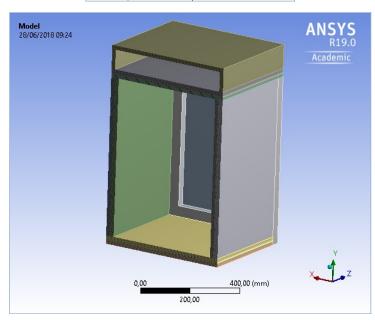
Project Page 1 of 17



# **Project**

| First Saved                  | Wednesday, June 27, 2018 |
|------------------------------|--------------------------|
| Last Saved                   | Thursday, June 28, 2018  |
| Product Version              | 19.0 Release             |
| Save Project Before Solution | No                       |
| Save Project After Solution  | No                       |



Project Page 2 of 17

## **Contents**

- Units
- Model (A4)
  - o Geometry
  - Parts o Coordinate Systems
  - o Connections
    - Contacts
    - Contact Regions
  - o Mesh
  - o Transient Thermal (A5)
    - Initial Temperature
       Analysis Settings

    - LoadsSolution (A6)
      - Solution Information
      - Result Charts ■ Results
- Material Data
  o Air(Atmospheric)
  o PVC

  - o Isopor
  - o Wood
  - o Aluminum Alloy
  - o Glass

## **Units**

## TABLE 1

| Unit System         | Metric (mm, kg, N, s, mV, mA) Degrees rad/s Celsius |
|---------------------|---|
| Angle               | Degrees   |
| Rotational Velocity | rad/s   |
| Temperature         | Celsius   |

## Model (A4)

## Geometry

TABLE 2 Model (A4) > Geometry

|  | model (A4) > Geometry  |
|--|--|
| Object Name  | Geometry   |
| State  | Fully Defined  |
|  | Definition   |
| Source   | C:\Users\Thiago\Desktop\Estufa_camadas\estufa_camadas_files\dp0\SYS\DM\SYS.scdoc |
| Туре   | SpaceClaim   |
| Length Unit  | Meters   |
| Element Control                                      | Program Controlled   |
| Display Style  | Body Color   |
|  | Bounding Box   |
| Length X   | 535, mm  |
| Length Y   | 835, mm  |
| Length Z   | 570, mm  |
|  | Properties   |
| Volume   | 2,3479e+008 mm³  |
| Mass   | 33,764 kg  |
| Scale Factor Value                                   | 1,   |
|  | Statistics   |
| Bodies   | 19   |
| Active Bodies  | 19   |
| Nodes  | 27281  |
| Elements   | 4421   |
| Mesh Metric  | None   |
|  | Basic Geometry Options   |
| Solid Bodies   | Yes  |
| Surface Bodies                                       | Yes  |
| Line Bodies  | Yes  |
| Parameters   | Independent  |
| Parameter Key  |  |
| Attributes   | Yes  |
| Attribute Key  |  |
| Named Selections                                     | Yes  |
| Named Selection Key                                  |  |
| Material Properties                                  | Yes  |
| ·  | Advanced Geometry Options  |
| Use Associativity                                    | Yes  |
| Coordinate Systems                                   | Yes  |
| Coordinate System Key                                |  |
| Reader Mode Saves Updated File                       | No   |
| Use Instances  | Yes  |
| Smart CAD Update                                     | Yes  |
| Compare Parts On Update                              | No   |
| Analysis Type  |  |
|  |  |
| Mixed Import Resolution                              | None   |
| Mixed Import Resolution  Decompose Disjoint Geometry | None<br>Yes  |

TABLE 3 Model (A4) > Geometry > Parts Project Page 3 of 17

| Object Name              | parte_tras\forro         | parte_tras\pvc            | parte_tras\isopor  | parte_baixo\isopor          | parte_baixo\pvc    | parte_baixo\forro  | parte_esquerda\isopor | parte_esquerda\pvc | parte_e |  |  |  |  |  |
|--------------------------|--------------------------|---------------------------|--------------------|-----------------------------|--------------------|--------------------|-----------------------|--------------------|---------|--|--|--|--|--|
| State                    |                          |                           |                    |                             |                    | Meshed             |                       |                    |         |  |  |  |  |  |
|                          |                          |                           |                    |                             | Graph              | ics Properties     |                       |                    |         |  |  |  |  |  |
| Visible                  |                          |                           |                    |                             |                    | Yes                |                       |                    |         |  |  |  |  |  |
| Transparency             |                          |                           |                    |                             |                    | 1                  |                       |                    |         |  |  |  |  |  |
|                          |                          |                           |                    |                             |                    | Definition         |                       |                    |         |  |  |  |  |  |
| Suppressed               |                          |                           |                    |                             |                    | No                 |                       |                    |         |  |  |  |  |  |
| Stiffness Behavior       |                          |                           |                    |                             |                    | Flexible           |                       |                    |         |  |  |  |  |  |
| Coordinate<br>System     |                          | Default Coordinate System |                    |                             |                    |                    |                       |                    |         |  |  |  |  |  |
| Reference<br>Temperature |                          | By Environment            |                    |                             |                    |                    |                       |                    |         |  |  |  |  |  |
| Behavior                 |                          |                           |                    |                             |                    | None               |                       |                    |         |  |  |  |  |  |
|                          |                          |                           |                    |                             |                    | Material           |                       |                    |         |  |  |  |  |  |
| Assignment               | Air (Atmospheric) PVC Is |                           |                    | opor                        | PVC                | Air(Atmospheric)   | Isopor                | PVC                | Air(A   |  |  |  |  |  |
| Nonlinear Effects        |                          |                           |                    |                             |                    | Yes                |                       |                    |         |  |  |  |  |  |
| Thermal Strain           |                          |                           |                    |                             |                    | Yes                |                       |                    |         |  |  |  |  |  |
| Effects                  |                          |                           |                    |                             | Bo                 | unding Box         |                       |                    |         |  |  |  |  |  |
| Length X                 |                          |                           | 5                  | 35, mm                      |                    |                    | 17, mm                | 3,5 mm             | T       |  |  |  |  |  |
| Length Y                 |                          | 665, mm                   |                    | 17, mm                      | 3, mm              | 15, mm             |                       | (                  | 665, mm |  |  |  |  |  |
| Length Z                 | 15, mm                   | 3, mm                     | 17, mm             |                             | 535, mm            |                    |                       |                    | 500, mm |  |  |  |  |  |
|                          |                          |                           |                    |                             | Р                  | Properties         |                       |                    |         |  |  |  |  |  |
| Volume                   | 5,3366e+006<br>mm³       | 1,0673e+006<br>mm³        | 6,0482e+006<br>mm³ | 4,8658e+006 mm <sup>3</sup> | 8,5867e+005<br>mm³ | 4,2934e+006<br>mm³ | 5,6525e+006 mm³       | 1,1638e+006 mm³    | 4,987   |  |  |  |  |  |
| Mass                     | 6,5374e-003 kg           | 1,2808 kg                 | 0,30241 kg         | 0,24329 kg                  | 1,0304 kg          | 5,2594e-003 kg     | 0,28263 kg            | 1,3965 kg          | 6,10    |  |  |  |  |  |
| Centroid X               |                          |                           | 26                 | 7,5 mm                      |                    | •                  | 8,5 mm                | 18,75 mm           |         |  |  |  |  |  |
| Centroid Y               |                          | 367,5 mm                  |                    | 8,5 mm                      | 18,5 mm            | 367,5 n            |                       |                    |         |  |  |  |  |  |
| Centroid Z               | -507,5 mm                | -516,5 mm                 | -526,5 mm          |                             | -267,5 mm          |                    |                       | =                  | 250, mm |  |  |  |  |  |
| Moment of Inertia<br>Ip1 | 241,04 kg·mm²            | 47201 kg·mm²              | 11152 kg·mm²       | 5808,9 kg·mm²               | 24578 kg·mm²       | 125,55 kg·mm²      | 16303 kg·mm²          | 80558 kg·mm²       | 352     |  |  |  |  |  |
| Moment of Inertia<br>Ip2 | 156,05 kg·mm²            | 30551 kg·mm²              | 7220,4 kg·mm²      | 11606 kg·mm²                | 49155 kg·mm²       | 250,89 kg·mm²      | 5894,8 kg·mm²         | 29095 kg·mm²       | 127     |  |  |  |  |  |
| Moment of Inertia<br>Ip3 | 396,84 kg·mm²            | 77750 kg·mm²              | 18357 kg·mm²       | 5808,9 kg·mm²               | 24578 kg·mm²       | 125,55 kg·mm²      | 10422 kg·mm²          | 51465 kg·mm²       | 225     |  |  |  |  |  |
|                          |                          | •                         |                    |                             | •                  | Statistics         |                       |                    | -       |  |  |  |  |  |
| Nodes                    |                          | 1206                      |                    |                             | 1131               |                    |                       |                    | 1206    |  |  |  |  |  |
| Elements                 |                          | 154                       |                    |                             | 144                |                    |                       |                    | 154     |  |  |  |  |  |
| Mesh Metric              |                          |                           |                    |                             |                    | None               |                       |                    |         |  |  |  |  |  |
|                          |                          |                           |                    |                             | CAI                | D Attributes       |                       |                    |         |  |  |  |  |  |
| PartTolerance:           |                          |                           |                    |                             |                    | 0,0000000          | 1                     |                    |         |  |  |  |  |  |
| Color:192.192.192        |                          |                           |                    |                             |                    |                    |                       |                    |         |  |  |  |  |  |

TABLE 4 Model (A4) > Geometry > Parts

|                        |                    |                           | WIOUE               | (A4) > Geometry >      | raits                     |                           |                       |                      |  |  |  |  |  |
|------------------------|--------------------|---------------------------|---------------------|------------------------|---------------------------|---------------------------|-----------------------|----------------------|--|--|--|--|--|
| Object Name            | Component8\pvc     | Component10<br>\forro     | Component11<br>\pvc | Component12<br>\isopor | madeira\Solid             | porta\Solid               | vidro\Solid           | ar\Solid             |  |  |  |  |  |
| State                  |                    | '                         |                     | Meshed                 |                           |                           |                       | Hidden               |  |  |  |  |  |
|                        |                    |                           |                     | Graphics Properties    |                           |                           |                       |                      |  |  |  |  |  |
| Visible                |                    |                           |                     | Yes                    |                           |                           |                       | No                   |  |  |  |  |  |
| Transparency           |                    |                           |                     | 1                      |                           |                           |                       |                      |  |  |  |  |  |
|                        |                    |                           |                     | Definition             |                           |                           |                       |                      |  |  |  |  |  |
| Suppressed             |                    |                           |                     |                        | No                        |                           |                       |                      |  |  |  |  |  |
| Stiffness Behavior     |                    | Flexible                  |                     |                        |                           |                           |                       |                      |  |  |  |  |  |
| Coordinate System      |                    | Default Coordinate System |                     |                        |                           |                           |                       |                      |  |  |  |  |  |
| Reference              |                    | By Environment            |                     |                        |                           |                           |                       |                      |  |  |  |  |  |
| Temperature            |                    |                           |                     | Dy Liiv                | IIOIIIII <del>C</del> III |                           |                       |                      |  |  |  |  |  |
| Behavior               |                    |                           |                     |                        | one                       |                           |                       |                      |  |  |  |  |  |
|                        |                    |                           |                     | Material               |                           |                           |                       |                      |  |  |  |  |  |
| Assignment             | PVC                | Air(Atmospheric)          | PVC                 | Isopor                 | Wood                      | Aluminum Alloy            | Glass                 | Air<br>(Atmospheric) |  |  |  |  |  |
| Nonlinear Effects      |                    |                           |                     | Y                      | 'es                       |                           |                       |                      |  |  |  |  |  |
| Thermal Strain Effects |                    |                           |                     |                        | 'es                       |                           |                       |                      |  |  |  |  |  |
|                        |                    |                           |                     | Bounding Box           |                           |                           |                       |                      |  |  |  |  |  |
| Length X               | 3,5 mm             |                           |                     | 535, mm                |                           |                           | 375, mm               | 464, mm              |  |  |  |  |  |
| Length Y               | 665, mm            | 15, mm                    | 3, mm               | 17, mm                 | 100, mm                   | 700, mm                   | 540, mm               | 700, mm              |  |  |  |  |  |
| Length Z               | 500, mm            |                           | 57                  | 0, mm                  |                           | 35, mm                    | 7, mm                 | 500, mm              |  |  |  |  |  |
|                        |                    |                           |                     | Properties             |                           |                           |                       |                      |  |  |  |  |  |
| Volume                 | 1,1637e+006<br>mm³ | 4,5743e+006 mm³           | 9,1485e+005<br>mm³  | 5,1842e+006 mm³        | 8,2065e+006 mm³           | 6,02e+006 mm <sup>3</sup> | 1,4175e+006 mm³       | 1,624e+008<br>mm³    |  |  |  |  |  |
| Mass                   | 1,3965 kg          | 5,6035e-003 kg            | 1,0978 kg           | 0,25921 kg             | 5,7446 kg                 | 16,675 kg                 | 3,5437 kg             | 0,19894 kg           |  |  |  |  |  |
| Centroid X             | 516,25 mm          |                           |                     |                        | 267,5 mm                  |                           |                       |                      |  |  |  |  |  |
| Centroid Y             | 367,5 mm           | 707,5 mm                  | 716,5 mm            | 726,5 mm               | 808,09 mm                 | 350                       | , mm                  | 385, mm              |  |  |  |  |  |
| Centroid Z             |                    |                           | -250, mm            |                        |                           | 17,5 mm                   | 31,5 mm               | -250, mm             |  |  |  |  |  |
| Moment of Inertia Ip1  | 80557 kg·mm²       | 151,82 kg·mm²             | 29725 kg·mm²        | 7024,3 kg·mm²          | 2,0907e+005<br>kg·mm²     | 1,0072e+006<br>kg·mm²     | 86128 kg·mm²          | 12268 kg·mm²         |  |  |  |  |  |
| Moment of Inertia Ip2  | 29095 kg·mm²       | 285,37 kg·mm²             | 55909 kg·mm²        | 13201 kg·mm²           | 3,8724e+005<br>kg·mm²     | 6,3765e+005<br>kg·mm²     | 41543 kg·mm²          | 7713,8 kg·mm²        |  |  |  |  |  |
| Moment of Inertia Ip3  | 51465 kg·mm²       | 133,76 kg·mm²             | 26186 kg·mm²        | 6188,9 kg·mm²          | 1,8746e+005<br>kg·mm²     | 1,6414e+006<br>kg·mm²     | 1,2764e+005<br>kg·mm² | 11693 kg·mm²         |  |  |  |  |  |
|                        |                    |                           |                     | Statistics             |                           |                           |                       |                      |  |  |  |  |  |
| Nodes                  | 1206               |                           | 1220                | -                      | 1494                      | 773                       | 932                   | 6175                 |  |  |  |  |  |
| Elements               | 154                |                           | 156                 |                        | 679                       | 79                        | 117                   | 1260                 |  |  |  |  |  |
| Mesh Metric            |                    |                           |                     | N                      | one                       |                           |                       |                      |  |  |  |  |  |
|                        |                    |                           |                     | CAD Attributes         |                           |                           |                       |                      |  |  |  |  |  |
| PartTolerance:         |                    |                           |                     | 0,000                  | 000001                    |                           |                       |                      |  |  |  |  |  |
| Color:192.192.192      |                    |                           |                     |                        |                           |                           |                       |                      |  |  |  |  |  |
| Color:175.175.143      |                    |                           |                     |                        |                           |                           |                       |                      |  |  |  |  |  |
| Color:0.0.0            |                    |                           |                     |                        |                           |                           |                       |                      |  |  |  |  |  |
| Color:255,255,255      |                    |                           |                     |                        |                           |                           |                       |                      |  |  |  |  |  |

**Coordinate Systems** 

Project Page 4 of 17

TABLE 5
Model (A4) > Coordinate Systems > Coordinate System

| Object Name          | Global Coordinate System |  |  |  |  |  |  |  |
|----------------------|--------------------------|--|--|--|--|--|--|--|
| State                | Fully Defined            |  |  |  |  |  |  |  |
| De                   | Definition               |  |  |  |  |  |  |  |
| Туре                 | Cartesian                |  |  |  |  |  |  |  |
| Coordinate System ID | 0,                       |  |  |  |  |  |  |  |
|                      | Origin                   |  |  |  |  |  |  |  |
| Origin X             | 0, mm                    |  |  |  |  |  |  |  |
| Origin Y             | 0, mm                    |  |  |  |  |  |  |  |
| Origin Z             | 0, mm                    |  |  |  |  |  |  |  |
| Direction            | onal Vectors             |  |  |  |  |  |  |  |
| X Axis Data          | [1, 0, 0, ]              |  |  |  |  |  |  |  |
| Y Axis Data          | [0, 1, 0, ]              |  |  |  |  |  |  |  |
| Z Axis Data          | [0, 0, 1, ]              |  |  |  |  |  |  |  |

## **Connections**

## TABLE 6 Model (A4) > Connections

| Model (A4) > Connections                 |               |  |  |  |  |  |  |
|--|---------------|--|--|--|--|--|--|
| Object Name                              | Connections   |  |  |  |  |  |  |
| State                                    | Fully Defined |  |  |  |  |  |  |
| Auto Detection                           |               |  |  |  |  |  |  |
| Generate Automatic Connection On Refresh | Yes           |  |  |  |  |  |  |
| Transparency                             |               |  |  |  |  |  |  |
| Enabled                                  | Yes           |  |  |  |  |  |  |

## TABLE 7

| Model (A4) > Connections > Contacts |                    |  |  |  |  |  |  |  |
|-------------------------------------|--------------------|--|--|--|--|--|--|--|
| Object Name Contacts                |                    |  |  |  |  |  |  |  |
| State                               | Fully Defined      |  |  |  |  |  |  |  |
| Definition                          |                    |  |  |  |  |  |  |  |
| Connection Type                     | Contact            |  |  |  |  |  |  |  |
| Scop                                | е                  |  |  |  |  |  |  |  |
| Scoping Method                      | Geometry Selection |  |  |  |  |  |  |  |
| Geometry                            | All Bodies         |  |  |  |  |  |  |  |
| Auto Dete                           | ection             |  |  |  |  |  |  |  |
| Tolerance Type                      | Slider             |  |  |  |  |  |  |  |
| Tolerance Slider                    | 0,                 |  |  |  |  |  |  |  |
| Tolerance Value                     | 2,8596 mm          |  |  |  |  |  |  |  |
| Use Range                           | No                 |  |  |  |  |  |  |  |
| Face/Face                           | Yes                |  |  |  |  |  |  |  |
| Face Overlap Tolerance              | Off                |  |  |  |  |  |  |  |
| Cylindrical Faces                   | Include            |  |  |  |  |  |  |  |
| Face/Edge                           | No                 |  |  |  |  |  |  |  |
| Edge/Edge                           | No                 |  |  |  |  |  |  |  |
| Priority                            | Include All        |  |  |  |  |  |  |  |
| Group By                            | Bodies             |  |  |  |  |  |  |  |
| Search Across                       | Bodies             |  |  |  |  |  |  |  |
| Statist                             | ics                |  |  |  |  |  |  |  |
| Connections                         | 51                 |  |  |  |  |  |  |  |
| Active Connections                  | 51                 |  |  |  |  |  |  |  |

