

THERMAL GAP PAD MATERIALS

MATERIAL SELECTION CONSIDERATIONS

When looking for a thermal gap pad material, Marian Sales Engineers have been trained to help you find your way through the maze of choices. Begin with the considerations below. After you answer these questions, Marian can recommend thermal gap pad materials with a specific thickness, durometer, and bulk thermal conductivity to meet the requirements of your application.



THICKNESS OF THE GAP



Start with the thickness of the gap. When it comes to a Thermal Gap Pad, thinner is better as long as the pad closes out all of the air pockets.



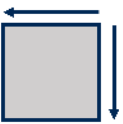
RELATIVE TEXTURE OF SURFACES

No surface is perfect. Extremely rough or serrated surfaces will need compensation in thickness and hardness of the gap pad.



AMOUNT OF CLAMPING FORCE AVAILABLE

If only minimal clamping force is possible, an extremely soft pad material may be needed.



AREA OR SIZE OF THE HEAT SINK / COOLING PLATE

The geometry of the area of the pad and heat sink affect cooling effectiveness of the gap pad. This will also help us recommend a material with a reinforcing layer if necessary.



THERMAL IMPEDANCE / RESISTANCE THAT IS TOLERABLE

Impedance is application specific. If you know the impedance values needed for your components, we can be sure to recommend a material that has adequate conductance. If it is not known, we can help set a target value and then adjust as needed through testing and evaluation.

OTHER CONSIDERATIONS

- Dielectric Constant
- Specific Gravity
- Volume Resistivity
- Operating Temperature Range
- Flammability
- Carrier/Reinforcing Layer
- Thermal Conductivity
- Availability & Cost

PUT MARIAN TO WORK FOR YOU!

Experienced Marian Representatives can help you navigate all of the choices and possibilities, providing samples, data, technical support from manufacturers, prototypes, and assembly recommendations.



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