

3M™ Thermally Conductive Silicone Interface Pad 5515S

Product Description

3M™ Thermally Conductive Silicone Interface Pad 5515S is the same as 3M™ Thermally Conductive Interface Silicone Pad 5515, but with a thin 13 µm polyimide film laminated onto it to help enhance the electrical insulation performance, anti-abrasion and ease of handling and die-cutting. The main function of this product is to help provide a preferential heat transfer path between heat generating components and heat sinks, heat spreaders or other cooling devices.

Features and Benefits

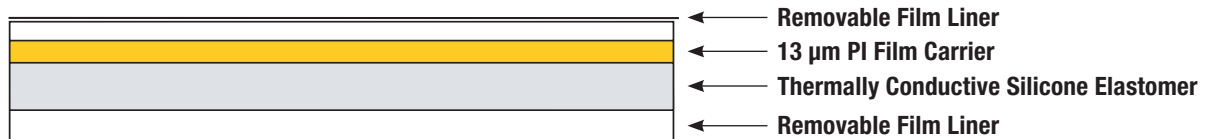
- Thin for lower thermal impedance, 0.20mm and 0.25mm thick products available
- High thermal conductivity
- Excellent electrical insulation properties
- Good dimensional stability for easy and convenient converting
- Anti-abrasion
- Good conformability performance
- High pressure relaxation
- Inherent surface tack allows pre-assembly
- This product is available in a roll format

Product Uses

This product can be used for heat management of electronic devices and joining/stacking parts in electronic components. Mechanical fastening such as clamp, bracket, screw and additional tapes and adhesives bonding can be used in parallel with this pad.

Product Construction

3M™ Thermally Conductive Silicone Interface Pad 5515S



Standard thickness (Silicone layer + PI film): 0.25 mm

Application Ideas

- IC Packaging Heat Conduction
- Insulation TIM between Power and TR and HS
- Assembly of Metal/Ceramic Heat Sink Device
- Spacer for Battery Module/Pack
- COF Chip Heat Conduction
- LED Module/Board TIM
- HD TV Address IC Chip and Scan Module
- Thin Gap Filling between between Board, Module and Chassis

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Thermally Conductive Silicone Interface Pad 5515S-20 and 5515S-25				
Property	Value			Method
Thickness (mm)	0.2 / 0.25 (±0.025mm)			–
Thermal Conductivity (W/mK)*	2.7			QTM-500
Density (g/cm ³ , @ 25°C)*	2.8 (±0.25)			TS-TM-441
Hardness (Shore 00)*	90 (±10)			ASTM D2240
Volume Resistivity (Ω-cm)*	8.6 x 10 ¹⁴			ASTM D257
Dielectric Strength (kV/mm)*	17.7			ASTM D149
Dielectric Constant*	100 Hz	1 Khz	1 Mhz	ASTM D150
	18.4	18.2	18.3	

*3M™ Thermally Conductive Interface Silicone Pad 5515S-25 tested.

Heat resistance of 3M™ Thermally Conductive Interface Silicone Pad 5515S-25

Duration	Initial	100	500	1000
Thermal Conductivity (W/mK)	2.7	2.7	2.7	2.7
Hardness (Shore 00)	93	94	94	94
Appearance	–	No effect	No effect	No effect

Aged at 130°C in high temperature chamber.

Application Techniques

- Positioning is dependent upon the total amount of surface contact developed. Firm application pressure helps develop better contact.
- To obtain optimum thermal conductivity, the wetting surfaces must be maximized. For better contact, clean, dry and well unified surface condition is recommended. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. **Note:** Be sure to follow manufacturer’s safety precautions and directions for use when using solvents.
- Ideal application temperature range is from 0°C to 40°C. Initial application to surfaces at temperatures below 0°C is not recommended because the pad becomes too firm to be wetted readily. However, once properly applied, low temperature holding is generally satisfactory.

Storage and Shelf Life

The shelf life of 3M™ Thermally Conductive Silicone Interface Pad 5515S is 12 months from the manufacture date when stored in original packaging at 21°C (70°F) and 50% relative humidity.

Regulatory

For regulatory information about this product, contact your 3M representative.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

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