# TABLE 8 Model (A4) > Connections > Contacts > Contact Regions

|                                  |                   |                     | Wouel (A4             | <i>) -</i> Collinections - C | ontacts > Contact Re    |                       |                      |                     |                       |              |  |  |
|----------------------------------|-------------------|---------------------|-----------------------|------------------------------|-------------------------|-----------------------|----------------------|---------------------|-----------------------|--------------|--|--|
| Object Name                      | Contact<br>Region | Contact Region<br>2 | Contact Region 3      | Contact Region 4             | Contact Region 5        | Contact<br>Region 6   | Contact<br>Region 7  | Contact<br>Region 8 | Contact<br>Region 9   | Contact<br>1 |  |  |
| State                            | Fully Defined     |                     |                       |                              |                         |                       |                      |                     |                       |              |  |  |
|                                  |                   |                     |                       |                              | Scope                   |                       |                      |                     |                       |              |  |  |
| Scoping<br>Method                |                   |                     |                       |                              | Geometry Se             | lection               |                      |                     |                       |              |  |  |
| Contact                          |                   | 1 Face              |                       |                              |                         |                       |                      |                     |                       |              |  |  |
| Target                           |                   | 1 Face              |                       |                              |                         |                       |                      |                     |                       |              |  |  |
| Contact<br>Bodies                |                   |                     |                       | parte_t                      | ras\forro               |                       |                      |                     |                       |              |  |  |
| Target<br>Bodies                 | parte_tras\pvc    | parte_baixo\forro   | parte_esquerda\isopor | parte_esquerda\pvc           | parte_esquerda\forro    | Component7<br>\isopor | Component9<br>\forro | Component8<br>\pvc  | Component10<br>\forro | parte_tra    |  |  |
| Protected                        |                   | No                  |                       |                              |                         |                       |                      |                     |                       |              |  |  |
|                                  |                   |                     |                       |                              | Definition              |                       |                      |                     |                       |              |  |  |
| Туре                             |                   | Bonded              |                       |                              |                         |                       |                      |                     |                       |              |  |  |
| Scope Mode                       |                   |                     |                       |                              | Automat                 |                       |                      |                     |                       |              |  |  |
| Behavior                         |                   |                     |                       |                              | Program Cor             |                       |                      |                     |                       |              |  |  |
| Trim Contact                     |                   |                     |                       |                              | Program Cor             | ntrolled              |                      |                     |                       |              |  |  |
| Trim<br>Tolerance                |                   |                     |                       |                              | 2,8596 m                | nm                    |                      |                     |                       |              |  |  |
| Suppressed                       |                   |                     |                       |                              | No                      |                       |                      |                     |                       |              |  |  |
|                                  |                   |                     |                       |                              | Advanced                |                       |                      |                     |                       |              |  |  |
| Formulation                      |                   |                     |                       |                              | Program Cor             |                       |                      |                     |                       |              |  |  |
| Small Sliding                    |                   |                     |                       |                              | Program Cor             | ntrolled              |                      |                     |                       |              |  |  |
| Detection<br>Method              |                   |                     |                       |                              | Program Cor             | ntrolled              |                      |                     |                       |              |  |  |
| Elastic Slip<br>Tolerance        |                   |                     |                       |                              | Program Cor             | ntrolled              |                      |                     |                       |              |  |  |
| Thermal Conductance              |                   |                     |                       |                              | Program Cor             | ntrolled              |                      |                     |                       |              |  |  |
| Pinball                          |                   |                     |                       |                              | Program Cor             | ntrolled              |                      |                     |                       |              |  |  |
| Region                           |                   |                     |                       |                              | Geometric Modification  |                       |                      |                     |                       |              |  |  |
| Contact                          |                   |                     |                       | •                            | Jeonieti ic Modificatio | <b>711</b>            |                      |                     |                       |              |  |  |
| Geometry                         |                   |                     |                       |                              | None                    |                       |                      |                     |                       |              |  |  |
| Target<br>Geometry<br>Correction |                   |                     |                       |                              | None                    |                       |                      |                     |                       |              |  |  |

TABLE 9

Project Page 5 of 17

|                        |                       |                          |                      | 4                    |                           |                      |                    |         |             |                 |          |                     |                     |
|------------------------|-----------------------|--------------------------|----------------------|----------------------|---------------------------|----------------------|--------------------|---------|-------------|-----------------|----------|---------------------|---------------------|
| Object Name            | Contact               | Contact Region           | Contact              | Contact Reg          |                           | Contacts > Co        | ion   Coi          | ntact   | Contact Re  | agion 10        | Contac   | t Region 20         | Contact Reg         |
|                        | Region 12             | 13                       | Region 14            | 15                   | Region 16                 | 17                   |                    | ion 18  | Contact Ne  | gion 19         | Contact  | i Negion 20         | Contact Ne          |
| State                  |                       |                          |                      |                      |                           | Scope                | ly Defined         |         |             |                 |          |                     |                     |
| Scoping                |                       |                          |                      |                      |                           |                      | etry Select        | ion     |             |                 |          |                     |                     |
| Method                 |                       |                          |                      |                      |                           |                      |                    | .1011   |             |                 |          |                     |                     |
| Contact<br>Target      |                       |                          |                      |                      |                           |                      | 1 Face<br>1 Face   |         |             |                 |          |                     |                     |
| Contact                | parte_tras\pvc        | parte_tras               | eliconor             | narte h              | aixo\isopor               |                      | baixo\pvc          |         |             |                 |          | parte baixo         | o\forro             |
| Bodies                 |                       |                          |                      |                      | аіхолзорої                | parto_               | _baixo\pvc         |         |             |                 | 1        | parto_baix          | 7                   |
| Target<br>Bodies       | Component10<br>\forro | parte_baixo\forro        | Component1<br>\forro | parte_baixo\         | pvc porta\Solid           | parte_baixo\f        | forro porta        | a\Solid | parte_esque | rda\isopor      | parte_e  | squerda\pv          | c parte_esque       |
| Protected              |                       |                          |                      |                      |                           |                      | No                 |         |             |                 |          |                     |                     |
| Туре                   |                       |                          |                      |                      |                           | Definition           | n<br>Bonded        |         |             |                 |          |                     |                     |
| Scope Mode             |                       |                          |                      |                      |                           |                      | utomatic           |         |             |                 |          |                     |                     |
| Behavior               |                       |                          |                      |                      |                           |                      | m Control          |         |             |                 |          |                     |                     |
| Trim Contact<br>Trim   |                       |                          |                      |                      |                           |                      | m Control          | led     |             |                 |          |                     |                     |
| Tolerance              |                       |                          |                      |                      |                           | 2,8                  | 8596 mm            |         |             |                 |          |                     |                     |
| Suppressed             |                       |                          |                      |                      |                           |                      | No                 |         |             |                 |          |                     |                     |
| Formulation            |                       |                          |                      |                      |                           | Advance              | d<br>m Control     | led     |             |                 |          |                     |                     |
| Small Sliding          |                       |                          |                      |                      |                           |                      | m Control          |         |             |                 |          |                     |                     |
| Detection              |                       |                          |                      |                      |                           | Progra               | ım Control         | led     |             |                 |          |                     |                     |
| Method<br>Elastic Slip |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |
| Tolerance              |                       |                          |                      |                      |                           | Progra               | m Control          | led     |             |                 |          |                     |                     |
| Thermal<br>Conductance |                       |                          |                      |                      |                           | Progra               | m Control          | led     |             |                 |          |                     |                     |
| Pinball                |                       |                          |                      |                      |                           | Progra               | ım Control         | led     |             |                 |          |                     |                     |
| Region                 |                       |                          |                      |                      | Go                        | ometric Mod          |                    |         |             |                 |          |                     |                     |
| Contact                |                       |                          |                      |                      | Ge                        | onietric wou         | incation           |         |             |                 |          |                     |                     |
| Geometry               |                       |                          |                      |                      |                           |                      | None               |         |             |                 |          |                     |                     |
| Correction<br>Target   |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |
| Geometry               |                       |                          |                      |                      |                           |                      | None               |         |             |                 |          |                     |                     |
| Correction             |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |
|                        |                       |                          |                      |                      | TABLE                     |                      |                    |         |             |                 |          |                     |                     |
|                        | Contact               | Contact Co               | ntact                | ` ,                  | onnections > C<br>Contact | Contact              |                    |         | Conta       | oct Co          | ontact   | Contact             | Contact             |
| Object Name            | Region 23             |                          | ion 25 Conta         | act Region 26        | Region 27                 | Region 28            | Contact Re         | egion 2 | 9 Region    |                 | gion 31  | Region 3            |                     |
| State                  |                       |                          |                      |                      |                           | ully Defined         |                    |         |             |                 |          |                     |                     |
| Scoping                |                       |                          |                      |                      | Scor                      |                      |                    |         |             |                 |          |                     |                     |
| Method                 |                       |                          |                      |                      | Geo                       | metry Selection      | on                 |         |             |                 |          |                     |                     |
| Contact<br>Target      |                       |                          |                      |                      |                           | 1 Face<br>1 Face     |                    |         |             |                 |          |                     |                     |
| Contact                |                       | uto haissa\fauna         |                      | nanta as             |                           | 11 ace               |                    |         |             |                 |          |                     |                     |
| Bodies                 |                       | rte_baixo\forro          |                      | parte_es             | squerda\isopor            |                      |                    | рап     | e_esquerda\ |                 |          |                     | squerda\forro       |
| Target<br>Bodies       | \forro                | Component8 port          | a\Solid parte_       | _esquerda\pvc        | Component10<br>\forro     | porta\Solid p        | arte_esqu          | erda\fo | rro Compon  |                 | ta\Solid | Component<br>\forro | porta\Solid         |
| Protected              |                       |                          | ,                    |                      |                           | No                   |                    |         |             |                 |          |                     |                     |
| Туре                   |                       |                          |                      |                      | Definit                   | Bonded               |                    |         |             |                 |          |                     |                     |
| Scope Mode             |                       |                          |                      |                      |                           | Automatic            |                    |         |             |                 |          |                     |                     |
| Behavior               |                       |                          |                      |                      |                           | gram Controlle       |                    |         |             |                 |          |                     |                     |
| Trim Contact<br>Trim   |                       |                          |                      |                      |                           | gram Controlle       | ed                 |         |             |                 |          |                     |                     |
| Tolerance              |                       |                          |                      |                      |                           | 2,8596 mm            |                    |         |             |                 |          |                     |                     |
| Suppressed             |                       |                          |                      |                      | Advan                     | No                   |                    |         |             |                 |          |                     |                     |
| Formulation            |                       |                          |                      |                      |                           | gram Controlle       | ed                 |         |             |                 |          |                     |                     |
| Small Sliding          |                       |                          |                      |                      | Pro                       | gram Controlle       | ed                 |         |             |                 |          |                     |                     |
| Detection<br>Method    |                       |                          |                      |                      | Pro                       | gram Controlle       | ed                 |         |             |                 |          |                     |                     |
| Elastic Slip           |                       |                          |                      |                      | Pro                       | gram Controlle       | 2d                 |         |             |                 |          |                     |                     |
| Tolerance<br>Thermal   |                       |                          |                      |                      | 110                       | gram controlle       |                    |         |             |                 |          |                     |                     |
| Conductance            |                       |                          |                      |                      | Pro                       | gram Controlle       | ed                 |         |             |                 |          |                     |                     |
| Pinball                |                       |                          |                      |                      | Pro                       | gram Controlle       | ed                 |         |             |                 |          |                     |                     |
| Region                 |                       |                          |                      |                      | Geometric M               | <u> </u>             |                    |         |             |                 |          |                     |                     |
| Contact                |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |
| Geometry<br>Correction |                       |                          |                      |                      |                           | None                 |                    |         |             |                 |          |                     |                     |
| Target                 |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |
| Geometry<br>Correction |                       |                          |                      |                      |                           | None                 |                    |         |             |                 |          |                     |                     |
| Correction             |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |
|                        |                       |                          |                      |                      | TABLE                     |                      |                    |         |             |                 |          |                     |                     |
| 2                      | Contact               | Contact                  | Contact              | Nodel (A4) > Contact | onnections > C<br>Contact | ontacts > Co Contact | ntact Reg<br>Conta |         | Contact     | Contac          | ct (     | Contact             | Contact             |
| Object Nam             | Region 34             |                          | Region 36            | Region 37            | Region 38                 | Region 39            | Region             |         | Region 41   | Region          |          | egion 43            | Region 44           |
| Sta                    | te                    |                          |                      |                      |                           | Fully Defined        |                    |         |             |                 |          |                     |                     |
| Scopir                 | na                    |                          |                      |                      | Scor                      |                      |                    |         |             |                 |          |                     |                     |
| Metho                  | od                    |                          |                      |                      | Ge                        | ometry Select        | tion               |         |             |                 |          |                     |                     |
| Conta                  |                       |                          |                      |                      |                           | 1 Face               |                    |         |             |                 |          |                     |                     |
| Targ                   |                       | 0                        |                      | -                    |                           | 1 Face               | _                  |         | 401         |                 |          | \.                  | Component11         |
| Contact Bodie          |                       | Component7\isopo         | Dr .                 |                      | omponent9\forro           | )                    |                    | nponen  | IIQ/b/c     |                 | onent10  | \torro              | ,<br>\bvc           |
| Target Bodie           | es Component          | t8 Component10<br>\forro | porta\Solid          | Component8<br>\pvc   | Component10<br>\forro     | porta\Solid          | Compone<br>\forre  |         | porta\Solid | Compone<br>\pvc |          | orta\Solid          | Component12 \isopor |
| 1                      |                       |                          |                      |                      |                           |                      |                    |         |             |                 |          |                     |                     |

Project Page 6 of 17

| Туре                              | Bonded                 |
|-----------------------------------|------------------------|
| Scope Mode                        | Automatic              |
| Behavior                          | Program Controlled     |
| Trim Contact                      | Program Controlled     |
| Trim Tolerance                    | 2,8596 mm              |
| Suppressed                        | No                     |
|                                   | Advanced               |
| Formulation                       | Program Controlled     |
| Small Sliding                     | Program Controlled     |
| Detection<br>Method               |                        |
| Elastic Slip<br>Tolerance         |                        |
| Thermal Conductance               |                        |
| Pinball Region                    | Program Controlled     |
|                                   | Geometric Modification |
| Contact<br>Geometry<br>Correction | None                   |
| Target<br>Geometry<br>Correction  | None                   |

TABLE 12

|                             |                    | Model (A4) >        | Connections > Con | tacts > Contact Reg | ione                 |                   |                   |  |  |  |  |
|-----------------------------|--------------------|---------------------|-------------------|---------------------|----------------------|-------------------|-------------------|--|--|--|--|
| Object Name                 | Contact Region 45  |                     |                   | Contact Region 48   | Contact Region 49    | Contact Region 50 | Contact Region 51 |  |  |  |  |
| State                       |                    | Fully Defined       |                   |                     |                      |                   |                   |  |  |  |  |
|                             |                    |                     | Scope             | ,                   |                      |                   |                   |  |  |  |  |
| Scoping Method              |                    |                     |                   |                     |                      |                   |                   |  |  |  |  |
| Contact                     | 1 Face             | Face 4 Faces 1 Face |                   |                     |                      |                   |                   |  |  |  |  |
| Target                      | 1 Face             | 4 Faces             |                   |                     | 1 Face               |                   |                   |  |  |  |  |
| Contact Bodies              | Component12\isopor | porta\Solid         | parte_tras\forro  | parte_baixo\forro   | parte_esquerda\forro | Component9\forro  | porta\Solid       |  |  |  |  |
| Target Bodies               | madeira\Solid      | vidro\Solid         |                   |                     | ar\Solid             |                   |                   |  |  |  |  |
| Protected                   |                    |                     |                   | No                  |                      |                   |                   |  |  |  |  |
|                             |                    |                     | Definition        | 1                   |                      |                   |                   |  |  |  |  |
| Туре                        |                    |                     |                   | Bonded              |                      |                   |                   |  |  |  |  |
| Scope Mode                  |                    |                     |                   | Automatic           |                      |                   |                   |  |  |  |  |
| Behavior                    |                    |                     |                   | Program Controlled  |                      |                   |                   |  |  |  |  |
| Trim Contact                |                    |                     |                   | Program Controlled  |                      |                   |                   |  |  |  |  |
| Trim Tolerance              |                    |                     |                   | 2,8596 mm           |                      |                   |                   |  |  |  |  |
| Suppressed                  |                    |                     |                   | No                  |                      |                   |                   |  |  |  |  |
|                             |                    |                     | Advanced          |                     |                      |                   |                   |  |  |  |  |
| Formulation                 |                    |                     |                   | Program Controlled  |                      |                   |                   |  |  |  |  |
| Small Sliding               |                    |                     |                   | Program Controlled  |                      |                   |                   |  |  |  |  |
| Detection Method            |                    |                     |                   | Program Controlled  |                      |                   |                   |  |  |  |  |
| Elastic Slip Tolerance      |                    | Program Controlled  |                   |                     |                      |                   |                   |  |  |  |  |
| Thermal Conductance         |                    | Program Controlled  |                   |                     |                      |                   |                   |  |  |  |  |
| Pinball Region              |                    |                     |                   | Program Controlled  |                      |                   |                   |  |  |  |  |
|                             |                    |                     | Geometric Modi    |                     |                      |                   |                   |  |  |  |  |
| Contact Geometry Correction |                    |                     |                   | None                |                      |                   |                   |  |  |  |  |
| Target Geometry Correction  |                    |                     |                   | None                |                      |                   |                   |  |  |  |  |

## Mesh

TABLE 13 Model (A4) > Mesh

| Model (A4) > Mesh                        |                     |  |
|--|---------------------|--|
| Object Name                              | Mesh                |  |
| State                                    | Solved              |  |
| Display                                  |                     |  |
| Display Style                            | Body Color          |  |
| Defaults                                 |                     |  |
| Physics Preference                       | Mechanical          |  |
| Relevance                                | 0                   |  |
| Element Order                            | Program Controlled  |  |
| Sizing                                   |                     |  |
| Size Function                            | Adaptive            |  |
| Relevance Center                         | Coarse              |  |
| Element Size                             | Default             |  |
| Mesh Defeaturing                         | Yes                 |  |
| Defeature Size                           | Default             |  |
| Transition                               | Fast                |  |
| Initial Size Seed                        | Assembly            |  |
| Span Angle Center                        | Coarse              |  |
| Bounding Box Diagonal                    | 1143,80 mm          |  |
| Average Surface Area                     | 1,1221e+005 mm²     |  |
| Minimum Edge Length                      | 3,0 mm              |  |
| Quality                                  |                     |  |
| Check Mesh Quality                       | Yes, Errors         |  |
| Error Limits                             | Standard Mechanical |  |
| Target Quality                           | Default (0.050000)  |  |
| Smoothing                                | Medium              |  |
| Mesh Metric                              | None                |  |
| Inflation                                |                     |  |
| Use Automatic Inflation                  | None                |  |
| Inflation Option                         | Smooth Transition   |  |
| Transition Ratio                         | 0,272               |  |
| Maximum Layers                           | 5                   |  |
| Growth Rate                              | 1,2                 |  |
| Inflation Algorithm                      | Pre                 |  |
| View Advanced Options                    | No                  |  |
| Advanced                                 |                     |  |
| Number of CPUs for Parallel Part Meshing | Program Controlled  |  |
| Straight Sided Elements                  | No                  |  |
| Number of Retries                        | Default (4)         |  |
|  |                     |  |

Project Page 7 of 17

| Rigid Body Behavior       | Dimensionally Reduced |
|---------------------------|-----------------------|
| Triangle Surface Mesher   | Program Controlled    |
| Topology Checking         | Yes                   |
| Pinch Tolerance           | Please Define         |
| Generate Pinch on Refresh | No                    |
| Statistics                |                       |
| Nodes                     | 27281                 |
| Elements                  | 4421                  |

## **Transient Thermal (A5)**

TABLE 14

| Model (A4) > Analysis |                        |  |
|-----------------------|------------------------|--|
| Object Name           | Transient Thermal (A5) |  |
| State                 | Solved                 |  |
| Definition            |                        |  |
| Physics Type          | Thermal                |  |
| Analysis Type         | Transient              |  |
| Solver Target         | Mechanical APDL        |  |
| Options               |                        |  |
| Generate Input Only   | No                     |  |

TABLE 15
Model (A4) > Transient Thermal (A5) > Initial Condition

| Object Name                             | Initial Temperature |  |
|---|---------------------|--|
| State                                   | Fully Defined       |  |
| Definition                              |                     |  |
| Initial Temperature Uniform Temperature |                     |  |
| Initial Temperature Value               | 22, °C              |  |

TABLE 16

Model (A4) > Transient Thermal (A5) > Analysis Settings

| Model (A4) > Transient Thermal (A5) > Analysis Settings |   |  |  |
|---|---|--|--|
| Object Name   | Analysis Settings   |  |  |
| State   | Fully Defined   |  |  |
|   | Step Controls   |  |  |
| Number Of Steps   | 10,   |  |  |
| Current Step Number                                     | 10,   |  |  |
| Step End Time   | 7200, s   |  |  |
| Auto Time Stepping                                      | Program Controlled  |  |  |
| Initial Time Step                                       | 52, s   |  |  |
| Minimum Time Step                                       | 5,2 s   |  |  |
| Maximum Time Step                                       | 520, s  |  |  |
| Time Integration  | On  |  |  |
|   | Solver Controls   |  |  |
| Solver Type   | Program Controlled  |  |  |
|   | Radiosity Controls  |  |  |
| Radiosity Solver  | Program Controlled  |  |  |
| Flux Convergence  | 1,e-004   |  |  |
| Maximum Iteration                                       | 1000,   |  |  |
| Solver Tolerance  | 1,e-007 W/mm²   |  |  |
| Over Relaxation   | 0,1   |  |  |
| Hemicube Resolution                                     | 10,   |  |  |
|   | Nonlinear Controls  |  |  |
| Heat Convergence  | Program Controlled  |  |  |
| Temperature Convergence                                 | Program Controlled  |  |  |
| Line Search   | Program Controlled  |  |  |
| Nonlinear Formulation                                   | Program Controlled  |  |  |
|   | Output Controls   |  |  |
| Calculate Thermal Flux                                  | Yes   |  |  |
| Nodal Forces  | No  |  |  |
| Contact Miscellaneous                                   | No  |  |  |
| General Miscellaneous                                   | No  |  |  |
| Store Results At  | All Time Points   |  |  |
| Analysis Data Management                                |   |  |  |
| Solver Files Directory                                  | C:\Users\Thiago\Desktop\Estufa_camadas\estufa_camadas_files\dp0\SYS\MECH\ |  |  |
| Future Analysis   | None  |  |  |
| Scratch Solver Files Directory                          |   |  |  |
| Save MAPDL db   | No  |  |  |
| Contact Summary   | Program Controlled  |  |  |
| Delete Unneeded Files                                   | Yes   |  |  |
| Nonlinear Solution                                      | Yes   |  |  |
| Solver Units  | Active System   |  |  |
| Solver Unit System                                      | nmm   |  |  |
|   |   |  |  |

