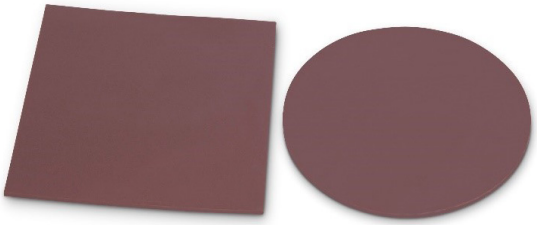
# H48-2
# Thermal Conductive Pad

Version 3.140318



## Thermal Conductive Pad

H48-2 is a silicone based thermal pad which has been designed for both efficient heat transfer away from critical devices and ease of manufacture. H48-2 can be provided in a range of formats and thicknesses, such as standard sheets, rolls or die cuts. Additionally, H48-2 may be provided with either one of two sided adhesive to further facilitate manufacturing processes.

## Features

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

## Applications

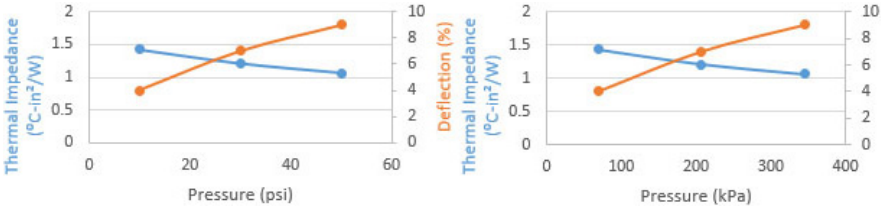
Electronic components: IC, CPU, MOS
LED, M/B, P/S, Heat Sink
LCD, TV, Notebook PC, PC Telecom Device, Wireless, etc.
DDR II Module, DVD Applications, Hand-set applications, etc.

## Properties

✓ REACH Compliant
✓ ROHS Compliant

| Property | H48-2 | Unit | Tolerance | Test Method |
|---|---|---|---|---|
| Colour | Dark Red | - | - | Visual |
| Thickness (Available thickness range) | 0.1 - 10 | mm | - | ASTM D374 |
| | 0.012 - 0.7874 | inch | - | ASTM D374 |
| Thermal Conductivity | 2.2 | W/mK | ±0.22 | ASTM D5470 |
| Flammability Rating | V-0 | - | - | UL 94 |
| Dielectric Breakdown Voltage | 5 | kV/mm | ±0.5 | ASTM D149 |
| Weight Loss | <1 | % | - | ASTM E595 |
| Density | 2.43 | g/cm$^3$ | ±0.2 | ASTM D792 |
| Working Temperature | -40 to 200 | °C | - | - |
| Volume Resistance | >10$^{11}$ | Ohm-cm | - | ASTM D257 |
| Elongation | 282 | % | - | ASTM D412 |
| Tensile Strength | 7 | Kgf/cm$^2$ | ±2 | ASTM D412 |
| Hardness | 25 | Shore A | ±2.5 | 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

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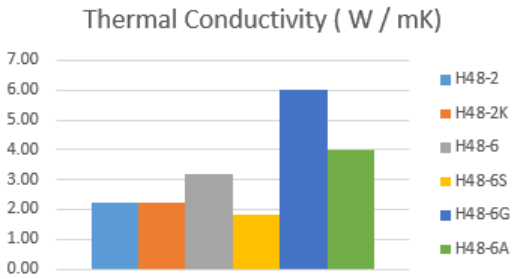
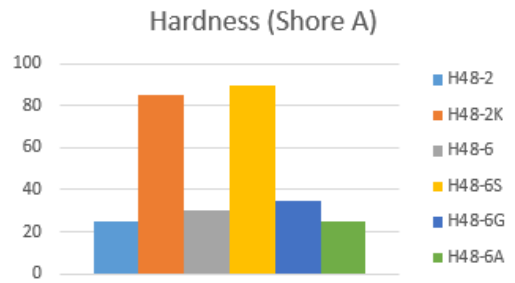
## Standard Weights & Dimensional Tolerance

| Size | Thickness (mm) | Weights (g) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.10 | 0.20 | 0.30 | 0.50 | 0.80 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 | 4.50 |
| | 100x100 | 2.43 | 4.86 | 7.29 | 12.15 | 19.44 | 24.30 | 36.45 | 48.60 | 60.75 | 72.90 | 85.05 | 97.20 | 109.35 |
| | 150x150 | 5.47 | 10.94 | 16.40 | 27.34 | 43.74 | 54.68 | 82.01 | 109.35 | 136.69 | 164.03 | 191.36 | 218.70 | 246.04 |
| | 300x300 | 21.87 | 43.74 | 65.61 | 109.35 | 174.96 | 218.70 | 328.05 | 437.40 | 546.75 | 656.10 | 765.45 | 874.80 | 984.15 |
| | 320x320 | 24.88 | 49.77 | 74.65 | 124.42 | 199.07 | 248.83 | 373.25 | 497.66 | 622.08 | 746.50 | 870.91 | 995.33 | 1,119.74 |

| Size | Thickness (mm) | 5.00 | 5.50 | 6.00 | 6.50 | 7.00 | 7.50 | 8.00 | 8.50 | 9.00 | 9.50 | 10.00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 100x100 | 121.50 | 133.65 | 145.80 | 157.95 | 170.10 | 182.25 | 194.40 | 206.55 | 218.70 | 230.85 | 243.00 |
| | 150x150 | 273.38 | 300.71 | 328.05 | 355.39 | 382.73 | 410.06 | 437.40 | 464.74 | 492.08 | 519.41 | 546.75 |
| | 300x300 | 1,093.50 | 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 | 1,244.16 | 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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