Tlower [°C] | Qupper [μV] | Qlower [μV] | Lambda [W/mK] |
|----------------|----------------|----------------|----------------|------------------|
| 10.14 | 20.06 | -12548 | -2868 | 0.5809 |
| 10.00 | 20.00 | -7586 | 1696 | 0.3468 |
| 10.00 | 19.99 | -6367 | 2403 | 0.3275 |
| 10.00 | 20.00 | -5557 | 2901 | 0.3155 |
| 10.00 | 20.00 | -5034 | 3225 | 0.3079 |
| 10.00 | 20.00 | -4700 | 3438 | 0.3031 |
| 10.00 | 20.00 | -4481 | 3568 | 0.2998 |
| 10.00 | 20.00 | -4340 | 3658 | 0.2978 |
| 10.00 | 20.01 | -4248 | 3713 | 0.2964 |
| 10.00 | 20.01 | -4185 | 3754 | 0.2955 |
| 10.00 | 20.01 | -4148 | 3774 | 0.2950 |
| 10.00 | 20.00 | -4135 | 3784 | 0.2948 |
| 10.00 | 20.00 | -4119 | 3794 | 0.2946 |
| 10.00 | 20.00 | -4101 | 3806 | 0.2943 |
| 10.00 | 20.00 | -4093 | 3809 | 0.2941 |
| 10.00 | 20.00 | -4088 | 3813 | 0.2941 |
| 10.00 | 20.00 | -4083 | 3816 | 0.2940 |
| 10.01 | 20.01 | -4084 | 3815 | 0.2940 |

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Setpoint No. 2

Setpoint Upper: 10.00 °C
Setpoint Lower: 20.00 °C
Temperature Upper: 10.00 °C
CalibFactor Upper: 0.026312
Results Upper: 0.3061 W/mK
Temperature Lower: 20.00 °C
CalibFactor Lower: 0.025969
Results Lower: 0.2821 W/mK
Percent Difference: 8.16%

Thermal Equilibrium Criteria:

Temperature Equilibrium: 0.20
Between Block HFM Equil.: 49
HFM Percent Change: 2.00
Min Number of Blocks: 4
Calculation Blocks: 3

Setpoint duration: 97 min

Block Averages for setpoint 3 in SI units

| Tupper [°C] | Tlower [°C] | Qupper [μV] | Qlower [μV] | Lambda [W/mK] |
|----------------|----------------|----------------|----------------|------------------|
| 5.22 | 15.08 | -12352 | -2820 | 0.5805 |
| 4.99 | 15.00 | -7455 | 1664 | 0.3440 |
| 4.99 | 15.00 | -6256 | 2343 | 0.3236 |
| 5.00 | 15.00 | -5454 | 2831 | 0.3113 |
| 5.00 | 15.00 | -4939 | 3149 | 0.3036 |
| 5.00 | 15.01 | -4607 | 3356 | 0.2987 |
| 5.00 | 15.01 | -4395 | 3483 | 0.2953 |
| 5.00 | 15.01 | -4254 | 3571 | 0.2932 |
| 5.00 | 15.00 | -4167 | 3623 | 0.2919 |
| 5.00 | 15.01 | -4106 | 3661 | 0.2910 |
| 5.00 | 15.01 | -4074 | 3680 | 0.2905 |
| 4.99 | 15.00 | -4053 | 3691 | 0.2900 |
| 4.99 | 15.00 | -4034 | 3706 | 0.2899 |
| 5.00 | 15.00 | -4021 | 3712 | 0.2896 |
| 5.00 | 15.00 | -4014 | 3716 | 0.2896 |
| 5.00 | 15.00 | -4008 | 3721 | 0.2895 |
| 5.00 | 15.00 | -4007 | 3723 | 0.2895 |
| 5.00 | 15.00 | -4006 | 3723 | 0.2895 |
| 5.00 | 15.00 | -4006 | 3723 | 0.2895 |
| 5.00 | 15.00 | -4004 | 3726 | 0.2895 |

-pe- 5.00 15.00 -4003 3727 0.2895
-pe- 5.00 15.01 -4002 3728 0.2895
-pe- 5.00 15.00 -4003 3726 0.2895

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Setpoint No. 3
Setpoint Upper: 5.00 °C
Setpoint Lower: 15.00 °C
Temperature Upper: 5.00 °C
CalibFactor Upper: 0.026610
Results Upper: 0.3032 W/mK
Temperature Lower: 15.00 °C
CalibFactor Lower: 0.026003
Results Lower: 0.2759 W/mK
Percent Difference: 9.44%

Thermal Equilibrium Criteria:

Temperature Equilibrium: 0.20
Between Block HFM Equil.: 49
HFM Percent Change: 2.00
Min Number of Blocks: 4
Calculation Blocks: 3

Results Table -- SI Units

| Mean Temp | Upper Cond | Lower Cond | Average Cond |
|-----------|------------|------------|--------------|
| 20.01 | 0.3101 | 0.2895 | 0.2998 |
| 15.00 | 0.3061 | 0.2821 | 0.2941 |
| 10.00 | 0.3032 | 0.2759 | 0.2895 |