TABLE 17
Model (A4) > Transient Thermal (A5) > Analysis Settings

| Step-Specific "Step Controls" |               |                   |                   |                   |
|-------------------------------|---------------|-------------------|-------------------|-------------------|
| Step                          | Step End Time | Initial Time Step | Minimum Time Step | Maximum Time Step |
| 1                             | 1, s          | 1,e-002 s         | 1,e-003 s         | 0,1 s             |
| 2                             | 5, s          | 4,e-002 s         | 4,e-003 s         | 0,4 s             |
| 3                             | 10, s         | 5,e-002 s         | 5,e-003 s         | 0,5 s             |
| 4                             | 50, s         | 0,4 s             | 4,e-002 s         | 4, s              |
| 5                             | 100, s        | 0,5 s             | 5,e-002 s         | 5, s              |
| 6                             | 200, s        | 1, s              | 0,1 s             | 10, s             |
| 7                             | 500, s        | 3, s              | 0,3 s             | 30, s             |
| 8                             | 1000, s       | 5, s              | 0,5 s             | 50, s             |
| 9                             | 2000, s       | 10, s             | 1, s              | 100, s            |
| 10                            | 7200, s       | 52, s             | 5,2 s             | 520, s            |

TABLE 18
Model (A4) > Transient Thermal (A5) > Loads

| miodei (A+) - | Transferit Thermal ( | au) - Louds  |
|---------------|----------------------|--------------|
| Object Name   | Convection           | Convection 2 |
| State         | Fully Defined        | Suppressed   |
| Scope         |                      |              |
|               |                      |              |

Page 8 of 17 Project

| Scoping Method      | Geometry Selection                           |         |  |
|---------------------|--|---------|--|
| Geometry            | 41 Faces                                     | 6 Faces |  |
|                     | Definition                                   |         |  |
| Туре                | Conv   | ection  |  |
| Film Coefficient    | 5,e-006 W/mm <sup>2</sup> .°C (step applied) |         |  |
| Coefficient Type    | Average Film Temperature                     |         |  |
| Ambient Temperature | 30, °C (step applied) 20, °C (step applied)  |         |  |
| Convection Matrix   | Program Controlled                           |         |  |
| Suppressed          | No   | Yes     |  |

FIGURE 1 Model (A4) > Transient Thermal (A5) > Convection

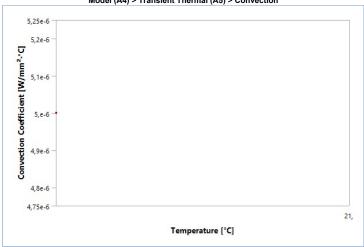


FIGURE 2 Model (A4) > Transient Thermal (A5) > Convection 2

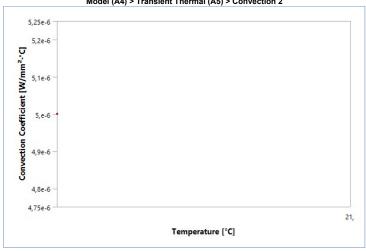


TABLE 20 Model (A4) > Transient Thermal (A5) > Convection 2 Temperature [°C] Convection Coefficient [W/mm²-°C]
21, 5,e-006

Solution (A6)

TABLE 21 Model (A4) > Transient Thermal (A5) > Solution

| Object Name            | Solution (A6) |  |  |
|------------------------|---------------|--|--|
| State                  | Solved        |  |  |
| Adaptive Mesh Re       | finement      |  |  |
| Max Refinement Loops   | 1,            |  |  |
| Refinement Depth       | 2,            |  |  |
| Information            |               |  |  |
| Status Done            |               |  |  |
| MAPDL Elapsed Time     | 3 m 17 s      |  |  |
| MAPDL Memory Used      | 421, MB       |  |  |
| MAPDL Result File Size | 417,31 MB     |  |  |
| Post Processing        |               |  |  |
| Beam Section Results   | No            |  |  |

TABLE 22

| Model (A4) > Transient Thermal (A5) > Solution (A6) > Solution Information |                 |                      |  |  |
|--|-----------------|----------------------|--|--|
|  | Object Name     | Solution Information |  |  |
|  | State           | Solved               |  |  |
|  | Solution Inform | ation                |  |  |
|  |                 |                      |  |  |

Project Page 9 of 17

| Solution Output              | Solver Output     |
|------------------------------|-------------------|
| Update Interval              | 2,5 s             |
| Display Points               | All               |
| FE Connection V              | isibility         |
| Activate Visibility          | Yes               |
| Display                      | All FE Connectors |
| Draw Connections Attached To | All Nodes         |
| Line Color                   | Connection Type   |
| Visible on Results           | No                |
| Line Thickness               | Single            |
| Display Type                 | Lines             |

TABLE 23

Model (A4) > Transient Thermal (A5) > Solution (A6) > Solution Information > Result Charts

| Object Name    | Temperature - Global Maximum  | Temperature - Global Minimum |  |
|----------------|-------------------------------|------------------------------|--|
| State          | Sol                           | ved                          |  |
|                | Scope                         |                              |  |
| Scoping Method | Global Maximum Global Minimum |                              |  |
| Definition     |                               |                              |  |
| Туре           | Temperature                   |                              |  |
| Suppressed     | No                            |                              |  |
| Results        |                               |                              |  |
| Minimum        | 22,177 °C                     | 20,209 °C                    |  |
| Maximum        | 30,111 °C                     | 21,926 °C                    |  |

FIGURE 3
Model (A4) > Transient Thermal (A5) > Solution (A6) > Solution Information > Temperature - Global Maximum

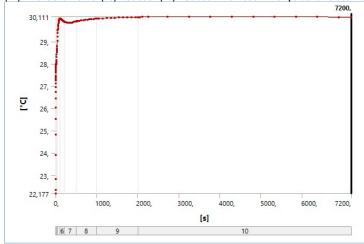
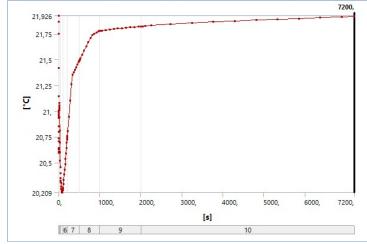


FIGURE 4
Model (A4) > Transient Thermal (A5) > Solution (A6) > Solution Information > Temperature - Global Minimum



|              |           | IABLE 24      |            |                        |
|--------------|-----------|---------------|------------|------------------------|
| Model (A4) > | Transient | Thermal (A5): | > Solution | $(\Delta 6) > Results$ |

|                        |             | (*)             |                          |
|------------------------|-------------|-----------------|--------------------------|
| Object Name            | Temperature | Total Heat Flux | Directional Heat Flux    |
| State                  |             | Solved          |                          |
|                        | S           | соре            |                          |
| Scoping Method         |             | Geometry Select | ion                      |
| Geometry               |             | All Bodies      |                          |
|                        | De          | finition        |                          |
| Туре                   | Temperature | Total Heat Flux | Directional Heat Flux    |
| Ву                     |             | Time            |                          |
| Display Time           | Last        |                 |                          |
| Calculate Time History |             | Yes             |                          |
| Identifier             |             |                 |                          |
| Suppressed             |             | No              |                          |
| Orientation            |             |                 | X Axis                   |
| Coordinate System      |             |                 | Global Coordinate System |
| Results                |             |                 |                          |
|                        |             |                 |                          |

Project Page 10 of 17

| Minimum                 | 21,919 °C                                   | 5,9057e-009 W/mm <sup>2</sup> | -9,1686e-005 W/mm <sup>2</sup> |
|-------------------------|---|-------------------------------|--------------------------------|
| Maximum                 | 30,094 °C                                   | 1,0219e-004 W/mm <sup>2</sup> | 9,1745e-005 W/mm²              |
| Average                 | 28,145 °C                                   | 3,732e-006 W/mm²              | 3,623e-008 W/mm²               |
| Minimum Occurs On       | Component11\pvc                             | ar\Solid                      | vidro\Solid                    |
| Maximum Occurs On       | Component10\forro                           | porta\Solid                   | vidro\Solid                    |
|                         | Minimum V                                   | alue Over Time                |                                |
| Minimum                 | 20,209 °C                                   | 1,4257e-013 W/mm²             | -1,3387e-004 W/mm²             |
| Maximum                 | 21,926 °C                                   | 1,5242e-008 W/mm <sup>2</sup> | -1,7653e-005 W/mm²             |
| Maximum Value Over Time |   |                               |                                |
| Minimum                 | 22,177 °C 1,9472e-005 W/mm² 1,8369e-005 W/r |                               |                                |
| Maximum                 | 30,111 °C                                   | 1,3957e-004 W/mm²             | 1,3095e-004 W/mm²              |
|                         | Info  | rmation                       |                                |
| Time                    |   | 7200, s                       |                                |
| Load Step               |   | 10                            |                                |
| Substep                 |   | 13                            |                                |
| Iteration Number        |   | 130                           |                                |
|                         | Integration                                 | Point Results                 |                                |
| Display Option          | Averaged                                    |                               |                                |
| Average Across Bodies   |   |                               | No                             |

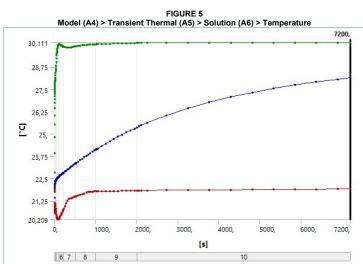


TABLE 25

Model (A4) > Transient Thermal (A5) > Solution (A6) > Temperature

Time [s] | Minimum [°C] | Maximum [°C] | Average [°C]

| Tillic [3] | Will lill lidin [ O] | Maximum [ O] | Average [ O] |
|------------|----------------------|--------------|--------------|
| 1,e-002    | 21,926               | 22,177       | 22,001       |
| 2,e-002    | 21,867               | 22,349       | 22,003       |
| 5,e-002    | 21,754               | 22,821       | 22,006       |
| 0,14       | 21,418               | 23,914       | 22,016       |
| 0,24       | 21,141               | 24,828       | 22,025       |
| 0,34       | 20,941               | 25,516       | 22,034       |
| 0,44       | 20,8                 | 26,036       | 22,041       |
| 0,54       | 20,705               | 26,429       | 22,048       |
| 0,64       | 20,644               | 26,727       | 22,054       |
| 0,74       | 20,609               | 26,953       | 22,06        |
| 0,84       | 20,593               | 27,125       | 22,065       |
| 0,94       | 20,592               | 27,257       | 22,07        |
| 1,         | 20,596               | 27,324       | 22,072       |
| 1,04       | 20,6                 | 27,363       | 22,074       |
| 1,08       | 20,605               | 27,399       | 22,076       |
| 1,2        | 20,63                | 27,477       | 22,081       |
| 1,56       | 20,733               | 27,596       | 22,094       |
| 1,96       | 20,853               | 27,665       | 22,106       |
| 2,36       | 20,934               | 27,707       | 22,118       |
| 2,76       | 20,932               | 27,736       | 22,128       |
| 3,16       | 20,935               | 27,761       | 22,137       |
| 3,56       | 20,939               | 27,784       | 22,146       |
| 3,96       | 20,946               | 27,805       | 22,154       |
| 4,36       | 20,953               | 27,826       | 22,162       |
| 4,76       | 20,96                | 27,847       | 22,17        |
| 5,         | 20,964               | 27,859       | 22,174       |
| 5,05       | 20,965               | 27,861       | 22,175       |
| 5,1        | 20,966               | 27,864       | 22,176       |
| 5,25       | 20,969               | 27,872       | 22,179       |
| 5,7        | 20,977               | 27,894       | 22,187       |
| 6,2        | 20,985               | 27,919       | 22,195       |
| 6,7        | 20,994               | 27,943       | 22,203       |
| 7,2        | 21,001               | 27,967       | 22,211       |
| 7,7        | 21,009               | 27,991       | 22,218       |
| 8,2        | 21,016               | 28,014       | 22,225       |
| 8,7        | 21,022               | 28,036       | 22,232       |
| 9,2        | 21,029               | 28,058       | 22,239       |
| 9,7        | 21,035               | 28,08        | 22,245       |
| 10,        | 21,038               | 28,093       | 22,249       |
| 10,4       | 21,043               | 28,11        | 22,254       |
| 10,8       | 21,047               | 28,126       | 22,259       |
| 12,        | 21,058               | 28,174       | 22,273       |
| 15,6       | 21,081               | 28,296       | 22,307       |
| 19,6       | 20,94                | 28,412       | 22,34        |
| 23,6       | 20,809               | 28,512       | 22,367       |

Project Page 11 of 17

| 07.6           | 20,696           | 20.500           | 1 22 204         |
|----------------|------------------|------------------|------------------|
| 27,6<br>31,6   | 20,696           | 28,599<br>28,675 | 22,391<br>22,412 |
| 35,6           | 20,52            | 28,781           | 22,431           |
| 39,6           | 20,452           | 29,024           | 22,448           |
| 43,6           | 20,395           | 29,225           | 22,464           |
| 47,6           | 20,349           | 29,389           | 22,478           |
| 50,            | 20,324           | 29,477           | 22,486           |
| 50,5           | 20,319           | 29,494           | 22,488           |
| 51,            | 20,314           | 29,512           | 22,49            |
| 52,5<br>57,    | 20,3<br>20,268   | 29,56<br>29,674  | 22,494<br>22,508 |
| 62,            | 20,266           | 29,074           | 22,506           |
| 67,            | 20,242           | 29,849           | 22,536           |
| 72,            | 20,214           | 29,906           | 22,549           |
| 77,            |                  | 29,949           | 22,562           |
| 82,            | 20,209           | 29,98            | 22,574           |
| 87,            | 20,213           | 30,002           | 22,586           |
| 92,            | 20,221           | 30,017           | 22,597           |
| 97,            | 20,233           | 30,025           | 22,609           |
| 100,           | 20,24            | 30,028           | 22,615           |
| 101,           | 20,243           | 30,029           | 22,617           |
| 102,           | 20,246           | 30,03            | 22,62            |
| 105,           | 20,255           | 30,031           | 22,626           |
| 114,           | 20,29            | 30,025           | 22,645           |
| 124,<br>134,   | 20,333           | 30,013           | 22,666           |
| 134,           | 20,381<br>20,432 | 29,997<br>29,98  | 22,687<br>22,707 |
| 154.           | 20,432           | 29,963           | 22,707           |
| 164,           | 20,400           | 29,947           | 22,726           |
| 174,           | 20,587           | 29,931           | 22,765           |
| 184,           | 20,64            | 29,917           | 22,784           |
| 194,           | 20,692           | 29,904           | 22,803           |
| 200,           | 20,724           | 29,896           | 22,815           |
| 203,           | 20,74            | 29,893           | 22,82            |
| 206,           | 20,756           | 29,889           | 22,826           |
| 215,           | 20,804           | 29,88            | 22,843           |
| 242,           | 20,948           | 29,86            | 22,892           |
| 272,           | 21,105           | 29,845           | 22,947           |
| 302,           | 21,259           | 29,836           | 23,001           |
| 332,<br>362,   | 21,353           | 29,83<br>29,84   | 23,054           |
| 392,           | 21,377<br>21,402 | 29,852           | 23,106<br>23,158 |
| 422,           | 21,402           | 29,868           | 23,136           |
| 452,           | 21,451           | 29,883           | 23,261           |
| 482,           | 21,476           | 29,897           | 23,312           |
| 500,           | 21,49            | 29,904           | 23,342           |
| 505,           | 21,494           | 29,907           | 23,35            |
| 510,           | 21,499           | 29,909           | 23,359           |
| 525,           | 21,511           | 29,915           | 23,384           |
| 570,           | 21,547           | 29,93            | 23,458           |
| 620,           | 21,588           | 29,946           | 23,539           |
| 670,           | 21,628           | 29,96            | 23,62            |
| 720,           | 21,668           | 29,972           | 23,699           |
| 770,           | 21,708           | 29,984           | 23,777           |
| 820,<br>870,   | 21,741<br>21,753 | 29,994<br>30,003 | 23,854<br>23,93  |
| 920,           | 21,764           | 30,003           | 24,004           |
| 970,           | 21,775           | 30,019           | 24,004           |
| 1000,          |                  | 30,024           | 24,122           |
| 1010,          | 21,779           | 30,025           | 24,137           |
| 1020,          | 21,78            | 30,026           | 24,151           |
| 1050,          | 21,782           | 30,031           | 24,194           |
| 1140,          | 21,787           | 30,041           | 24,321           |
| 1240,          | 21,792           | 30,051           | 24,457           |
| 1340,          | 21,797           | 30,06            | 24,59            |
| 1440,          | 21,801           | 30,067           | 24,718           |
| 1540,          | 21,805           | 30,074           | 24,843           |
| 1640,<br>1740, | 21,809           | 30,079<br>30,084 | 24,964           |
| 1840,          | 21,813<br>21,817 | 30,084           | 25,081<br>25,195 |
| 1940,          | 21,817           | 30,088           | 25,305           |
| 2000,          | 21,822           | 30,092           | 25,303           |
| 2052,          | 21,824           | 30,096           | 25,425           |
| 2104,          | 21,826           | 30,097           | 25,48            |
| 2260,          | 21,831           | 30,101           | 25,636           |
| 2728,          | 21,843           | 30,107           | 26,044           |
| 3248,          | 21,855           | 30,11            | 26,435           |
| 3768,          | 21,866           | 30,111           | 26,773           |
| 4288,          | 21,875           | 30,109           | 27,066           |
| 4808,          | 21,884           | 30,107           | 27,321           |
| 5328,          | 21,892           | 30,104           | 27,544           |
| 5848,          | 21,9             | 30,1             | 27,739           |
| 6368,<br>6888, | 21,908           | 30,098           | 27,91            |
| 7200,          | 21,915<br>21,919 | 30,096<br>30,094 | 28,061<br>28,145 |
| 1200,          | 21,010           | 00,004           | 1 20,170         |
|                |                  | CURE 6           |                  |

FIGURE 6
Model (A4) > Transient Thermal (A5) > Solution (A6) > Total Heat Flux

Project Page 12 of 17

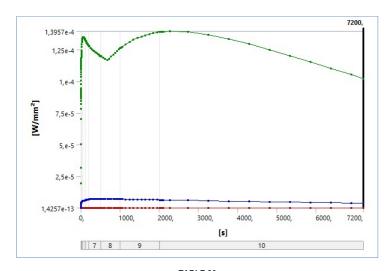


TABLE 26

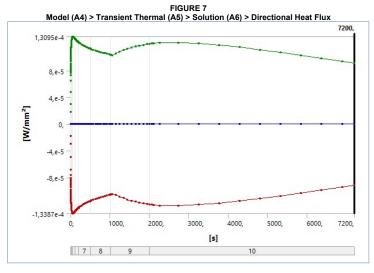
Model (A4) > Transient Thermal (A5) > Solution (A6) > Total Heat Flux

