

# H48-6 Thermal Conductive Pad

Version 4.270318

## Thermal Conductive Pad

H48-6 is a silicone based thermal interface pad which offers a good combination of low thermal impedance, good compressibility and a high dielectric breakdown voltage. H48-6 is available in numerous different formats such as custom die cuts or standard sheets. Additionally, both custom die cut pads and standard sheets can be supplied with either one of two side thermally conductive adhesive applied for greater ease of manufacture.

## Features

- Good thermal conductivity
- Ultra-soft and high compressibility
- Natural tack
- Easy to assemble
- Good insulator
- Shock and vibration absorber

## Applications

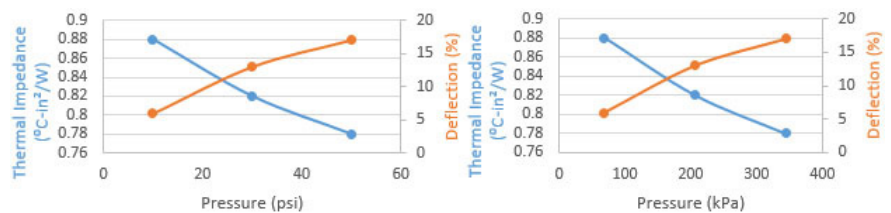
Electronic components: IC, CPU, MOS  
 LED - M/B, P/S, Heat Sink  
 LCD, TV, Notebook PC, PC Telecom Device, Wireless Hub, etc.  
 DDR II Module, DVD Applications, Hand-set applications, etc.

## Properties

- ✓ REACH Compliant
- ✓ ROHS Compliant

| Property   | H48-6             | Unit                | Tolerance | Test Method |
|--|-------------------|---------------------|-----------|-------------|
| Colour   | Dark Grey         | -                   | -         | Visual      |
| Thickness (Available thickness range)                          | 0.3 - 10          | mm                  | -         | ASTM D374   |
|  | 0.0118 - 0.787    | inch                | -         | ASTM D374   |
| Thermal Conductivity   | 3.2               | W/mK                | ±0.3      | ASTM D5470  |
| Flammability Rating  | V-0               | -                   | -         | UL 94       |
| Dielectric Breakdown Voltage                                   | 2                 | kV/mm               | ±0.2      | ASTM D149   |
| Weight Loss  | <1                | %                   | -         | ASTM E595   |
| Density  | 2.42              | g/cm <sup>3</sup>   | ±0.2      | ASTM D792   |
| Working Temperature  | -40 to 200        | °C                  | -         | -           |
| Volume Resistance  | >10 <sup>11</sup> | Ohm-cm              | -         | ASTM D257   |
| Elongation   | 130               | %                   | -         | ASTM D412   |
| Tensile Strength   | 8                 | Kgf/cm <sup>2</sup> | -         | ASTM D412   |
| Hardness   | 30                | Shore A             | ±10       | ASTM D2240  |
| Shelf Life   | 36                | months              | -         | -           |
| Shelf Life with adhesive (can be requalified for a further 12) | 12                | months              | -         | -           |

## Thermal Impedance vs Pressure vs Deflection



T-Global Technology Limited  
 1 & 2 Cosford Business Park, Central Park,  
 Lutterworth, Leicestershire LE17 4QU U.K.

Tel: +44 (0)1455 553 510  
 Email: sales@tglobaltechnology.com  
 Web: www.tglobaltechnology.com  
 Skype: tglobal.technology  
 VAT #: GB 116 662 714



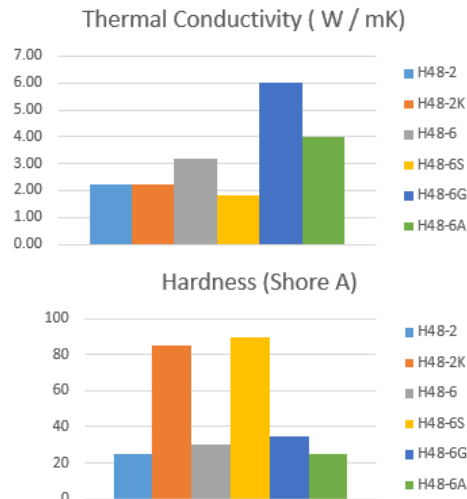
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## Standard Weights & Dimensional Tolerance

| Size    | Thickness (mm) | Weights (g) |        |        |        |        |        |        |        |        |        |          |          |
|---------|----------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|----------|
|         |                | 0.30        | 0.50   | 0.80   | 1.00   | 1.50   | 2.00   | 2.50   | 3.00   | 3.50   | 4.00   | 4.50     | 5.00     |
| 100x100 | 100x100        | 7.29        | 12.15  | 19.44  | 24.30  | 36.45  | 48.60  | 60.75  | 72.90  | 85.05  | 97.20  | 109.35   | 121.50   |
|         | 150x150        | 16.40       | 27.34  | 43.74  | 54.68  | 82.01  | 109.35 | 136.69 | 164.03 | 191.36 | 218.70 | 246.04   | 273.38   |
|         | 300x300        | 65.61       | 109.35 | 174.96 | 218.70 | 328.05 | 437.40 | 546.75 | 656.10 | 765.45 | 874.80 | 984.15   | 1,093.50 |
|         | 320x320        | 74.65       | 124.42 | 199.07 | 248.83 | 373.25 | 497.66 | 622.08 | 746.50 | 870.91 | 995.33 | 1,119.74 | 1,244.16 |

| Size    | Thickness (mm) | Weights (g) |          |          |          |          |          |          |          |          |          |
|---------|----------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|         |                | 5.50        | 6.00     | 6.50     | 7.00     | 7.50     | 8.00     | 8.50     | 9.00     | 9.50     | 10.00    |
| 100x100 | 100x100        | 133.65      | 145.80   | 157.95   | 170.10   | 182.25   | 194.40   | 206.55   | 218.70   | 230.85   | 243.00   |
|         | 150x150        | 300.71      | 328.05   | 355.39   | 382.73   | 410.06   | 437.40   | 464.74   | 492.08   | 519.41   | 546.75   |
|         | 300x300        | 1,202.85    | 1,312.20 | 1,421.55 | 1,530.90 | 1,640.25 | 1,749.60 | 1,858.95 | 1,968.30 | 2,077.65 | 2,187.00 |
|         | 320x320        | 1,368.58    | 1,492.99 | 1,617.41 | 1,741.82 | 1,866.24 | 1,990.66 | 2,115.07 | 2,239.49 | 2,363.90 | 2,488.32 |

## Data



| Die-Cut Thickness Tolerances | Thickness (mm) | Tolerance (mm) |
|------------------------------|----------------|----------------|
|                              | 0.3            | ±0.03          |
|                              | 0.5            | ±0.05          |
|                              | 0.8            | ±0.08          |
|                              | 1.0            | ±0.1           |
|                              | 1.2            | ±0.12          |
|                              | 1.5            | ±0.15          |
|                              | 2.0            | ±0.2           |
|                              | 2.5 - 3.5      | ±0.25          |
|                              | 4.0 - 4.5      | ±0.3           |
|                              | 5.0            | ±0.35          |
|                              | 6.0 - 8.0      | ±0.4           |
| 9.0                          | ±0.45          |                |
| 10.0                         | ±0.5           |                |
| >10.0                        | ±0.5           |                |

\* Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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