Time [s] | Minimum [W/mm²] | Maximum [W/mm²] | Average [W/mm²]

| 0.002   2,4636e011   1,9472e-005   8,7014e-008   2,e-002   2,6672e-011   3,1955e-005   1,3989e-007   0,14   4,8685e-011   5,0501e-005   5,612e-007   0,24   1,933ae-011   7,8473e-005   8,4855e-007   0,24   1,933ae-011   8,4705e-005   1,0979e-006   0,44   3,2578e-011   8,6501e-005   1,3979e-006   0,54   5,0698e-011   8,6501e-005   1,5071e-006   0,54   5,0698e-011   8,6501e-005   1,5071e-006   0,64   4,5653e-011   8,6501e-005   1,5071e-006   0,64   4,5653e-011   8,9382e-005   1,8291e-006   0,84   1,5254e-011   9,0636e-005   1,666e-006   0,94   1,1838e-011   9,1809e-005   2,0901e-006   1,04   2,091e-011   9,2489e-005   2,2055e-006   1,008   2,0322e-011   9,3367e-005   2,249e-006   1,04   2,091e-011   9,233e-005   2,249e-006   1,56   2,7173e-012   1,0074e-004   2,8871e-006   2,36   3,6677e-012   1,0074e-004   2,8871e-006   2,36   3,6677e-012   1,0074e-004   2,8871e-006   3,66   3,6633e-012   1,0332e-004   3,0837e-006   2,643e-006   3,66   3,6637e-012   1,054e-004   3,4974e-006   3,56   8,5153e-013   1,0914e-004   3,4974e-006   3,56   8,5153e-013   1,1914e-004   3,6853e-006   4,76   9,5297e-013   1,139e-004   3,6853e-006   4,76   9,5297e-013   1,139e-004   3,805e-006   5,05   2,7927e-012   1,137e-004   3,805e-006   5,05   2,7927e-013   1,139e-004   3,805e-006   5,05   2,8117e-012   1,1384e-004   3,8497e-006   5,05   2,8117e-012   1,1384e-004   3,8497e-006   5,05   2,8117e-012   1,1384e-004   3,8497e-006   6,2   8,6978e-013   1,169e-004   3,8497e-006   6,2   8,6978e-013   1,1639e-004   4,1911e-006   5,7   2,2533e-012   1,1537e-004   3,8497e-006   6,2   8,6978e-013   1,1639e-004   4,1911e-006   6,2   8,6978e-013   1,1639e-004   4,1911e-006   6,2   8,6978e-013   1,1639e-004   4,1937e-006   6,2   8,6978e-013   1,189e-004   4,1937e-006   6,2   8,6978e-013   1,189e-004   4,1937e-006   6,2   8,6978e-013   1,1397e-004   4,8363e-006   6,7   1,3576e-012   1,3318e-004   4,6363e-006   5,6392e-006   5,6392e-006   5,6392e-006   5,6392e-006   5,6392e-001   1,3318e-004   5,6392e-006   5,6392e-006   6,7   2,4769e-012   1,3349e-004   | Time [s] | Minimum [W/mm²] | Maximum [W/mm²] | Average [W/mm <sup>2</sup> ] |
|---|----------|-----------------|-----------------|------------------------------|
| 5,e-002         3,555e-011         5,0501e-005         2,6233e-007           0,14         4,8685e-011         7,0328e-005         5,612e-007           0,24         1,9333e-011         7,8473e-005         8,4855e-007           0,34         4,3081e-011         8,2326e-005         1,0979e-006           0,44         3,2578e-011         8,601e-005         1,5071e-006           0,64         4,5653e-011         8,601e-005         1,6771e-006           0,64         4,5653e-011         8,001e-005         1,6271e-006           0,84         1,5254e-011         9,0636e-005         1,966e-006           0,84         1,5274e-011         9,636e-005         2,0901e-006           1,04         2,091e-011         9,233e-005         2,2055e-006           1,04         2,091e-011         9,233e-005         2,255e-006           1,04         2,092e-011         9,3367e-005         2,643e-006           1,56         2,7173e-012         9,7735e-005         2,643e-006           1,56         2,7173e-012         9,7735e-005         2,643e-006           1,56         2,7173e-012         1,074e-004         3,087e-006           2,76         5,6833e-012         1,054e-004         3,2456e-006   | 1,e-002  | 2,4636e-011     | 1,9472e-005     | 8,7014e-008                  |
| 0,14  | 2,e-002  | 2,6672e-011     | 3,1955e-005     | 1,3989e-007                  |
| 0,14  | 5.e-002  | 3.555e-011      | 5.0501e-005     | 2.6233e-007                  |
| 0,24         1,9333e-011         7,8473e-005         8,4855e-007           0,34         4,3081e-011         8,2726e-005         1,0979e-006           0,54         5,0698e-011         8,6501e-005         1,5071e-006           0,64         4,5653e-011         8,6801e-005         1,5071e-006           0,74         3,3358e-011         8,9382e-005         1,869e-006           0,84         1,5254e-011         9,0636e-005         1,966e-006           0,94         1,1838e-011         9,1809e-005         2,1604e-006           1,04         2,091e-011         9,2839e-005         2,2055e-006           1,04         2,091e-011         9,233e-005         2,2655e-006           1,08         2,0322e-011         9,367e-005         2,249e-006           1,56         2,7173e-012         9,7735e-005         2,639e-006           1,56         2,7173e-012         1,0074e-004         2,8871e-006           2,36         2,4942e-012         1,0332e-004         3,037e-005           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,8474e-006           3,56         8,5153e-013         1,9116e-004         3,6875e-006      <   |          |                 |                 |                              |
| 0,34  |          |                 |                 |                              |
| 0,44 3,2578e-011 8,4705e-005 1,3155e-006 0,54 5,0698e-011 8,6501e-005 1,5071e-006 0,64 4,5653e-011 8,9382e-005 1,8291e-006 0,74 3,3358e-011 9,9382e-005 1,8291e-006 0,94 1,1838e-011 9,1809e-005 2,0901e-006 1, 2,3272e-011 9,2489e-005 2,1604e-006 1,04 2,091e-011 9,2933e-005 2,2055e-006 1,08 2,0322e-011 9,3367e-005 2,249e-006 1,2 1,2793e-011 9,3367e-005 2,249e-006 1,2 1,2793e-011 9,3367e-005 2,3699e-006 1,2 1,2793e-011 9,3367e-005 2,6439e-006 1,56 2,7173e-012 9,7735e-005 2,6439e-006 2,36 2,4942e-012 1,0074e-004 2,8871e-006 2,36 2,4942e-012 1,0332e-004 3,0837e-006 2,36 2,4942e-012 1,0746e-004 3,3816e-006 3,16 7,3197e-012 1,0746e-004 3,3816e-006 3,56 8,5153e-013 1,0914e-004 3,4974e-005 4,36 1,4257e-013 1,119e-004 3,6853e-006 4,36 1,4257e-013 1,119e-004 3,6853e-006 4,76 9,5297e-013 1,137e-004 3,8066e-006 5,05 2,8117e-012 1,137e-004 3,8066e-006 5,05 2,8117e-012 1,1384e-004 3,8497e-006 5,1 2,1622e-012 1,1397e-004 3,8497e-006 5,2 2,5439e-012 1,1357e-004 3,8497e-006 5,1 2,1622e-012 1,1397e-004 3,8497e-006 5,2 2,5439e-013 1,1539e-004 3,8497e-006 6,2 8,6978e-013 1,1537e-004 3,8497e-006 6,2 8,6978e-013 1,1639e-004 3,9174e-006 6,2 8,6978e-013 1,1639e-004 4,0456e-006 7,7 (6,0988e-013 1,1639e-004 4,0456e-006 7,7 2,2497e-012 1,1373e-004 4,0456e-006 7,7 3,4598e-012 1,1572e-004 4,4456e-006 6,7 1,3576e-012 1,1373e-004 4,456e-006 6,7 1,3576e-012 1,1373e-004 4,456e-006 6,7 1,3576e-012 1,1373e-004 4,456e-006 6,7 1,3576e-012 1,1397e-004 4,456e-006 6,8 8,6978e-013 1,1639e-004 4,7519e-006 8,2 2,384e-012 1,209e-004 4,3416e-006 9,7 3,1285e-012 1,209e-004 4,3416e-006 10,4 2,5252e-012 1,339e-004 5,5719e-006 5,6 8,698e-013 1,349e-004 5,6697e-006 5,1 6,698e-013 1,349e-004 5,5719e-006 5,1 6,698e-013 1,349e-004 5,5719e-006 5,1 6,698e-013 1,349e-004 5,5719e-006 6,2 8,698e-013 1,349e-004 5,5719e-006 6,2 8,698e-013 1,349e-004 5,5719e-006 6,2 8,698e-013 1,349e-004 5,6697e-006 7,2 2,4878e-012 1,3312e-004 5,5759e-006 5,1 8,6735e-012 1,3479e-004 5,6697e-006 7,2 1,6789e-012 1,3499e-004 5,6891e-006 7,3 7,7986e-012 1,3499e-004 5,6891e-006 7,3 7,7986e-012 | _        |                 |                 |                              |
| 0,54         5,0698e-011         8,6501e-005         1,5071e-006           0,64         4,5653e-011         8,38021e-005         1,6771e-006           0,74         3,3358e-011         9,0636e-005         1,966e-006           0,94         1,1838e-011         9,1809e-005         2,1901e-006           1,04         2,091e-011         9,2839e-005         2,1604e-006           1,04         2,091e-011         9,2933e-005         2,2055e-006           1,08         2,0322e-011         9,3367e-005         2,249e-006           1,2         1,2793e-011         9,4588e-005         2,3669e-006           1,56         2,7173e-012         9,7735e-005         2,6439e-006           1,96         3,6677e-012         1,0074e-004         2,8871e-006           2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,2456e-006           3,56         8,5153e-013         1,0914e-004         3,4974e-006           3,56         8,515ae-013         1,119e-004         3,6853e-006           4,76         9,5297e-013         1,139e-004         3,6853e-006   |          |                 |                 |                              |
| 0,64  |          |                 |                 |                              |
| 0,74         3,3358e-011         8,9382e-005         1,8291e-006           0,84         1,5254e-011         9,0636e-005         2,0901e-006           0,94         1,1838e-011         9,1809e-005         2,0901e-006           1,04         2,091e-011         9,2489e-005         2,1604e-006           1,04         2,091e-011         9,233e-005         2,2055e-006           1,08         2,0322e-011         9,3367e-005         2,3669e-006           1,2         1,2793e-012         9,7735e-005         2,6439e-006           1,56         2,7173e-012         1,074e-004         2,8871e-006           2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,0914e-004         3,4974e-006           4,36         1,4257e-013         1,13e-004         3,6853e-006           4,76         9,5297e-013         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,137e-004         3,804e-006           5,1         2,7622e-012         1,1397e-004         3,8497e-006 <tr< td=""><td></td><td>5,0698e-011</td><td></td><td>1,5071e-006</td></tr<>  |          | 5,0698e-011     |                 | 1,5071e-006                  |
| 0,84         1,5254e-011         9,0836e-005         1,966e-006           0,94         1,1838e-011         9,1809e-005         2,0901e-006           1, 2         2,2372e-011         9,2489e-005         2,2655e-006           1,04         2,091e-011         9,233e-005         2,2555e-006           1,08         2,0322e-011         9,3367e-005         2,249e-006           1,2         1,2793e-012         9,7735e-005         2,6439e-006           1,56         2,7173e-012         1,0774e-004         2,8871e-006           2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0746e-004         3,3816e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,0914e-004         3,4974e-006           3,56         8,5153e-013         1,191e-004         3,6853e-006           4,76         9,5297e-013         1,1306e-004         3,6853e-006           4,76         9,5297e-013         1,137e-004         3,806e-006           5,1         2,7927e-012         1,137e-004         3,806e-006           5,1         2,1622e-012         1,1397e-004         3,815e-006  | 0,64     | 4,5653e-011     | 8,8021e-005     | 1,6771e-006                  |
| 0,84         1,5254e-011         9,0836e-005         1,966e-006           0,94         1,1838e-011         9,1809e-005         2,0901e-006           1, 2         2,2372e-011         9,2489e-005         2,2655e-006           1,04         2,091e-011         9,233e-005         2,2555e-006           1,08         2,0322e-011         9,3367e-005         2,249e-006           1,2         1,2793e-012         9,7735e-005         2,6439e-006           1,56         2,7173e-012         1,0774e-004         2,8871e-006           2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0746e-004         3,3816e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,0914e-004         3,4974e-006           3,56         8,5153e-013         1,191e-004         3,6853e-006           4,76         9,5297e-013         1,1306e-004         3,6853e-006           4,76         9,5297e-013         1,137e-004         3,806e-006           5,1         2,7927e-012         1,137e-004         3,806e-006           5,1         2,1622e-012         1,1397e-004         3,815e-006  | 0,74     | 3,3358e-011     | 8,9382e-005     | 1,8291e-006                  |
| 0,94  |          |                 |                 |                              |
| 1,         2,3272e-011         9,2489e-005         2,1604e-006           1,04         2,091e-011         9,2333e-005         2,245e-006           1,08         2,0322e-011         9,3367e-005         2,249e-006           1,26         1,2793e-011         9,4588e-005         2,3669e-006           1,56         2,7173e-012         9,7735e-005         2,6439e-006           1,96         3,6677e-012         1,0746e-004         3,087e-006           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,0914e-004         3,5875e-006           4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-013         1,137e-004         3,806e-006           5,05         2,8117e-012         1,138e-004         3,8156e-006           5,1         2,1622e-012         1,139re-004         3,849re-006           5,2         1,9145e-012         1,1435e-004         3,817e-006           5,7         2,253ae-012         1,153re-004         3,947e-006           6,2         8,6978e-013         1,1639e-004         3,948e-006  |          |                 |                 |                              |
| 1,04  |          |                 |                 |                              |
| 1,08  |          |                 |                 |                              |
| 1,2         1,2793e-011         9,4588e-005         2,3669e-006           1,56         2,7173e-012         9,7735e-005         2,6439e-006           1,96         3,6677e-012         1,0074e-004         2,8871e-006           2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,0914e-004         3,4974e-006           3,56         8,5153e-013         1,106e-004         3,5975e-006           4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-013         1,137e-004         3,806e-006           5,05         2,817e-012         1,138e-004         3,8156e-006           5,1         2,1622e-012         1,1387e-004         3,847e-006           5,7         2,2533e-012         1,1537e-004         3,947e-006           6,2         8,6978e-013         1,1639e-004         3,9448e-006           6,7         1,3576e-012         1,1819e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,191e-006  |          |                 |                 |                              |
| 1,56  |          |                 |                 |                              |
| 1,96  | 1,2      | 1,2793e-011     | 9,4588e-005     | 2,3669e-006                  |
| 2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,014e-004         3,4974e-006           3,96         2,9243e-012         1,106e-004         3,5975e-006           4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-012         1,137e-004         3,8066e-006           5,         2,7927e-012         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,8247e-006           5,2         1,0145e-012         1,135e-004         3,817e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9174e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,7         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,187e-006  | 1,56     | 2,7173e-012     | 9,7735e-005     | 2,6439e-006                  |
| 2,36         2,4942e-012         1,0332e-004         3,0837e-006           2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,014e-004         3,4974e-006           3,96         2,9243e-012         1,106e-004         3,5975e-006           4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-012         1,137e-004         3,8066e-006           5,         2,7927e-012         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,8247e-006           5,2         1,0145e-012         1,135e-004         3,817e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9174e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,7         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,187e-006  | 1.96     | 3.6677e-012     | 1.0074e-004     | 2.8871e-006                  |
| 2,76         5,6833e-012         1,0554e-004         3,2456e-006           3,16         7,3197e-012         1,0746e-004         3,3816e-006           3,56         8,5153e-013         1,0914e-004         3,4974e-006           3,66         8,5153e-013         1,106e-004         3,5975e-006           4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-013         1,137e-004         3,806e-006           5,05         2,7927e-012         1,137e-004         3,806e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,847e-006           5,2         1,145e-012         1,1435e-004         3,847e-006           5,7         2,2533e-012         1,1537e-004         3,947e-006           6,2         8,6978e-013         1,1639e-004         3,9448e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,7         6,0898e-013         1,1899e-004         4,1817e-006           8,2         2,3862e-012         1,1973e-004         4,187e-006           8,7         3,6239e-012         1,2044e-004         4,2825e-006  |          |                 |                 |                              |
| 3,16  |          |                 |                 |                              |
| 3,56         8,5153e-013         1,0914e-004         3,4974e-006           3,96         2,9243e-012         1,106e-004         3,5975e-006           4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-012         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,05         2,8117e-012         1,1397e-004         3,8244e-006           5,1         2,1622e-012         1,1397e-004         3,8244e-006           5,25         1,0145e-012         1,1435e-004         3,8497e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,0111e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,7         3,6239e-012         1,217e-004         4,2825e-006           8,7         3,6239e-012         1,217e-004         4,2835e-006           9,7         3,1285e-012         1,217g-004         4,2825e-006           9,7         3,1285e-012         1,2209e-004         4,3731e-006  |          |                 |                 |                              |
| 3,96  |          |                 |                 |                              |
| 4,36         1,4257e-013         1,119e-004         3,6853e-006           4,76         9,5297e-013         1,1306e-004         3,763e-006           5,         2,7927e-012         1,137e-004         3,806e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,847e-006           5,25         1,0145e-012         1,1435e-004         3,847e-006           6,2         8,6978e-013         1,1639e-004         3,948e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1917e-006           8,2         2,3862e-012         1,1973e-004         4,1987e-006           8,7         3,6239e-012         1,1973e-004         4,1887e-006           8,7         3,6239e-012         1,2044e-004         4,2835e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           10,         2,8934e-012         1,2209e-004         4,3371e-006           10,         2,8934e-012         1,2256e-004         4,3731e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006   |          |                 |                 |                              |
| 4,76         9,5297e-013         1,1306e-004         3,763e-006           5,         2,7927e-012         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,8244e-006           5,2         1,0145e-012         1,1435e-004         3,8497e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,1973e-004         4,2825e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3446e-006           10,4         2,2525e-012         1,2209e-004         4,34718e-006           10,2         2,8934e-012         1,2209e-004         4,34718e-006           10,4         2,2525e-012         1,2256e-004         4,3731e-006  |          |                 |                 |                              |
| 5,         2,7927e-012         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,8244e-006           5,25         1,0145e-012         1,1435e-004         3,8497e-006           6,2         8,6978e-013         1,1537e-004         3,948e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,0111e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,7         3,6239e-012         1,2173e-004         4,2425e-006           8,7         3,6239e-012         1,217e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           9,7         3,1285e-012         1,2173e-004         4,3231e-006           10,4         2,5252e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2209e-004         4,3416e-006           10,4         2,5252e-012         1,2209e-004         4,43731e-006           10,8         3,4804e-012         1,2899e-004         4,631e-006   | 4,36     | 1,4257e-013     | 1,119e-004      | 3,6853e-006                  |
| 5,         2,7927e-012         1,137e-004         3,8066e-006           5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,8244e-006           5,2         1,0145e-012         1,1435e-004         3,8497e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,973e-004         4,1887e-006           8,7         3,6239e-012         1,211e-004         4,2825e-006           9,2         3,4504e-012         1,217e-004         4,2835e-006           9,7         3,1285e-012         1,217e-004         4,3241e-006           10,4         2,5252e-012         1,2209e-004         4,3731e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,4         2,5252e-012         1,2301e-004         4,631e-006  | 4,76     | 9,5297e-013     | 1,1306e-004     | 3,763e-006                   |
| 5,05         2,8117e-012         1,1384e-004         3,8156e-006           5,1         2,1622e-012         1,1397e-004         3,8244e-006           5,25         1,0145e-012         1,1435e-004         3,8247e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,1973e-004         4,187e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2209e-004         4,3731e-006           10,         2,8934e-012         1,2256e-004         4,3731e-006           10,4         2,5252e-012         1,2256e-004         4,4718e-006           12,8,348e-013         1,2422e-004         4,4718e-006           12,8,348e-013         1,2422e-004         4,4718e-006           12,6         1,368e  |          |                 |                 |                              |
| 5,1         2,1622e-012         1,1397e-004         3,8244e-006           5,25         1,0145e-012         1,1435e-004         3,8497e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           8,2         2,3862e-012         1,1873e-004         4,187e-006           8,7         3,6239e-012         1,204e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           10,         2,8934e-012         1,2209e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,         2,8934e-012         1,2209e-004         4,3473le-006           10,4         2,5252e-012         1,2256e-004         4,373le-006           12,         8,348e-013         1,242e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,232e-004         4,8363e-006   |          |                 |                 |                              |
| 5,25         1,0145e-012         1,1435e-004         3,8497e-006           5,7         2,2533e-012         1,1537e-004         3,9174e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1987e-006           8,2         2,3862e-012         1,1973e-004         4,1987e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,2         3,4504e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,8         3,348e-013         1,242e-004         4,4718e-006           19,6         2,9254e-012         1,2699e-004         4,6331e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006   |          |                 |                 |                              |
| 5,7         2,2533e-012         1,1537e-004         3,9474e-006           6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,4         2,5252e-012         1,2301e-004         4,002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2899e-004         4,631e-006           23,6         1,0457e-012         1,31e-004         5,345e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006   |          |                 |                 |                              |
| 6,2         8,6978e-013         1,1639e-004         3,9848e-006           6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,7         3,6239e-012         1,1973e-004         4,1987e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2899e-004         4,6431e-006           19,6         2,9254e-012         1,232e-004         4,336e-006           27,6         9,505e-013         1,322re-004         5,3452e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           47,6         8,2696e-013         1,345e-004         5,5484e-006  |          |                 |                 |                              |
| 6,7         1,3576e-012         1,1733e-004         4,0456e-006           7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,1973e-004         4,1897e-006           8,7         3,6239e-012         1,204e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2825e-006           10,         2,8934e-012         1,2209e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6331e-006           19,6         2,9254e-012         1,2322e-004         4,8363e-006           27,6         9,505e-013         1,332e-004         5,3452e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           43,6         8,2566e-013         1,345e-004         5,5184e-006  |          |                 |                 |                              |
| 7,2         2,2497e-012         1,1819e-004         4,1011e-006           7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,1973e-004         4,1987e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2209e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6331e-006           19,6         2,9254e-012         1,2299e-004         4,6331e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3436e-004         5,673e-006  | 6,2      | 8,6978e-013     | 1,1639e-004     |                              |
| 7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,1973e-004         4,1987e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,7         3,1285e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2899e-004         4,6331e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,3386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,349e-004         5,6245e-006  | 6,7      | 1,3576e-012     | 1,1733e-004     | 4,0456e-006                  |
| 7,7         6,0898e-013         1,1899e-004         4,1519e-006           8,2         2,3862e-012         1,1973e-004         4,1987e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,7         3,1285e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2899e-004         4,6331e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,3386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,349e-004         5,6245e-006  | 7.2      | 2.2497e-012     | 1.1819e-004     | 4.1011e-006                  |
| 8,2         2,3862e-012         1,1973e-004         4,1987e-006           8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,229e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6331e-006           19,6         2,9254e-012         1,329e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,332e-004         5,4451e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           35,6         9,2526e-013         1,347e-004         5,579e-006           47,6         8,2695e-013         1,3496e-004         5,6073e-006           50,         8,5198e-013         1,3496e-004         5,6279e-006  |          | 6.0898e-013     |                 |                              |
| 8,7         3,6239e-012         1,2044e-004         4,2425e-006           9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,242e-004         4,4718e-006           15,6         1,628e-012         1,2899e-004         4,6431e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,3452e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           36,6         8,2695e-013         1,3436e-004         5,5709e-006           47,6         8,2695e-013         1,3496e-004         5,6073e-006           50,5         8,5943e-013         1,3496e-004         5,6372e-006  |          |                 |                 |                              |
| 9,2         3,4504e-012         1,211e-004         4,2835e-006           9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,342e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2829e-004         4,6336-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,3435e-004         5,5184e-006           47,6         8,2696e-013         1,3435e-004         5,5799e-006           47,6         8,2695e-013         1,3494e-004         5,6245e-006           50,5         8,5943e-013         1,3496e-004         5,6245e-006           51,         8,6735e-013         1,3499e-004         5,6392e-006   |          | ,               |                 |                              |
| 9,7         3,1285e-012         1,2173e-004         4,3221e-006           10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2899e-004         4,6431e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,337e-004         5,5445e-006           39,6         8,6162e-013         1,3456e-004         5,5709e-006           47,6         8,2695e-013         1,3494e-004         5,6245e-006           50,         8,5198e-013         1,3496e-004         5,6245e-006           51,         8,6735e-013         1,3497e-004         5,6332e-006           52,5         9,0196e-013         1,349e-004         5,6392e-006  |          | ,               | ,               |                              |
| 10,         2,8934e-012         1,2209e-004         4,3446e-006           10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,038e-006           27,6         9,505e-013         1,3227e-004         5,217e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,3387e-004         5,5184e-006           43,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,3496e-004         5,6073e-006           50,         8,5198e-013         1,3496e-004         5,6073e-006           51,         8,6735e-013         1,3497e-004         5,6332e-006           51,         8,6735e-013         1,3497e-004         5,6392e-006           67,         2,1679e-012         1,3499e-004         5,6392e-006   |          |                 |                 |                              |
| 10,4         2,5252e-012         1,2256e-004         4,3731e-006           10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,4452e-006           31,6         1,0654e-012         1,332e-004         5,4451e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5709e-006           43,6         8,2695e-013         1,3486e-004         5,5709e-006           50,         8,5943e-013         1,349e-004         5,6279e-006           50,5         8,5943e-013         1,3497e-004         5,6392e-006           57,         1,1688e-012         1,35e-004         5,6392e-006           57,         1,1688e-012         1,3492e-004         5,6697e-006           62,         1,8722e-012         1,3492e-004         5,6697e-006   |          |                 |                 |                              |
| 10,8         2,1202e-012         1,2301e-004         4,4002e-006           12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5709e-006           47,6         8,2695e-013         1,3496e-004         5,673-e-006           50,         8,5198e-013         1,3496e-004         5,6279e-006           50,5         8,5943e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6329e-006           62,         1,8722e-012         1,3492e-004         5,6699e-006           67,         2,1679e-012         1,349e-004         5,6699e-006           77,         3,1795e-012         1,349e-004         5,6699e-006  |          |                 |                 |                              |
| 12,         8,348e-013         1,2422e-004         4,4718e-006           15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,337e-004         5,4451e-006           39,6         8,6162e-013         1,3436e-004         5,5709e-006           47,6         8,2695e-013         1,3486e-004         5,6073e-006           50,         8,5198e-013         1,3494e-004         5,6245e-006           50,         8,5943e-013         1,3496e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6529e-006           67,         1,168e-012         1,3492e-004         5,669e-006           67,         2,1679e-012         1,3492e-004         5,669e-006           72,         2,4785e-012         1,349e-004         5,6891e-006   | 10,4     | 2,5252e-012     | 1,2256e-004     | 4,3731e-006                  |
| 15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2229e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,332e-004         5,54451e-006           39,6         8,6162e-013         1,3436e-004         5,5709e-006           47,6         8,2566e-013         1,3486e-004         5,6073e-006           50,         8,5198e-013         1,3494e-004         5,6245e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           67,         1,1688e-012         1,349e-004         5,669e-006           67,         2,1679e-012         1,349e-004         5,6891e-006           72,         2,4785e-012         1,349e-004         5,6891e-006           87,         2,861e-012         1,3439e-004         5,7161e-006           87,         2,861e-012         1,3339e-004         5,7892e-006   |          | 2,1202e-012     | 1,2301e-004     | 4,4002e-006                  |
| 15,6         1,628e-012         1,2699e-004         4,6431e-006           19,6         2,9254e-012         1,2229e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,332e-004         5,54451e-006           39,6         8,6162e-013         1,3436e-004         5,5709e-006           47,6         8,2566e-013         1,3486e-004         5,6073e-006           50,         8,5198e-013         1,3494e-004         5,6245e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           67,         1,1688e-012         1,349e-004         5,669e-006           67,         2,1679e-012         1,349e-004         5,6891e-006           72,         2,4785e-012         1,349e-004         5,6891e-006           87,         2,861e-012         1,3439e-004         5,7161e-006           87,         2,861e-012         1,3339e-004         5,7892e-006   | 12,      | 8,348e-013      | 1,2422e-004     | 4,4718e-006                  |
| 19,6         2,9254e-012         1,2929e-004         4,8363e-006           23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,332e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,3486e-004         5,6073e-006           47,6         8,2695e-013         1,3494e-004         5,6279e-006           50,         8,5198e-013         1,3497e-004         5,6311e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           57,         1,1688e-012         1,3492e-004         5,6699e-006           62,         1,8722e-012         1,3492e-004         5,6697e-006           77,         2,1785e-012         1,349e-004         5,6897e-006           77,         3,1795e-012         1,349e-004         5,7466e-006           82,         3,0252e-012         1,3439e-004         5,7892e-006   |          |                 |                 |                              |
| 23,6         1,0457e-012         1,31e-004         5,0386e-006           27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5709e-006           47,6         8,2695e-013         1,3466e-004         5,5709e-006           50,         8,5943e-013         1,3496e-004         5,6273e-006           50,5         8,5943e-013         1,3496e-004         5,6372e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           62,         1,8722e-012         1,3492e-004         5,6699e-006           67,         2,1679e-012         1,3492e-004         5,6699e-006           77,         3,1795e-012         1,349e-004         5,6881e-006           82,         3,0252e-012         1,3439e-004         5,6897e-006           87,         2,861e-012         1,3339e-004         5,7892e-006           97,         3,7198e-012         1,3335e-004         5,8556e-006   |          |                 |                 |                              |
| 27,6         9,505e-013         1,3227e-004         5,2117e-006           31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,3486e-004         5,6073e-006           50,         8,5198e-013         1,3494e-004         5,6245e-006           50,5         8,5943e-013         1,3496e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6329e-006           67,         1,1688e-012         1,35e-004         5,6529e-006           67,         2,1679e-012         1,3492e-004         5,669e-006           77,         3,1795e-012         1,349e-004         5,689re-006           87,         2,861e-012         1,3439e-004         5,7161e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3335e-004         5,7892e-006           97,         3,7198e-012         1,3318e-004         5,9878e-006   |          |                 |                 |                              |
| 31,6         1,0654e-012         1,332e-004         5,3452e-006           35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,3466e-004         5,5709e-006           47,6         8,2695e-013         1,3496e-004         5,6073e-006           50,         8,5198e-013         1,3496e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6379e-006           51,         8,6735e-013         1,3497e-004         5,6392e-006           57,         1,1688e-012         1,35e-004         5,6392e-006           62,         1,8722e-012         1,3492e-004         5,669e-006           67,         2,1679e-012         1,3479e-004         5,6897e-006           72,         2,4785e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,3369e-004         5,7892e-006           97,         3,7198e-012         1,3335e-004         5,8556e-006           100,         3,7936e-012         1,3318e-004         5,9878e-006  |          |                 |                 |                              |
| 35,6         9,2526e-013         1,3387e-004         5,4451e-006           39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,3466e-004         5,5709e-006           47,6         8,2695e-013         1,3494e-004         5,6273e-006           50,         8,5198e-013         1,3494e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           51,         8,6735e-013         1,3497e-004         5,6392e-006           57,         1,1688e-012         5,6392e-006         5,6392e-006           62,         1,8722e-012         1,3492e-004         5,6609e-006           67,         2,1679e-012         1,349e-004         5,6881e-006           72,         2,4785e-012         1,346e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,7466e-006           82,         3,0252e-012         1,3415e-004         5,7892e-006           87,         2,861e-012         1,3339e-004         5,7892e-006           97,         3,7198e-012         1,3318e-004         5,9578e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006   |          |                 |                 |                              |
| 39,6         8,6162e-013         1,3435e-004         5,5184e-006           43,6         8,2566e-013         1,3466e-004         5,5709e-006           47,6         8,2695e-013         1,3486e-004         5,6073e-006           50,         8,5984e-013         1,3494e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6329e-006           62,         1,8722e-012         1,3492e-004         5,6629e-006           67,         2,1679e-012         1,3479e-004         5,6897e-006           77,         3,1795e-012         1,3439e-004         5,6897e-006           82,         3,0252e-012         1,3439e-004         5,7660e-006           87,         2,861e-012         1,3339e-004         5,7892e-006           97,         3,7198e-012         1,3335e-004         5,8556e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  |          | <u>'</u>        |                 |                              |
| 43,6         8,2566e-013         1,3466e-004         5,5709e-006           47,6         8,2695e-013         1,3486e-004         5,6073e-006           50,         8,5198e-013         1,3494e-004         5,6245e-006           50,5         8,5943e-013         1,3497e-004         5,6311e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           62,         1,8722e-012         1,3492e-004         5,669e-006           67,         2,1679e-012         1,3479e-004         5,6697e-006           72,         2,4785e-012         1,3439e-004         5,681e-006           77,         3,1795e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7892e-006           87,         2,861e-012         1,3369e-004         5,7892e-006           97,         3,7198e-012         1,3318e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  |          |                 |                 |                              |
| 47,6         8,2695e-013         1,3486e-004         5,6073e-006           50         8,5198e-013         1,3494e-004         5,6245e-006           50,5         8,5943e-013         1,3496e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           57,         1,1688e-012         1,3492e-004         5,6609e-006           67,         2,1679e-012         1,3479e-004         5,6609e-006           72,         2,4785e-012         1,3479e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,7466e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,3363e-004         5,8556e-006           92,         3,0158e-012         1,3363e-004         5,8556e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  |          |                 | 1,3435e-004     |                              |
| 47,6         8,2695e-013         1,3486e-004         5,6073e-006           50,         8,5198e-013         1,3494e-004         5,6275e-006           50,5         8,5943e-013         1,3497e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           57,         1,1688e-012         1,3492e-004         5,6609e-006           62,         1,8722e-012         1,3479e-004         5,6609e-006           67,         2,1679e-012         1,3479e-004         5,6897e-006           72,         2,4785e-012         1,3439e-004         5,7466e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3335e-004         5,8556e-006           97,         3,7198e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   | 43,6     | 8,2566e-013     | 1,3466e-004     | 5,5709e-006                  |
| 50,         8,5198e-013         1,3494e-004         5,6245e-006           50,5         8,5943e-013         1,3496e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         5,6392e-006           57,         1,1688e-012         1,35e-004         5,669e-006           67,         2,1679e-012         1,3479e-004         5,669e-006           72,         2,4785e-012         1,3479e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,78161e-006           82,         3,0252e-012         1,3415e-004         5,7892e-006           87,         2,861e-012         1,3363e-004         5,8556e-006           92,         3,0158e-012         1,3363e-004         5,8556e-006           100,         3,7936e-012         1,3318e-004         5,957e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  | 47,6     | 8,2695e-013     |                 | 5,6073e-006                  |
| 50,5         8,5943e-013         1,3496e-004         5,6279e-006           51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           57,         1,1688e-012         1,55e-004         5,6629e-006           62,         1,8722e-012         1,3492e-004         5,6699e-006           67,         2,1679e-012         1,3479e-004         5,6897e-006           72,         2,4785e-012         1,3439e-004         5,7681e-006           87,         3,0252e-012         1,3439e-004         5,7466e-006           87,         2,861e-012         1,3339e-004         5,7892e-006           92,         3,0158e-012         1,3335e-004         5,8556e-006           100,         3,7936e-012         1,3335e-004         5,9257e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  |          | ,               |                 |                              |
| 51,         8,6735e-013         1,3497e-004         5,6311e-006           52,5         9,0196e-013         1,35e-004         5,6392e-006           57,         1,1688e-012         1,35e-004         5,6529e-006           62,         1,8722e-012         1,3492e-004         5,6609e-006           67,         2,1679e-012         1,3479e-004         5,6891e-006           72,         2,4785e-012         1,349e-004         5,681e-006           77,         3,1795e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,3369e-004         5,8556e-006           92,         3,0158e-012         1,3335e-004         5,9257e-006           97,         3,7198e-012         1,3318e-004         5,9678e-006           100,         3,7936e-012         1,3312e-004         5,9818e-006  |          |                 |                 |                              |
| 52,5         9,0196e-013         1,35e-004         5,6392e-006           57,         1,1688e-012         1,3492e-004         5,6629e-006           62,         1,8722e-012         1,3492e-004         5,6609e-006           67,         2,1679e-012         1,3479e-004         5,6697e-006           72,         2,4785e-012         1,346e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3336e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          | -,              |                 |                              |
| 57,         1,1688e-012         1,35e-004         5,6529e-006           62,         1,8722e-012         1,3492e-004         5,6609e-006           67,         2,1679e-012         1,3479e-004         5,6697e-006           72,         2,4785e-012         1,346e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,7466e-006           82,         3,0252e-012         1,3415e-004         5,7892e-006           87,         2,861e-012         1,3363e-004         5,8556e-006           92,         3,0158e-012         1,3335e-004         5,955e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  |          |                 | 1,04376-004     |                              |
| 37.         1,1688e-012         5,5629e-006           62.         1,8722e-012         1,3492e-004         5,6609e-006           67.         2,1679e-012         1,3479e-004         5,6897e-006           72.         2,4785e-012         1,349e-004         5,6881e-006           77.         3,1795e-012         1,3439e-004         5,7161e-006           82.         3,0252e-012         1,3415e-004         5,7892e-006           87.         2,861e-012         1,3369e-004         5,8556e-006           92.         3,0158e-012         1,3335e-004         5,9257e-006           97.         3,7198e-012         1,3318e-004         5,9678e-006           100.         3,7936e-012         1,3312e-004         5,9818e-006           101.         3,8099e-012         1,3312e-004         5,9818e-006   |          |                 | 1,35e-004       |                              |
| 67,         2,1679e-012         1,3479e-004         5,6697e-006           72,         2,4785e-012         1,346e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3363e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  |          |                 |                 |                              |
| 72,         2,4785e-012         1,346e-004         5,6881e-006           77,         3,1795e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3336e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006  | 62,      | 1,8722e-012     | 1,3492e-004     | 5,6609e-006                  |
| 72.         2,4785e-012         1,348e-004         5,6881e-006           77.         3,1795e-012         1,3439e-004         5,7161e-006           82.         3,0252e-012         1,3415e-004         5,7466e-006           87.         2,861e-012         1,339e-004         5,7892e-006           92.         3,0158e-012         1,3369e-004         5,8556e-006           97.         3,7198e-012         1,3335e-004         5,9257e-006           100.         3,7936e-012         1,3318e-004         5,9678e-006           101.         3,8099e-012         1,3312e-004         5,9818e-006  | 67,      | 2,1679e-012     | 1,3479e-004     | 5,6697e-006                  |
| 77,         3,1795e-012         1,3439e-004         5,7161e-006           82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3363e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          | 2,4785e-012     | 1,346e-004      |                              |
| 82,         3,0252e-012         1,3415e-004         5,7466e-006           87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3363e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          |                 |                 |                              |
| 87,         2,861e-012         1,339e-004         5,7892e-006           92,         3,0158e-012         1,3363e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          |                 |                 |                              |
| 92,         3,0158e-012         1,3363e-004         5,8556e-006           97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          |                 |                 |                              |
| 97,         3,7198e-012         1,3335e-004         5,9257e-006           100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          |                 |                 |                              |
| 100,         3,7936e-012         1,3318e-004         5,9678e-006           101,         3,8099e-012         1,3312e-004         5,9818e-006   |          |                 |                 |                              |
| 101, 3,8099e-012 1,3312e-004 5,9818e-006  | 97,      | 3,7198e-012     | 1,3335e-004     |                              |
|   | 100,     | 3,7936e-012     | 1,3318e-004     |                              |
|   | 101,     | 3,8099e-012     | 1,3312e-004     | 5,9818e-006                  |
| ., ., .,,,,,  |          |                 |                 |                              |
|   |          | -,              | ,               | .,                           |

Project Page 13 of 17

| 114.         4,4378e-012         1,3238e-004         6,262e-006           124.         5,5737e-012         1,3182e-004         6,262e-006           134.         7,3961e-012         1,3128e-004         6,3653e-006           144.         1,0029e-011         1,3075e-004         6,4588e-006           154.         1,3611e-011         1,2975e-004         6,6892e-006           164.         1,7796e-011         1,2975e-004         6,6892e-006           174.         2,3753e-011         1,2927e-004         6,6892e-006           184.         3,1511e-011         1,2838e-004         6,7518e-006           200.         4,6024e-011         1,2838e-004         6,8084e-006           203.         4,9042e-011         1,278e-004         6,8708e-006           215.         6,2846e-011         1,275e-004         6,8708e-006           215.         6,2846e-010         1,225e-004         7,0827e-006           272.         1,5312e-010         1,251e-004         7,0827e-006           332.         2,486e-010         1,2376e-004         7,1789e-006           332.         2,486e-010         1,2279e-004         7,223e-006           392.         3,2799e-010         1,225e-004         7,223e-006 <tr< th=""><th>105,</th><th>3,9088e-012</th><th>1,3289e-004</th><th>6,0363e-006</th></tr<>  | 105,  | 3,9088e-012 | 1,3289e-004 | 6,0363e-006 |
|--|-------|-------------|-------------|-------------|
| 124, 5,5737e-012 1,3182e-004 6,3653e-006 144, 1,0029e-011 1,3075e-004 6,4588e-006 154, 1,3611e-011 1,3075e-004 6,5434e-006 154, 1,3611e-011 1,3075e-004 6,689e-006 164, 1,7796e-011 1,2975e-004 6,6892e-006 184, 3,1511e-011 1,2882e-004 6,7518e-006 184, 3,1511e-011 1,2882e-004 6,7518e-006 194, 4,0247e-011 1,2838e-004 6,884e-006 200, 4,6021e-011 1,2813e-004 6,889e-006 203, 4,9042e-011 1,2787e-004 6,8708e-006 205, 4,9042e-011 1,2787e-004 6,8708e-006 215, 6,2846e-011 1,275e-004 6,9118e-006 242, 1,0249e-010 1,2651e-004 7,055e-006 242, 1,0249e-010 1,2651e-004 7,055e-006 242, 1,0249e-010 1,2551e-004 7,055e-006 302, 2,116e-010 1,246e-004 7,139e-006 362, 2,962e-010 1,2376e-004 7,2259e-006 392, 3,2799e-010 1,225e-004 7,2259e-006 422, 3,809e-010 1,225e-004 7,2234e-006 422, 3,809e-010 1,2156e-004 7,2348e-006 422, 3,809e-010 1,291e-004 7,2348e-006 422, 3,809e-010 1,2991e-004 7,2348e-006 422, 3,809e-010 1,2091e-004 7,2349e-006 500, 2,9533e-010 1,1992e-004 7,2319e-006 505, 4,2179e-010 1,1979e-004 7,2319e-006 505, 5,7811e-010 1,1979e-004 7,2319e-006 505, 5,7811e-010 1,1979e-004 7,2319e-006 505, 5,344e-010 1,1969e-004 7,2319e-006 505, 5,3647e-010 1,1969e-004 7,2319e-006 620, 5,3647e-010 1,196e-004 7,171e-006 620, 5,3647e-010 1,196e-004 7,171e-006 620, 5,3647e-010 1,196e-004 7,1456e-006 770, 3,2557e-010 1,1857e-004 7,0861e-006 670, 3,2557e-010 1,1864e-004 7,1721e-006 670, 3,2557e-010 1,1864e-004 7,1721e-006 670, 3,2557e-010 1,1864e-004 7,1721e-006 670, 3,2557e-010 1,1864e-004 7,166e-006 670, 3,2557e-010 1,1864e-004 7,1721e-006 670, 3,2557e-010 1,1864e-004 7,166e-006 770, 3,255e-010 1,1864e-004 7,1726e-006 670, 3,2557e-010 1,1864e-004 7,1726e-006 670, 3,2557e-010 1,1864e-004 7,166e-006 670, 3,2557e-010 1,1864e-004 7,167e-006 670, 3,2557e-010 1,1864e-004 7,166e-006 670, 3,2556e-010 1,266e-006 670, 3,2556e-006 670, 3,256e-006 670, 3,256e-006 670, 3,256e-006 670, 3,256e-006 670, 3,256e | 114,  | 4,4378e-012 | 1,3238e-004 | 6,1482e-006 |
| 144, 1,0029e-011 1,3075e-004 6,4588e-006 154, 1,3611e-011 1,3024e-004 6,6434e-006 164, 1,7796e-011 1,2975e-004 6,6892e-006 174, 2,3753e-011 1,2927e-004 6,6892e-006 184, 3,1511e-011 1,2882e-004 6,7518e-006 194, 4,0247e-011 1,2813e-004 6,8084e-006 200, 4,6021e-011 1,2813e-004 6,8084e-006 203, 4,9042e-011 1,279e-004 6,8558e-006 206, 5,2197e-011 1,2775e-004 6,8708e-006 215, 6,2846e-011 1,275e-004 6,9118e-006 242, 1,0249e-010 1,2651e-004 7,0055e-006 272, 1,5312e-010 1,2551e-004 7,0027e-006 332, 2,486e-010 1,2376e-004 7,139e-006 332, 2,486e-010 1,2376e-004 7,139e-006 332, 2,486e-010 1,225e-004 7,225e-006 392, 3,2799e-010 1,2225e-004 7,225e-006 422, 4,7394e-010 1,225e-004 7,2319e-006 482, 2,0187e-010 1,2091e-004 7,2319e-006 500, 2,9533e-010 1,2029e-004 7,2319e-006 500, 2,9533e-010 1,1992e-004 7,2319e-006 505, 4,2179e-010 1,1969e-004 7,2312e-006 500, 2,9533e-010 1,1992e-004 7,2312e-006 525, 5,7811e-010 1,1969e-004 7,2312e-006 525, 5,7811e-010 1,1969e-004 7,2312e-006 670, 3,2557e-010 1,1959e-004 7,2312e-006 670, 3,2557e-010 1,1959e-004 7,2312e-006 670, 3,2557e-010 1,1969e-004 7,266e-006 670, 3,2557e-010 1,1969e-004 7,266e-006 670, 3,2557e-010 1,1969e-004 7,266e-006 670, 3,2557e-010 1,1969e-004 7,0661e-006 670, 3,2556e-006 1,1960e-006 1,200e-006 1,200e-006 1,200e-006 1,200e-006 1,200e-006 1,200e-006 1,200e-006 1,200e-006 1,200e-006 1,200 | 124,  | 5,5737e-012 |             | 6,262e-006  |
| 154,         1,3611e-011         1,3024e-004         6,6199e-006           164,         1,7796e-011         1,2977e-004         6,6199e-006           174,         2,3753e-011         1,2927e-004         6,8982e-006           184,         3,1511e-011         1,2882e-004         6,7518e-006           194,         4,0247e-011         1,2838e-004         6,804e-006           200,         4,6021e-011         1,2799e-004         6,8558e-006           203,         4,9042e-011         1,279e-004         6,8708e-006           215,         6,2846e-011         1,275e-004         6,9118e-006           215,         6,2846e-011         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,116e-010         1,246e-004         7,139e-006           362,         2,9962e-010         1,2298e-004         7,259e-006           392,         3,2799e-010         1,2225e-004         7,2219e-006           452,         4,7394e-010         1,2091e-004         7,2319e-006           452,         4,7394e-010         1,2091e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,231e-006  | 134,  | 7,3961e-012 | 1,3128e-004 | 6,3653e-006 |
| 154,         1,3611e-011         1,3024e-004         6,6199e-006           164,         1,7796e-011         1,2977e-004         6,6199e-006           174,         2,3753e-011         1,2927e-004         6,8982e-006           184,         3,1511e-011         1,2882e-004         6,7518e-006           194,         4,0247e-011         1,2838e-004         6,804e-006           200,         4,6021e-011         1,2799e-004         6,8558e-006           203,         4,9042e-011         1,279e-004         6,8708e-006           215,         6,2846e-011         1,275e-004         6,9118e-006           215,         6,2846e-011         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,116e-010         1,246e-004         7,139e-006           362,         2,9962e-010         1,2298e-004         7,259e-006           392,         3,2799e-010         1,2225e-004         7,2219e-006           452,         4,7394e-010         1,2091e-004         7,2319e-006           452,         4,7394e-010         1,2091e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,231e-006  | 144,  | 1,0029e-011 | 1,3075e-004 | 6,4588e-006 |
| 174, 2,3753e-011 1,2927e-004 6,6892e-006 184, 3,1511e-011 1,2882e-004 6,7518e-006 194, 4,0247e-011 1,2838e-004 6,8084e-006 200, 4,6021e-011 1,2813e-004 6,8084e-006 203, 4,9042e-011 1,2787e-004 6,8558e-006 206, 5,2197e-011 1,2787e-004 6,8558e-006 215, 6,2846e-011 1,275e-004 6,9118e-006 242, 1,0249e-010 1,2651e-004 7,0055e-006 272, 1,5312e-010 1,2551e-004 7,0827e-006 302, 2,116e-010 1,246e-004 7,139e-006 362, 2,962e-010 1,2376e-004 7,1789e-006 362, 2,962e-010 1,225e-004 7,225e-006 392, 3,2799e-010 1,225e-004 7,225e-006 422, 1,3631e-001 1,2156e-004 7,2334e-006 422, 1,3699e-010 1,2156e-004 7,2334e-006 422, 1,3699e-010 1,2156e-004 7,2334e-006 422, 1,3699e-010 1,2156e-004 7,2334e-006 422, 2,0187e-010 1,2091e-004 7,2334e-006 422, 2,0187e-010 1,2091e-004 7,2334e-006 500, 2,9533e-010 1,1992e-004 7,2312e-006 505, 4,2179e-010 1,1979e-004 7,2312e-006 505, 5,7811e-010 1,1969e-004 7,2312e-006 505, 5,7811e-010 1,1969e-004 7,2312e-006 620, 5,3647e-010 1,1857e-004 7,2151e-006 620, 5,3647e-010 1,1768e-004 7,1756e-006 670, 3,2557e-010 1,1864e-004 7,1456e-006 670, 3,2557e-010 1,1684e-004 7,1456e-006 670, 3,2557e-010 1,1684e-004 7,1456e-006 670, 3,2557e-010 1,1684e-004 7,166e-006 670, 3,2557e-010 1,1684e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0861e-006 1000, 2,4225e-009 1,2633e-004 6,963e-006 1000, 2,4225e-009 1,2633e-004 6,963e-006 1000, 2,4225e-009 1,2637e-004 6,963e-006 1000, 2,4225e-009 1,2637e-004 6,963e-006 1040, 2,441e-009 1,2537e-004 6,963e-006 1040, 2,441e-009 1,2537e-004 6,963e-006 1040, 2,441e-009 1,2637e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,5334e-006 6,5354e-006 1,340, 3,143e-004 6,5334e-006 6,532e-009 1,3801e-004 6,3319e-006 6,532e-009 1,3801e-004 6,5334e-006 6,532e-009 1,3801e-004 6,5334e-006 6,532e-009 1,3801e-004 6,5354e-006 6,532e-009 1,3801e-004 6,5334e-006 6,5328, 1,1877e-008 1,397e-004 4,5719e-006 | 154,  | 1,3611e-011 |             | 6,5434e-006 |
| 174, 2,3753e-011 1,2927e-004 6,6892e-006 184, 3,1511e-011 1,2882e-004 6,7518e-006 194, 4,0247e-011 1,2838e-004 6,8084e-006 200, 4,6021e-011 1,2813e-004 6,8084e-006 203, 4,9042e-011 1,2787e-004 6,8558e-006 206, 5,2197e-011 1,2787e-004 6,8558e-006 215, 6,2846e-011 1,275e-004 6,9118e-006 242, 1,0249e-010 1,2651e-004 7,0055e-006 272, 1,5312e-010 1,2551e-004 7,0827e-006 302, 2,116e-010 1,246e-004 7,139e-006 362, 2,962e-010 1,2376e-004 7,1789e-006 362, 2,962e-010 1,225e-004 7,225e-006 392, 3,2799e-010 1,225e-004 7,225e-006 422, 1,3631e-001 1,2156e-004 7,2334e-006 422, 1,3699e-010 1,2156e-004 7,2334e-006 422, 1,3699e-010 1,2156e-004 7,2334e-006 422, 1,3699e-010 1,2156e-004 7,2334e-006 422, 2,0187e-010 1,2091e-004 7,2334e-006 422, 2,0187e-010 1,2091e-004 7,2334e-006 500, 2,9533e-010 1,1992e-004 7,2312e-006 505, 4,2179e-010 1,1979e-004 7,2312e-006 505, 5,7811e-010 1,1969e-004 7,2312e-006 505, 5,7811e-010 1,1969e-004 7,2312e-006 620, 5,3647e-010 1,1857e-004 7,2151e-006 620, 5,3647e-010 1,1768e-004 7,1756e-006 670, 3,2557e-010 1,1864e-004 7,1456e-006 670, 3,2557e-010 1,1684e-004 7,1456e-006 670, 3,2557e-010 1,1684e-004 7,1456e-006 670, 3,2557e-010 1,1684e-004 7,166e-006 670, 3,2557e-010 1,1684e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0861e-006 1000, 2,4225e-009 1,2633e-004 6,963e-006 1000, 2,4225e-009 1,2633e-004 6,963e-006 1000, 2,4225e-009 1,2637e-004 6,963e-006 1000, 2,4225e-009 1,2637e-004 6,963e-006 1040, 2,441e-009 1,2537e-004 6,963e-006 1040, 2,441e-009 1,2537e-004 6,963e-006 1040, 2,441e-009 1,2637e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,963e-006 1040, 2,441e-009 1,3639e-004 6,5334e-006 6,5354e-006 1,340, 3,143e-004 6,5334e-006 6,532e-009 1,3801e-004 6,3319e-006 6,532e-009 1,3801e-004 6,5334e-006 6,532e-009 1,3801e-004 6,5334e-006 6,532e-009 1,3801e-004 6,5354e-006 6,532e-009 1,3801e-004 6,5334e-006 6,5328, 1,1877e-008 1,397e-004 4,5719e-006 | 164,  | 1,7796e-011 | 1,2975e-004 | 6,6199e-006 |
| 184,         3,1511e-011         1,2882e-004         6,76518e-006           194,         4,0247e-011         1,2838e-004         6,8084e-006           200,         4,6021e-011         1,2813e-004         6,8404e-006           203,         4,9042e-011         1,2799e-004         6,8558e-006           206,         5,2197e-011         1,2787e-004         6,8708e-006           215,         6,2846e-011         1,275e-004         6,9118e-006           242,         1,0249e-010         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,116e-010         1,246e-004         7,139e-006           332,         2,486e-010         1,2276e-004         7,2359e-006           392,         3,2799e-010         1,2225e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2319e-006           500,         2,9533e-010         1,1979e-004         7,2312e-006           501,         5,544e-010         1,194e-004         7,2307e-006           525,         5,7811e-010         1,194e-004         7,2307e-006   |       | 2,3753e-011 | 1,2927e-004 | 6,6892e-006 |
| 194,   4,0247e-011   1,2838e-004   6,8084e-006   200,   4,6021e-011   1,2813e-004   6,8404e-006   203,   4,9042e-011   1,2799e-004   6,8558e-006   206,   5,2197e-011   1,2787e-004   6,8708e-006   215,   6,2846e-011   1,275e-004   6,9118e-006   242,   1,0249e-010   1,2651e-004   7,0055e-006   272,   1,5312e-010   1,2551e-004   7,189e-006   302,   2,116e-010   1,246e-004   7,139e-006   332,   2,486e-010   1,2376e-004   7,1789e-006   332,   2,486e-010   1,2376e-004   7,1789e-006   332,   3,2799e-010   1,2295e-004   7,2059e-006   392,   3,2799e-010   1,225e-004   7,2319e-006   422,   3,809e-010   1,2091e-004   7,2319e-006   452,   4,7394e-010   1,2091e-004   7,2319e-006   500,   2,9533e-010   1,1992e-004   7,2312e-006   500,   2,9533e-010   1,1992e-004   7,2312e-006   505,   4,2179e-010   1,1979e-004   7,2312e-006   505,   5,7811e-010   1,1969e-004   7,2307e-006   525,   5,7811e-010   1,194e-004   7,2307e-006   525,   5,7811e-010   1,1969e-004   7,2151e-006   670,   3,2557e-010   1,1684e-004   7,1456e-006   670,   3,0574e-010   1,1772e-004   7,1456e-006   670,   3,0574e-010   1,1946e-004   7,0861e-006   670,   3,0574e-010   1,1946e-004   7,0861e-006   670,   3,2557e-010   1,1684e-004   7,0543e-006   670,   3,2557e-010   1,1684e-004   7,0964e-006   670,   3,2557e-010   1,1684e-004   7,0964e-006   670,   3,2557e-010   1,1684e-004   7,0543e-006   670,   3,2557e-010   1,1684e-004   7,0543e-006   670,   3,2557e-010   1,1684e-004   7,0543e-006   670,   3,2557e-010   1,1684e-004   6,836e-006   670,   3,2557e-0010   1,172e-004   7,1856e-006   670,   3,2557e-0010   1,1896e-004   6,8369e-006   670,   3,2557e-0010   1,1896e-004   6,836e-006   670,   3,255e-009   1,2639e-004   6,937e-006   6,9   |       |             |             | 6,7518e-006 |
| 200,         4,6021e-011         1,2813e-004         6,8404e-006           203,         4,9042e-011         1,2799e-004         6,8558e-006           206,         5,2197e-011         1,2787e-004         6,8708e-006           215,         6,2846e-011         1,275e-004         6,9118e-006           242,         1,0249e-010         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,139e-006           302,         2,116e-010         1,2376e-004         7,139e-006           362,         2,0962e-010         1,2275e-004         7,235e-006           392,         3,2799e-010         1,2225e-004         7,2319e-006           452,         4,7394e-010         1,2021e-004         7,2348e-006           482,         2,0187e-010         1,2029e-004         7,2319e-006           500,         2,9533e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,187e-004         7,2151e-006           570,         5,9497e-010         1,187e-004         7,125e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006      <  | 194,  |             |             |             |
| 203,         4,9042e-011         1,2799e-004         6,8558e-006           206,         5,2197e-011         1,2787e-004         6,8708e-006           215,         6,2846e-011         1,275e-004         6,9118e-006           242,         1,0249e-010         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,116e-010         1,246e-004         7,139e-006           362,         2,9662e-010         1,2298e-004         7,139e-006           362,         2,9962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2319e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2334e-006           482,         2,0187e-010         1,1979e-004         7,2312e-006           500,         2,9533e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2312e-006           525,         5,7811e-010         1,1857e-004         7,2151e-006           670,         5,9497e-010         1,1864e-004         7,1721e-006   | 200.  |             | 1.2813e-004 |             |
| 215,         6,2846e-011         1,275e-004         6,9118e-006           242,         1,0249e-010         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,146e-010         1,2376e-004         7,139e-006           332,         2,486e-010         1,2376e-004         7,1789e-006           362,         2,9962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2319e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2348e-006           482,         2,0187e-010         1,2029e-004         7,2319e-006           500,         2,9533e-010         1,1992e-004         7,2312e-006           501,         5,544e-010         1,1969e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,237e-006           525,         5,7811e-010         1,1869e-004         7,237e-006           570,         5,9497e-010         1,178e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006 <t< td=""><td></td><td></td><td></td><td>6,8558e-006</td></t<>   |       |             |             | 6,8558e-006 |
| 215,         6,2846e-011         1,275e-004         6,9118e-006           242,         1,0249e-010         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,146e-010         1,2376e-004         7,139e-006           332,         2,486e-010         1,2376e-004         7,1789e-006           362,         2,9962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2319e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2348e-006           482,         2,0187e-010         1,2029e-004         7,2319e-006           500,         2,9533e-010         1,1992e-004         7,2312e-006           501,         5,544e-010         1,1969e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,237e-006           525,         5,7811e-010         1,1869e-004         7,237e-006           570,         5,9497e-010         1,178e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006 <t< td=""><td>206.</td><td>5.2197e-011</td><td>1.2787e-004</td><td>6.8708e-006</td></t<>   | 206.  | 5.2197e-011 | 1.2787e-004 | 6.8708e-006 |
| 242,         1,0249e-010         1,2651e-004         7,0055e-006           272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,116e-010         1,246e-004         7,139e-006           332,         2,486e-010         1,2376e-004         7,139e-006           362,         2,0962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2228e-006           422,         3,809e-010         1,2051e-004         7,2348e-006           482,         4,7394e-010         1,2029e-004         7,2334e-006           500,         2,9533e-010         1,1979e-004         7,2312e-006           505,         4,2179e-010         1,1979e-004         7,2307e-006           505,         4,2179e-010         1,1979e-004         7,2307e-006           505,         4,2179e-010         1,194e-004         7,2307e-006           507,         5,9497e-010         1,187e-004         7,2151e-006           670,         3,257e-010         1,1684e-004         7,1721e-006           670,         3,257e-010         1,1684e-004         7,1721e-006           770,         3,0574e-010         1,172e-004         7,145e-006  |       |             |             |             |
| 272,         1,5312e-010         1,2551e-004         7,0827e-006           302,         2,116e-010         1,246e-004         7,139e-006           332,         2,486e-010         1,2376e-004         7,1789e-006           362,         2,9962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2228e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2334e-006           482,         2,0187e-010         1,2029e-004         7,2334e-006           500,         2,9533e-010         1,1992e-004         7,2312e-006           505,         4,2179e-010         1,1969e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2312e-006           525,         5,7811e-010         1,194e-004         7,2283e-006           570,         5,9497e-010         1,1857e-004         7,125e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           670,         3,0574e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1261e-004         7,0543e-006  |       |             |             |             |
| 302,         2,116e-010         1,2376e-004         7,139e-006           332,         2,486e-010         1,2376e-004         7,1789e-006           362,         2,0962e-010         1,2298e-004         7,2059e-006           392,         3,809e-010         1,2225e-004         7,2228e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2019e-004         7,2319e-006           482,         2,0187e-010         1,2029e-004         7,2319e-006           500,         2,9533e-010         1,1992e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,2319e-006           505,         5,7811e-010         1,194e-004         7,2319e-006           500,         5,3647e-010         1,1867e-004         7,2151e-006           620,         5,3647e-010         1,1684e-004         7,1721e-006           670,         3,2557e-010         1,172e-004         7,1456e-006           770,         3,0574e-010         1,219e-004         7,0861e-006           820,         2,0476e-010         1,2194e-004         7,0543e-006  |       |             |             |             |
| 332,         2,486e-010         1,2376e-004         7,1789e-006           362,         2,0962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2228e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2029e-004         7,2348e-006           500,         2,9533e-010         1,1992e-004         7,2312e-006           505,         4,2179e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,1969e-004         7,237e-006           570,         5,9497e-010         1,1768e-004         7,2151e-006           670,         3,2557e-010         1,1684e-004         7,1751e-006           670,         3,2574e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1712e-004         7,1456e-006           770,         3,0574e-010         1,2199e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006   |       |             |             |             |
| 362,         2,0962e-010         1,2298e-004         7,2059e-006           392,         3,2799e-010         1,2225e-004         7,2228e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2091e-004         7,2348e-006           500,         2,9533e-010         1,2029e-004         7,2334e-006           500,         2,9533e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,194e-004         7,2307e-006           570,         5,9497e-010         1,187e-004         7,2151e-006           670,         3,257e-010         1,1684e-004         7,1721e-006           670,         3,257e-010         1,1684e-004         7,1721e-006           770,         3,0574e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,2261e-004         7,0543e-006           870,         4,3175e-010         1,2281e-004         7,0543e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006   |       |             |             |             |
| 392,         3,2799e-010         1,2225e-004         7,2228e-006           422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2091e-004         7,2334e-006           482,         2,0187e-010         1,2029e-004         7,2334e-006           500,         2,9533e-010         1,1992e-004         7,2312e-006           505,         4,2179e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,194e-004         7,2283e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,178e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           720,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,2109e-004         7,0343e-006           820,         2,0476e-010         1,2261e-004         7,0343e-006           920,         1,1423e-009         1,2261e-004         7,0343e-006           970,         1,9271e-009         1,253re-004         6,983e-006   |       |             |             |             |
| 422,         3,809e-010         1,2156e-004         7,2319e-006           452,         4,7394e-010         1,2091e-004         7,2348e-006           482,         2,0187e-010         1,2029e-004         7,2348e-006           500,         2,9533e-010         1,1992e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2312e-006           525,         5,7811e-010         1,1969e-004         7,2337e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,1768e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           720,         8,0702e-010         1,172e-004         7,167e-006           820,         2,0476e-010         1,2109e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2637e-004         6,9894e-006           1000,         2,4225e-009         1,2637e-004         6,989e-006           1010,         2,5902e-009         1,2637e-004         6,985e-006  |       |             |             |             |
| 452,         4,7394e-010         1,2091e-004         7,2348e-006           482,         2,0187e-010         1,2029e-004         7,2334e-006           500,         2,9533e-010         1,1992e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,2317e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,1969e-004         7,2283e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,1768e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           720,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1456e-006           870,         4,3175e-010         1,2109e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           970,         1,9271e-009         1,2537e-004         6,989e-006           1000,         2,4225e-009         1,2614e-004         6,989e-006           1010,         2,5902e-009         1,2637e-004         6,983e-006 <td></td> <td>· '</td> <td></td> <td></td>   |       | · '         |             |             |
| 482,         2,0187e-010         1,2029e-004         7,2334e-006           500,         2,9533e-010         1,1992e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,194e-004         7,2307e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           770,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1167e-006           820,         2,0476e-010         1,2261e-004         7,0543e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           970,         1,9271e-009         1,2537e-004         6,983e-006           1000,         2,4225e-009         1,2614e-004         6,963e-006           1010,         2,5902e-009         1,2638e-004         6,963e-006           1050,         9,3258e-010         1,2729e-004         6,8817e-006 <td></td> <td></td> <td></td> <td></td>  |       |             |             |             |
| 500,         2,9533e-010         1,1992e-004         7,2319e-006           505,         4,2179e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1979e-004         7,2307e-006           525,         5,7811e-010         1,194e-004         7,2283e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,1768e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           720,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1167e-006           820,         2,0476e-010         1,2109e-004         7,0841e-006           970,         4,3175e-010         1,2261e-004         7,0543e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006           1000,         2,4225e-009         1,2633e-004         6,963e-006           1050,         9,32558e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2921e-004         6,8817e-006           1340,         1,0682e-009         1,3319e-004         6,654e-006     <   |       |             |             |             |
| 505,         4,2179e-010         1,1979e-004         7,2312e-006           510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,1857e-004         7,2215te-006           570,         5,9497e-010         1,1857e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,172te-006           720,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1167e-006           820,         2,0476e-010         1,2109e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2637e-004         6,9894e-006           1000,         2,4225e-009         1,2614e-004         6,9894e-006           1010,         2,5902e-009         1,2637e-004         6,985e-006           1020,         2,4441e-009         1,2657e-004         6,9375e-006           1020,         2,4441e-009         1,2657e-004         6,9375e-006           1040,         9,8258e-010         1,2729e-004         6,9375e-006  |       |             |             |             |
| 510,         5,544e-010         1,1969e-004         7,2307e-006           525,         5,7811e-010         1,194e-004         7,2283e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,1768e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           720,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1456e-006           870,         4,3175e-010         1,2109e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2403e-004         7,022e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006           1000,         2,4225e-009         1,2637e-004         6,963e-006           1010,         2,5902e-009         1,2637e-004         6,963e-006           1020,         2,4441e-009         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2721e-004         6,8317e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006 </td <td></td> <td></td> <td></td> <td></td>   |       |             |             |             |
| 525,         5,7811e-010         1,194e-004         7,2283e-006           570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,1857e-004         7,2151e-006           670,         3,2557e-010         1,1684e-004         7,1721e-006           770,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1167e-006           820,         2,0476e-010         1,2109e-004         7,0543e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2537e-004         6,9894e-006           970,         1,9271e-009         1,2537e-004         6,983e-006           1010,         2,4225e-009         1,2633e-004         6,963e-006           1020,         2,4441e-009         1,2657e-004         6,963e-006           1050,         9,3258e-010         1,2729e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,653e-006           1440,         3,635e-009         1,3413e-004         6,653e-006 <td></td> <td>,</td> <td></td> <td></td>  |       | ,           |             |             |
| 570,         5,9497e-010         1,1857e-004         7,2151e-006           620,         5,3647e-010         1,1768e-004         7,1956e-006           670,         3,2557e-010         1,1684e-004         7,1956e-006           770,         3,0574e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1167e-006           820,         2,0476e-010         1,2109e-004         7,0841e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,261e-004         7,0543e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006           1000,         2,4225e-009         1,2633e-004         6,963e-006           1010,         2,5902e-009         1,2633e-004         6,953e-006           1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2921e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,7664e-006           1340,         1,0682e-009         1,3271e-004         6,6516e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006  |       |             |             |             |
| 620, 5,3647e-010 1,1768e-004 7,1956e-006 670, 3,2557e-010 1,1684e-004 7,1721e-006 720, 8,0702e-010 1,1772e-004 7,1456e-006 770, 3,0574e-010 1,1946e-004 7,1167e-006 820, 2,0476e-010 1,2109e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0543e-006 920, 1,1423e-009 1,2403e-004 7,022e-006 920, 1,1423e-009 1,2537e-004 6,9894e-006 1000, 2,4225e-009 1,2634e-004 6,9894e-006 1000, 2,4225e-009 1,2657e-004 6,9894e-006 1010, 2,5902e-009 1,2657e-004 6,9656e-006 1020, 2,4441e-009 1,257e-004 6,9375e-006 1020, 2,4441e-009 1,257e-004 6,9375e-006 1050, 9,3258e-010 1,2729e-004 6,9375e-006 1140, 6,6535e-010 1,2921e-004 6,8375e-006 1140, 9,8434e-010 1,3108e-004 6,8234e-006 1340, 1,0682e-009 1,3413e-004 6,7692e-006 1540, 2,4157e-009 1,3535e-004 6,6516e-006 1640, 2,8456e-009 1,3413e-004 6,7092e-006 1640, 2,8456e-009 1,3821e-004 6,5354e-006 11840, 3,1238e-009 1,3821e-004 6,5354e-006 1940, 7,135e-009 1,3801e-004 6,4769e-006 1940, 7,135e-009 1,3801e-004 6,4769e-006 1940, 7,135e-009 1,3801e-004 6,4769e-006 1940, 7,135e-009 1,3801e-004 6,3312e-006 2000, 7,2346e-009 1,3801e-004 6,3512e-006 2000, 7,2346e-009 1,3892e-004 6,3512e-006 2260, 2,9622e-009 1,3957e-004 6,3213e-006 2260, 2,9622e-009 1,3957e-004 6,5354e-006 2260, 2,9622e-009 1,3957e-004 6,5354e-006 2260, 2,9622e-009 1,3957e-004 6,5359e-006 2728, 4,6319e-009 1,3892e-004 6,3519e-006 2728, 4,6319e-009 1,3892e-004 6,3213e-006 2260, 2,9622e-009 1,3957e-004 6,5359e-006 2728, 4,6319e-009 1,3892e-004 5,5578e-006 2328, 1,1877e-008 1,2937e-004 4,8079e-006 3688, 1,0609e-008 1,2937e-004 4,8079e-006 3688, 1,0609e-008 1,2937e-004 4,8079e-006 3688, 6,1528e-009 1,0517e-004 4,0768e-006 3688, 6,1528e-009 1,0517e-004 4,0768e-006 3688, 6,1528e-009 1,0517e-004 4,0768e-006 3688, 6,1528e-009 1,0517e-004 4,0768e-006 3688, 6,1528e-009 1,0517e-004 3,5554e-006 3688, 6,1528e-009 1,0517e-004 3,5554e-006 36 |       |             |             |             |
| 670, 3,2557e-010 1,1684e-004 7,1721e-006 720, 8,0702e-010 1,1772e-004 7,1456e-006 770, 3,0574e-010 1,1946e-004 7,1456e-006 870, 4,3175e-010 1,2109e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0543e-006 920, 1,1423e-009 1,2403e-004 7,022e-006 970, 1,9271e-009 1,2537e-004 6,9894e-006 1000, 2,4225e-009 1,2614e-004 6,9699e-006 1010, 2,5902e-009 1,2633e-004 6,963e-006 1020, 2,4441e-009 1,2657e-004 6,9566e-006 1050, 9,3258e-010 1,2729e-004 6,8377e-006 1240, 9,8434e-010 1,3108e-004 6,8234e-006 1340, 1,0682e-009 1,3271e-004 6,817e-006 1440, 3,1635e-009 1,3413e-004 6,6516e-006 1640, 2,4457e-009 1,3535e-004 6,5536e-006 1640, 2,4457e-009 1,3687e-004 6,837e-006 1440, 3,1635e-009 1,3413e-004 6,5937e-006 1640, 2,8456e-009 1,364e-004 6,5937e-006 1640, 2,8456e-009 1,364e-004 6,5937e-006 1740, 3,2138e-009 1,3881e-004 6,5354e-006 1840, 3,2415e-009 1,3881e-004 6,5354e-006 1840, 3,2415e-009 1,3881e-004 6,4769e-006 1840, 3,2415e-009 1,3881e-004 6,3832e-006 2000, 7,2346e-009 1,3881e-004 6,3519e-006 2000, 7,2346e-009 1,3892e-004 6,3819e-006 2260, 2,9622e-009 1,3992e-004 6,3819e-006 2260, 2,9622e-009 1,3957e-004 6,2289e-006 3768, 1,5242e-008 1,3895e-004 5,5649re-006 3768, 1,5242e-008 1,3895e-004 5,5649re-006 3768, 1,5242e-008 1,3895e-004 5,5649re-006 3768, 1,5242e-008 1,3895e-004 5,5649re-006 3768, 1,5242e-008 1,3895e-004 5,5768e-006 3768, 1,5242e-008 1,3895e-004 5,5768e-006 3768, 1,5242e-008 1,3895e-004 4,8079e-006 3528, 1,1877e-008 1,2937e-004 4,5514e-006 3688, 1,0609e-008 1,2937e-004 4,5714e-006 3688, 6,1528e-009 1,0517e-004 4,9768e-006 3688, 6,1528e-009 1,0517e-004 3,5858e-006 3688, 6,1528e-009 1,0517e-004 3,5858e-006 3688, 6,1528e-009 1,0517e-004 3,5858e-006 3688, 6,1528e-009 1,0517e-004 3,5858e-006   |       |             |             |             |
| 720,         8,0702e-010         1,1772e-004         7,1456e-006           770,         3,0574e-010         1,1946e-004         7,1167e-006           820,         2,0476e-010         1,2109e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2403e-004         7,022e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006           1000,         2,4225e-009         1,2614e-004         6,969e-006           1010,         2,5902e-009         1,2633e-004         6,963e-006           1020,         2,4441e-009         1,2657e-004         6,963e-006           1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2729e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3413e-004         6,792e-006           1540,         2,8456e-009         1,3535e-004         6,6515e-006           1640,         2,8456e-009         1,3801e-004         6,5354e-006   |       |             |             |             |
| 770, 3,0574e-010 1,1946e-004 7,1167e-006 820, 2,0476e-010 1,2109e-004 7,0861e-006 870, 4,3175e-010 1,2261e-004 7,0543e-006 970, 1,9271e-009 1,2537e-004 6,9894e-006 1000, 2,4225e-009 1,2633e-004 6,963e-006 1010, 2,5902e-009 1,2633e-004 6,963e-006 1010, 2,5902e-009 1,2633e-004 6,956e-006 1050, 9,3258e-010 1,2729e-004 6,956e-006 1140, 6,6535e-010 1,2729e-004 6,8817e-006 1240, 9,8434e-010 1,3108e-004 6,6234e-006 1340, 1,0682e-009 1,3271e-004 6,6234e-006 1340, 2,4457e-009 1,3535e-004 6,6516e-006 1440, 2,8456e-009 1,3271e-004 6,5535e-006 1540, 2,4157e-009 1,3535e-004 6,6516e-006 1640, 2,8456e-009 1,364e-004 6,5937e-006 1740, 3,2138e-009 1,3728e-004 6,5354e-006 1840, 3,2415e-009 1,3801e-004 6,5354e-006 1940, 7,135e-009 1,3801e-004 6,4183e-006 1940, 7,135e-009 1,3801e-004 6,4183e-006 2000, 7,2346e-009 1,3892e-004 6,3513e-006 2260, 2,9622e-009 1,3995e-004 6,3213e-006 2260, 2,9622e-009 1,3957e-004 6,2289e-006 2728, 4,6319e-009 1,3892e-004 6,3513e-006 2260, 2,9622e-009 1,3957e-004 5,5578e-006 3248, 1,1528e-008 1,3665e-004 5,6497e-006 3248, 1,1528e-008 1,365e-004 5,5578e-006 3288, 1,1677e-008 1,2937e-004 4,8079e-006 3328, 1,1677e-008 1,2937e-004 4,8079e-006 3328, 1,1675e-009 1,1517e-004 4,5514e-006 3688, 6,1528e-009 1,10517e-004 3,8585e-006   |       |             |             |             |
| 820,         2,0476e-010         1,2109e-004         7,0861e-006           870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2403e-004         7,022e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006           1000,         2,4225e-009         1,2614e-004         6,9699e-006           1010,         2,5902e-009         1,2633e-004         6,963e-006           1020,         2,4441e-009         1,2657e-004         6,956e-006           1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2921e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7692e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3892e-004         6,3312e-006  |       |             |             |             |
| 870,         4,3175e-010         1,2261e-004         7,0543e-006           920,         1,1423e-009         1,2403e-004         7,022e-006           970,         1,9271e-009         1,2537e-004         6,9894e-006           1000,         2,4225e-009         1,2614e-004         6,9699e-006           1010,         2,5902e-009         1,2633e-004         6,963e-006           1020,         2,4441e-009         1,2657e-004         6,953e-006           1050,         9,3258e-010         1,2729e-004         6,837ze-006           1140,         6,6535e-010         1,2729e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3413e-004         6,7092e-006           1540,         2,4157e-009         1,3525e-004         6,6516e-006           1640,         2,8456e-009         1,3728e-004         6,5354e-006           1740,         3,2138e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3801e-004         6,4769e-006           2052,         6,3221e-009         1,3892e-004         6,3319e-006 <td></td> <td></td> <td></td> <td></td>   |       |             |             |             |
| 920, 1,1423e-009 1,2403e-004 7,022e-006 970, 1,9271e-009 1,2537e-004 6,9894e-006 1000, 2,4225e-009 1,2614e-004 6,9699e-006 1010, 2,5902e-009 1,2633e-004 6,963e-006 1020, 2,4441e-009 1,2657e-004 6,956e-006 1050, 9,3258e-010 1,2729e-004 6,9375e-006 1140, 6,6535e-010 1,2729e-004 6,8817e-006 1240, 9,8434e-010 1,3108e-004 6,8234e-006 1340, 1,0682e-009 1,3271e-004 6,7664e-006 1340, 1,0682e-009 1,3271e-004 6,7664e-006 1440, 3,1635e-009 1,3413e-004 6,7092e-006 1540, 2,4157e-009 1,3535e-004 6,6516e-006 1640, 2,8456e-009 1,364e-004 6,5937e-006 1740, 3,2138e-009 1,3801e-004 6,5354e-006 1840, 3,2415e-009 1,3801e-004 6,4769e-006 1940, 7,135e-009 1,3801e-004 6,4183e-006 2000, 7,2346e-009 1,3892e-004 6,3519e-006 2052, 6,3221e-009 1,3923e-004 6,3519e-006 2260, 2,9622e-009 1,3932e-004 6,2829e-006 22728, 4,6319e-009 1,3889e-004 5,9512e-006 22728, 4,6319e-009 1,3839e-004 5,5512e-006 3248, 1,1528e-008 1,3656e-004 5,6497e-006 3248, 1,1528e-008 1,3337e-004 5,5768e-006 4808, 1,0059e-008 1,2489e-004 4,8579e-006 5328, 1,1877e-008 1,2489e-004 4,8079e-006 5328, 1,1877e-008 1,2011e-004 4,5514e-006 5848, 9,1075e-009 1,1517e-004 4,3077e-006 6888, 6,1528e-009 1,0517e-004 3,8585e-006   |       |             |             |             |
| 970, 1,9271e-009 1,2537e-004 6,9894e-006 1000, 2,4225e-009 1,2614e-004 6,9699e-006 1010, 2,5902e-009 1,2633e-004 6,963e-006 1020, 2,4441e-009 1,2657e-004 6,9566e-006 1050, 9,3258e-010 1,2729e-004 6,9375e-006 1140, 6,6535e-010 1,2921e-004 6,8817e-006 1240, 9,8434e-010 1,3108e-004 6,234e-006 1340, 1,0682e-009 1,3271e-004 6,7664e-006 1440, 3,1635e-009 1,3413e-004 6,7692e-006 1540, 2,4157e-009 1,3535e-004 6,6516e-006 1640, 2,8456e-009 1,364e-004 6,5937e-006 1740, 3,2138e-009 1,3801e-004 6,5354e-006 1740, 3,2138e-009 1,3801e-004 6,5354e-006 1940, 7,135e-009 1,3801e-004 6,4183e-006 1940, 7,135e-009 1,3801e-004 6,4183e-006 2000, 7,2346e-009 1,3892e-004 6,3519e-006 2052, 6,3221e-009 1,3902e-004 6,3213e-006 2260, 2,9622e-009 1,3957e-004 6,2289e-006 2260, 2,9622e-009 1,3957e-004 5,9512e-006 3248, 1,1528e-008 1,3837e-004 5,5578e-006 3248, 1,1528e-008 1,3837e-004 5,5578e-006 3248, 1,1528e-008 1,3837e-004 5,5578e-006 3248, 1,16528e-008 1,2937e-004 5,5578e-006 3288, 1,0609e-008 1,2937e-004 4,8079e-006 5328, 1,1877e-008 1,2011e-004 4,5514e-006 5848, 9,1075e-009 1,10517e-004 4,9768e-006 6888, 6,1528e-009 1,0517e-004 3,8585e-006  |       |             |             |             |
| 1000,         2,4225e-009         1,2614e-004         6,9699e-006           1010,         2,5902e-009         1,2633e-004         6,963e-006           1020,         2,4441e-009         1,2633e-004         6,956e-006           1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2921e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7692e-006           1440,         3,1635e-009         1,3413e-004         6,7092e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3801e-004         6,4769e-006           1840,         7,135e-009         1,3861e-004         6,4769e-006           1940,         7,135e-009         1,3801e-004         6,4769e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3213e-006           2260,         2,9622e-009         1,3932e-004         6,3213e-006<  |       |             |             |             |
| 1010,         2,5902e-009         1,2633e-004         6,963e-006           1020,         2,4441e-009         1,2657e-004         6,9566e-006           1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2729e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3413e-004         6,6516e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3801e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4832e-006           2052,         6,3221e-009         1,3922e-004         6,3832e-006           2052,         6,3221e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,6497e-00  |       |             |             |             |
| 1020,         2,4441e-009         1,2657e-004         6,9566e-006           1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2921e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3413e-004         6,7092e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4832e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3923e-004         6,3213e-006           2260,         2,9822e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,365e-004         5,6497e-00  |       |             |             |             |
| 1050,         9,3258e-010         1,2729e-004         6,9375e-006           1140,         6,6535e-010         1,2921e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,7664e-006           1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3271e-004         6,7664e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,382e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3801e-004         6,4769e-006           2000,         7,2346e-009         1,3892e-004         6,3319e-006           2052,         6,3221e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,365e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,578e-006<  |       |             |             |             |
| 1140,         6,6535e-010         1,2921e-004         6,8817e-006           1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7692e-006           1440,         3,1635e-009         1,3413e-004         6,7092e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1741,         3,2138e-009         1,3801e-004         6,4769e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4769e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3213e-006           2260,         2,9622e-009         1,3923e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,6497e-006           3768,         1,5242e-008         1,3665e-004         5,6497e-006           4288,         1,0659e-008         1,2937e-004         4,5778e-006           4288,         1,0059e-008         1,2489e-004         4,5768e-0  |       |             |             |             |
| 1240,         9,8434e-010         1,3108e-004         6,8234e-006           1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3413e-004         6,6516e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         4,8079e-006           5328,         1,1877e-008         1,2489e-004         4,8079e-006           5848,         9,1075e-009         1,1517e-004         4,9768e-0  |       |             |             |             |
| 1340,         1,0682e-009         1,3271e-004         6,7664e-006           1440,         3,1635e-009         1,3413e-004         6,7092e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,9578e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5828,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,96768e-  |       |             |             |             |
| 1440,         3,1635e-009         1,3413e-004         6,7092e-006           1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3892e-004         6,3832e-006           2000,         7,2346e-009         1,3892e-004         6,3519e-006           2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3957e-004         6,2289e-006           2260,         2,9622e-009         1,3859e-004         5,9512e-006           3248,         1,1528e-008         1,365e-004         5,647e-006           3248,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006<  |       | ,           |             |             |
| 1540,         2,4157e-009         1,3535e-004         6,6516e-006           1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3865e-004         5,6497e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5828,         1,1877e-008         1,2011e-004         4,5514e-006           6368,         6,1528e-009         1,0517e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-0  |       |             |             |             |
| 1640,         2,8456e-009         1,364e-004         6,5937e-006           1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,0768e-006           6388,         6,1528e-009         1,0517e-004         3,8585e-0  |       |             |             |             |
| 1740,         3,2138e-009         1,3728e-004         6,5354e-006           1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3923e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,2213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,576e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         6,1528e-009         1,0517e-004         3,8585e-006  |       | · '         |             |             |
| 1840,         3,2415e-009         1,3801e-004         6,4769e-006           1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,2213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006   |       |             |             |             |
| 1940,         7,135e-009         1,3861e-004         6,4183e-006           2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3869e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         6,1528e-009         1,0517e-004         3,8585e-006   |       |             |             |             |
| 2000,         7,2346e-009         1,3892e-004         6,3832e-006           2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 2052,         6,3221e-009         1,3902e-004         6,3519e-006           2104,         5,4261e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 2104,         5,4261e-009         1,3923e-004         6,3213e-006           2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006   |       |             |             |             |
| 2260,         2,9622e-009         1,3957e-004         6,2289e-006           2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,0768e-006           6880,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 2728,         4,6319e-009         1,3889e-004         5,9512e-006           3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 3248,         1,1528e-008         1,3665e-004         5,6497e-006           3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 3768,         1,5242e-008         1,3337e-004         5,3578e-006           4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 4288,         1,0609e-008         1,2937e-004         5,0768e-006           4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6880,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 4808,         1,0059e-008         1,2489e-004         4,8079e-006           5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       | ,           |             |             |
| 5328,         1,1877e-008         1,2011e-004         4,5514e-006           5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 5848,         9,1075e-009         1,1517e-004         4,3077e-006           6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 6368,         7,1954e-009         1,1017e-004         4,0768e-006           6888,         6,1528e-009         1,0517e-004         3,8585e-006  |       |             |             |             |
| 6888, 6,1528e-009 1,0517e-004 3,8585e-006  |       | ,           |             |             |
|  |       |             |             |             |
| 1200, 3,80016-008 1,02196-004 3,1326-006   |       |             |             |             |
|  | 1200, | 5,9057e-009 | 1,02190-004 | 3,732e-00b  |



| TABLE 27 | Model (A4) > Transient Thermal (A5) > Solution (A6) > Directional Heat Flux | Time [s] | Minimum [W/mm²] | Maximum [W/mm²] | Average [W/mm²] | 1,e-002 | -1,7653e-005 | 1,8369e-005 | -2,7136e-010 |

Project Page 14 of 17

| 2,e-002         | -2,9773e-005                 | 3,0199e-005                | -4,3837e-010                |
|-----------------|------------------------------|----------------------------|-----------------------------|
| 5,e-002<br>0,14 | -4,8776e-005                 | 4,7919e-005                | -6,3116e-010                |
| 0,14            | -6,7937e-005<br>-7,643e-005  | 6,5228e-005<br>7,2872e-005 | -1,4186e-010<br>1,0614e-009 |
| 0,24            | -8,0829e-005                 | 7,6913e-005                | 2,5908e-009                 |
| 0,34            | -8,3672e-005                 | 7,961e-005                 | 4,2482e-009                 |
| 0,54            | -8,5803e-005                 | 8,1693e-005                | 5,9135e-009                 |
| 0,64            | -8,7544e-005                 | 8,3438e-005                | 7,515e-009                  |
| 0,74            | -8,9043e-005                 | 8,4968e-005                | 9,0125e-009                 |
| 0,84            | -9,0377e-005                 | 8,6348e-005                | 1,0386e-008                 |
| 0,94            | -9,1592e-005                 | 8,7617e-005                | 1,1627e-008                 |
| 1,              | -9,2286e-005                 | 8,8344e-005                | 1,2323e-008                 |
| 1,04            | -9,2734e-005                 | 8,8816e-005                | 1,2767e-008                 |
| 1,08            | -9,317e-005                  | 8,9275e-005                | 1,3189e-008                 |
| 1,2             | -9,4388e-005                 | 9,0565e-005                | 1,4278e-008                 |
| 1,56            | -9,7512e-005                 | 9,3883e-005                | 1,6363e-008                 |
| 1,96            | -1,0049e-004                 | 9,7036e-005                | 1,769e-008                  |
| 2,36            | -1,0305e-004                 | 9,9744e-005                | 1,8371e-008                 |
| 2,76            | -1,0527e-004                 | 1,0208e-004                | 1,8644e-008                 |
| 3,16            | -1,072e-004                  | 1,041e-004                 | 1,8665e-008                 |
| 3,56            | -1,0888e-004                 | 1,0585e-004                | 1,8539e-008                 |
| 3,96            | -1,1035e-004                 | 1,0738e-004                | 1,8331e-008                 |
| 4,36            | -1,1165e-004                 | 1,0873e-004                | 1,8084e-008                 |
| 4,76            | -1,1281e-004                 | 1,0992e-004                | 1,7823e-008                 |
| 5,              | -1,1346e-004<br>-1.136e-004  | 1,1059e-004                | 1,7665e-008                 |
| 5,05<br>5,1     | -1,1373e-004                 | 1,1073e-004<br>1,1087e-004 | 1,7633e-008<br>1,76e-008    |
| 5,25            | -1,1373e-004<br>-1,1411e-004 | 1,1126e-004                | 1,76e-008                   |
| 5,25            | -1,1411e-004<br>-1,1513e-004 | 1,1231e-004                | 1,7503e-008                 |
| 6,2             | -1,1616e-004                 | 1,1335e-004                | 1,6956e-008                 |
| 6,7             | -1,1709e-004                 | 1,143e-004                 | 1,6713e-008                 |
| 7,2             | -1,1795e-004                 | 1,1517e-004                | 1,6502e-008                 |
| 7,7             | -1,1874e-004                 | 1,1597e-004                | 1,6322e-008                 |
| 8,2             | -1,1949e-004                 | 1,1672e-004                | 1,6169e-008                 |
| 8,7             | -1,2018e-004                 | 1,1742e-004                | 1,6042e-008                 |
| 9,2             | -1,2084e-004                 | 1,1808e-004                | 1,5939e-008                 |
| 9,7             | -1,2145e-004                 | 1,187e-004                 | 1,5857e-008                 |
| 10,             | -1,2181e-004                 | 1,1906e-004                | 1,5815e-008                 |
| 10,4            | -1,2227e-004                 | 1,1952e-004                | 1,5771e-008                 |
| 10,8            | -1,2272e-004                 | 1,1996e-004                | 1,5737e-008                 |
| 12,             | -1,239e-004                  | 1,2114e-004                | 1,5717e-008                 |
| 15,6            | -1,2658e-004                 | 1,238e-004                 | 1,6048e-008                 |
| 19,6            | -1,2878e-004                 | 1,2598e-004                | 1,6654e-008                 |
| 23,6            | -1,3039e-004                 | 1,2757e-004                | 1,7359e-008                 |
| 27,6            | -1,3157e-004                 | 1,2873e-004                | 1,8083e-008                 |
| 31,6            | -1,3242e-004                 | 1,2956e-004                | 1,8783e-008                 |
| 35,6<br>39,6    | -1,3302e-004<br>-1,3342e-004 | 1,3014e-004<br>1,3053e-004 | 1,9438e-008<br>2,0039e-008  |
| 43,6            | -1,3367e-004                 | 1,3077e-004                | 2,0586e-008                 |
| 47,6            | -1,3381e-004                 | 1,3089e-004                | 2,1082e-008                 |
| 50,             |                              | 1,3093e-004                | 2,1362e-008                 |
| 50,5            | -1,3386e-004                 |                            | 2,1419e-008                 |
| 51,             | 1 0007 001                   | 1,3094e-004                | 2,1476e-008                 |
| 52,5            | -1,3387e-004                 | 1,3095e-004                | 2,164e-008                  |
| 57,             | -1,3381e-004                 | 1,3088e-004                | 2,2083e-008                 |
| 62,             | -1,3366e-004                 | 1,3073e-004                | 2,2525e-008                 |
| 67,             | -1,3345e-004                 | 1,3053e-004                | 2,2926e-008                 |
| 72,             | -1,332e-004                  | 1,3029e-004                | 2,3294e-008                 |
| 77,             | -1,3292e-004                 | 1,3001e-004                | 2,3634e-008                 |
| 82,             | -1,3261e-004                 | 1,2971e-004                | 2,3953e-008                 |
| 87,             | -1,3229e-004                 | 1,294e-004                 | 2,4255e-008                 |
| 92,             | -1,3195e-004                 | 1,2907e-004                | 2,4542e-008                 |
| 97,             | -1,316e-004<br>-1,3139e-004  | 1,2874e-004<br>1,2854e-004 | 2,4817e-008                 |
| 100,<br>101,    | -1,3139e-004<br>-1,3132e-004 | 1,2854e-004<br>1,2847e-004 | 2,4979e-008<br>2,5032e-008  |
| 101,            | -1,3125e-004                 | 1,284e-004                 | 2,5032e-008<br>2.5085e-008  |
| 102,            | -1,3123e-004<br>-1,3104e-004 | 1,2819e-004                | 2,5241e-008                 |
| 114,            | -1,304e-004                  | 1,2759e-004                | 2,569e-008                  |
| 124,            | -1,2971e-004                 | 1,2692e-004                | 2,6171e-008                 |
| 134,            | -1,2904e-004                 | 1,2628e-004                | 2,6637e-008                 |
| 144,            | -1,2838e-004                 | 1,2565e-004                | 2,709e-008                  |
| 154,            | -1,2775e-004                 | 1,2505e-004                | 2,7534e-008                 |
| 164,            | -1,2714e-004                 | 1,2446e-004                | 2,7967e-008                 |
| 174,            | -1,2655e-004                 | 1,239e-004                 | 2,8391e-008                 |
| 184,            | -1,2598e-004                 | 1,2336e-004                | 2,8807e-008                 |
| 194,            | -1,2544e-004                 | 1,2284e-004                | 2,9214e-008                 |
| 200,            | -1,2512e-004                 | 1,2253e-004                | 2,9454e-008                 |
| 203,            | -1,2495e-004<br>-1,2479e-004 | 1,2237e-004<br>1,2222e-004 | 2,9573e-008<br>2,9692e-008  |
| 206,<br>215,    | -1,2479e-004<br>-1,2434e-004 | 1,2222e-004<br>1,2179e-004 | 3,0042e-008                 |
| 242,            | -1,2434e-004<br>-1,231e-004  | 1,2062e-004                | 3,1029e-008                 |
| 272,            | -1,2186e-004                 | 1,1944e-004                | 3,2052e-008                 |
| 302,            | -1,2072e-004                 | 1,1836e-004                | 3,3005e-008                 |
| 332,            | -1,1968e-004                 | 1,1738e-004                | 3,3892e-008                 |
| 362,            | -1,1871e-004                 | 1,1647e-004                | 3,4717e-008                 |
| 392,            | -1,1781e-004                 | 1,1563e-004                | 3,5486e-008                 |
| 422,            | -1,1697e-004                 | 1,1484e-004                | 3,6204e-008                 |
| 452,            | -1,1617e-004                 | 1,1409e-004                | 3,6875e-008                 |
| 482,            | -1,1542e-004                 | 1,1339e-004                | 3,7503e-008                 |
| 500,            | -1,1498e-004                 | 1,1298e-004                | 3,7865e-008                 |
| 505,            | -1,1483e-004                 | 1,1284e-004                | 3,7962e-008                 |
| 510,            | -1,147e-004                  | 1,1272e-004                | 3,8061e-008                 |
| 525,<br>570     | -1,1435e-004                 | 1,1239e-004                | 3,8347e-008                 |
| 570,            | -1,1335e-004                 | 1,1146e-004                | 3,9133e-008                 |
|                 |                              |                            |                             |
|                 |                              |                            |                             |

Page 15 of 17 Project

| 620,  | -1,1231e-004 | 1,1049e-004 | 3,993e-008  |
|-------|--------------|-------------|-------------|
| 670,  | -1,1131e-004 | 1,0956e-004 | 4,0662e-008 |
| 720,  | -1,1036e-004 | 1,0867e-004 | 4,1337e-008 |
| 770,  | -1,0945e-004 | 1,0781e-004 | 4,1961e-008 |
| 820,  | -1,0856e-004 | 1,0698e-004 | 4,2541e-008 |
| 870,  | -1,0771e-004 | 1,0618e-004 | 4,3081e-008 |
| 920,  | -1,0688e-004 | 1,054e-004  | 4,3585e-008 |
| 970,  | -1,0607e-004 | 1,0464e-004 | 4,4056e-008 |
| 1000, | -1,0559e-004 | 1,0419e-004 | 4,4327e-008 |
| 1010, | -1,0539e-004 | 1,0399e-004 | 4,4413e-008 |
| 1020, | -1,0522e-004 | 1,0384e-004 | 4,4501e-008 |
| 1050, | -1,0476e-004 | 1,034e-004  | 4,4754e-008 |
| 1140, | -1,0559e-004 | 1,0568e-004 | 4,5432e-008 |
| 1240, | -1,083e-004  | 1,084e-004  | 4,6098e-008 |
| 1340, | -1,1068e-004 | 1,1078e-004 | 4,6683e-008 |
| 1440, | -1,1277e-004 | 1,1286e-004 | 4,7196e-008 |
| 1540, | -1,1458e-004 | 1,1468e-004 | 4,7642e-008 |
| 1640, | -1,1616e-004 | 1,1625e-004 | 4,8027e-008 |
| 1740, | -1,1752e-004 | 1,1761e-004 | 4,8356e-008 |
| 1840, | -1,1868e-004 | 1,1877e-004 | 4,8632e-008 |
| 1940, | -1,1966e-004 | 1,1975e-004 | 4,886e-008  |
| 2000, | -1,2019e-004 | 1,2028e-004 | 4,898e-008  |
| 2052, | -1,206e-004  | 1,2069e-004 | 4,9065e-008 |
| 2104, | -1,2097e-004 | 1,2107e-004 | 4,9142e-008 |
| 2260, | -1,2176e-004 | 1,2186e-004 | 4,9283e-008 |
| 2728, | -1,2206e-004 | 1,2215e-004 | 4,9095e-008 |
| 3248, | -1,2079e-004 | 1,2086e-004 | 4,834e-008  |
| 3768, | -1,1843e-004 | 1,185e-004  | 4,72e-008   |
| 4288, | -1,1523e-004 | 1,153e-004  | 4,5795e-008 |
| 4808, | -1,1148e-004 | 1,1154e-004 | 4,4216e-008 |
| 5328, | -1,0737e-004 | 1,0743e-004 | 4,2531e-008 |
| 5848, | -1,0306e-004 | 1,0313e-004 | 4,0789e-008 |
| 6368, | -9,8703e-005 | 9,8767e-005 | 3,9028e-008 |
| 6888, | -9,4315e-005 | 9,4376e-005 | 3,7274e-008 |
| 7200, | -9,1686e-005 | 9,1745e-005 | 3,623e-008  |

## **Material Data**

Air(Atmospheric)

## TABLE 28 Air(Atmospheric) > Constants

| Density              | 1,225e-009 kg mm^-3      |
|----------------------|--------------------------|
| Specific Heat        | 7,176e+005 mJ kg^-1 C^-1 |
| Thermal Conductivity | 2,42e-005 W mm^-1 C^-1   |

TABLE 29 Air(Atmospheric) > Ideal Gas EOS

| Adiabatic Exponent γ | Adiabatic Constant | Pressure Shift MPa | Reference Temperature C | Specific Internal Energy mJ kg^-1 |  |
|----------------------|--------------------|--------------------|-------------------------|-----------------------------------|--|
| 1.4                  | 0.                 | 0.                 | 15.05                   | 2.e+008                           |  |

# TABLE 30 Air(Atmospheric) > Color Red Green Blue 181, 155, 130,

PVC

## TABLE 31

|                      | PVC > | Constants             |
|----------------------|-------|-----------------------|
| Thermal Conductivity |       | 1,2e-006 kg mm^-3     |
|                      |       | 1,5e-004 W mm^-1 C^-1 |
|                      |       | 9,e+005 mJ kg^-1 C^-1 |

TABLE 32
PVC > Color
Red | Green | Blue | 130, | 177, | 176,

Isopor

## TABLE 33

| Isopor > Constants |                        |  |
|--------------------|------------------------|--|
|                    | 3,3e-005 W mm^-1 C^-1  |  |
| Specific Heat      | 1,4e+006 mJ kg^-1 C^-1 |  |
| Density            | 5,e-008 kg mm^-3       |  |

 TABLE 34

 Isopor > Color

 Red
 Green
 Blue

 109,
 157,
 209,

Wood

TABLE 35
Wood > Constants
Thermal Conductivity | 1,73e-004 W mm^-1 C^-1

TABLE 36 Wood > Density Density kg mm^-3 7,e-007

TABLE 37

Page 16 of 17 Project

## Wood > Specific Heat Constant Pressure

Specific Heat mJ kg^-1 C^-1 2,31e+006

> TABLE 38 Wood > Latent Heat Latent Heat mJ kg^-1 0.

TABLE 39
Wood > Vaporization Temperature Vaporization Temperature C

126,85

TABLE 40 Wood > Boiling Point Boiling Point C

126,85

TABLE 41 Wood > Binary Diffusivity
Binary Diffusivity 4,e-005

TABLE 42 Wood > Volatile Fraction Volatile Fraction

TABLE 43 Wood > Combustible Fraction Combustible Fraction 0,2

TABLE 44 Wood > Swelling Coefficient Swelling Coefficient 1,

> TABLE 45 Wood > Emissivity Emissivity 0,9

TABLE 46
Wood > Scattering Factor Scattering Factor 0,9

TABLE 47 Wood > Burn Stoichiometry Burn Stoichiometry 2,67

> TABLE 48 Wood > Burn Hreact
> Burn Hreact 3,2789e+007

TABLE 49 Wood > Burn Hreact Fraction Burn Hreact Fraction 0,3

TABLE 50
Wood > Devolatilization Model Devolatilization Model

TABLE 51 Wood > Absorption Coefficient Absorption Coefficient mm^-1 0,

> TABLE 52 Wood > Color Red Green Blue 103, 192, 205,

**Aluminum Alloy** 

TABLE 53

Coefficient of Thermal Expansion 2,3e-005 C^-1
Specific Heat 8,75e+005 mJ kg^-1 C^-1

TABLE 54
Aluminum Alloy > Color
Red Green Blue
138, 104, 46,

TABLE 55 Aluminum Alloy > Compressive Ultimate Strength

Compressive Ultimate Strength MPa

TABLE 56
Aluminum Alloy > Compressive Yield Strength
Compressive Yield Strength MPa

280,

TABLE 57
Aluminum Alloy > Tensile Yield Strength
Tensile Yield Strength MPa

280,

TABLE 58
Aluminum Alloy > Tensile Ultimate Strength
Tensile Ultimate Strength MPa
310,

TABLE 59
Aluminum Alloy > Isotropic Secant Coefficient of Thermal Expansion

Zero-Thermal-Strain Reference Temperature C

TABLE 60 Aluminum Alloy > Isotropic Thermal Conductivity

| Thermal Conductivity W mm^-1 C^-1 | Temperature C |
|-----------------------------------|---------------|
| 0,114                             | -100,         |
| 0,144                             | 0,            |
| 0,165                             | 100,          |
| 0.175                             | 200           |

TABLE 61
Aluminum Allov > Alternating Stress R-Ratio

| A | luminum Alloy > Altern | ating Stre | ss R-Rati |
|---|------------------------|------------|-----------|
|   | Alternating Stress MPa | Cycles     | R-Ratio   |
|   | 275,8                  | 1700,      | -1,       |
|   | 241,3                  | 5000,      | -1,       |
|   | 206,8                  | 34000      | -1,       |
|   | 172,4                  | 1,4e+005   | -1,       |
|   | 137,9                  | 8,e+005    | -1,       |
|   | 117,2                  | 2,4e+006   | -1,       |
|   | 89,63                  | 5,5e+007   | -1,       |
|   | 82,74                  | 1,e+008    | -1,       |
|   | 170,6                  | 50000      | -0,5      |
|   | 139,6                  | 3,5e+005   | -0,5      |
|   | 108,6                  | 3,7e+006   | -0,5      |
|   | 87,91                  | 1,4e+007   | -0,5      |
|   | 77,57                  | 5,e+007    | -0,5      |
|   | 72,39                  | 1,e+008    | -0,5      |
|   | 144,8                  | 50000      | 0,        |
|   | 120,7                  | 1,9e+005   | 0,        |
|   | 103,4                  | 1,3e+006   | 0,        |
|   | 93,08                  | 4,4e+006   | 0,        |
|   | 86,18                  | 1,2e+007   | 0,        |
|   | 72,39                  | 1,e+008    | 0,        |
|   | 74,12                  | 3,e+005    | 0,5       |
|   | 70,67                  | 1,5e+006   | 0,5       |
|   | 66,36                  | 1,2e+007   | 0,5       |
|   | 62,05                  | 1,e+008    | 0,5       |

## TABLE 62

Aluminum Alloy > Isotropic Resistivity

| Resistivity ohm mm | Temperature C |  |
|--------------------|---------------|--|
| 2,43e-005          | 0,            |  |
| 2,67e-005          | 20,           |  |
| 3 63e-005          | 100           |  |

TABLE 63 Aluminum Alloy > Isotropic Elasticity

| Temperature C | Young's Modulus MPa | Poisson's Ratio | Bulk Modulus MPa | Shear Modulus MPa |
|---------------|---------------------|-----------------|------------------|-------------------|
|               | 71000               | 0,33            | 69608            | 26692             |

## TABLE 64

Aluminum Alloy > Isotropic Relative Permeability

Relative Permeability 1,

Glass

TABLE 65 Glass > Constants

| Thermal Conductivity | 1,4e-003 W mm^-1 C^-1  |
|----------------------|------------------------|
| Density              | 2,5e-006 kg mm^-3      |
| Specific Heat        | 7,5e+005 mJ kg^-1 C^-1 |

## TABLE 66

Glass > Color

Red | Green | Blue | 181, | 168, | 168, |