

VK-X3S

Ultimate Low-Stress & High-Integrity Pad



Product Description

VOT VK-X3S represents the absolute pinnacle of 3.2 W/m·K thermal interface materials, engineered to resolve the historical trade-off between extreme softness and structural handleability. Featuring an ultra-soft hardness of Shore OO 20, VK-X3S delivers zero-stress compression for highly fragile components, yet it entirely eliminates the messy, putty-like handling typically associated with such low durometer materials.

Through a breakthrough in polymer matrix cross-linking, VK-X3S achieves the cohesive strength and clean operability of a much harder pad while maintaining the extreme compressibility of a liquid-like gel. This unique "Firm-Handling, Soft-Compressing" characteristic allows for flawless, high-speed manual or automated assembly without tearing or deformation. Offering unmatched surface wetting and thermal stability, VK-X3S is the ultimate choice for sophisticated electronic designs that demand premium 3.2W cooling.

FEATURES & BENEFITS

● The 3.2W Flagship Performance:

Delivers top-tier 3.2 W/m·K thermal conductivity with exceptionally low interfacial thermal resistance.

● Paradoxical Structural Integrity:

Handles and peels cleanly like a higher-hardness pad, preventing the "mushy" or stringy behavior of traditional Shore OO 20 materials.

● Ultra-Low Compression Stress:

Shore OO 20 hardness allows for extreme deflection under minimal pressure, entirely protecting bare dies and thin PCBs from mechanical damage.

● Flawless Reworkability:

Retains its shape and cohesive strength after compression, allowing for clean removal during device maintenance.

● Extreme Gap Conformance:

Effortlessly blankets massive topographical differences and large component height tolerances.

● Shock & Vibration Damping:

The ultra-soft core acts as an exceptional mechanical buffer for automotive and portable applications.



PROPERTY	VK-X3S	TEST METHOD
Construction	Ceramic Filled Silicone sheet	N/A
Color	Dark Red	Visual
Density	3.0 g/cc	ASTM D792
Thickness Range	0.3mm~15.0mm	N/A
Thermal Conductivity	3.2 W/m·K	ASTM D5470
Rth at 1mm,10psi	0.35 °C·in ² /W	ASTM D5470
Hardness Shore OO	20	ASTM D2240
Dielectric Constant@1MHz	7.2 @1MHz	ASTM D150
Dielectric Strength	>8 KVac/mm	
Volume Resistivity	10 ¹³ Ω·cm	ASTM D257
Temperature Range	-40°C to 180°C	VOT Test Method
Flammability Rating	V-0	UL 94
Siloxane Volatile Content (D3-D20)	Not Detected	GC-MS

Typical Applications

- Fragile Microelectronics: (Bare-die ICs, flip-chip packages, and delicate memory modules.)
- Automotive Cameras & Sensors
- Consumer Wearables
- High-Tolerance Assemblies
- Optoelectronics
- Thin-Profile Displays
- Telecommunications
- Portable Medical Devices

Storage Conditions

- Storage Temperature: 15°C to 35°C, RH <50%
- Shelf Life: 12 months under above conditions

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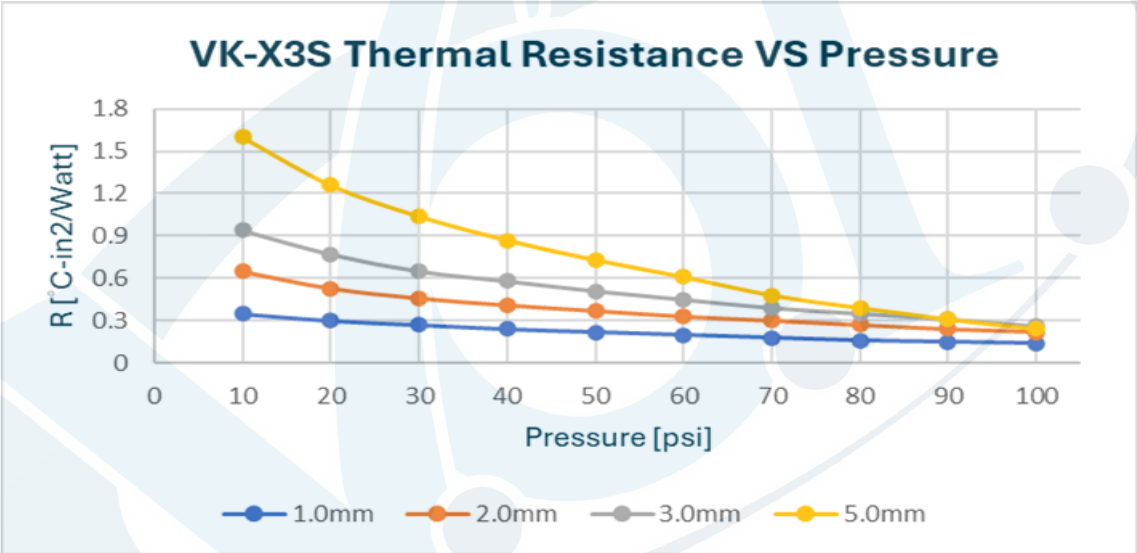
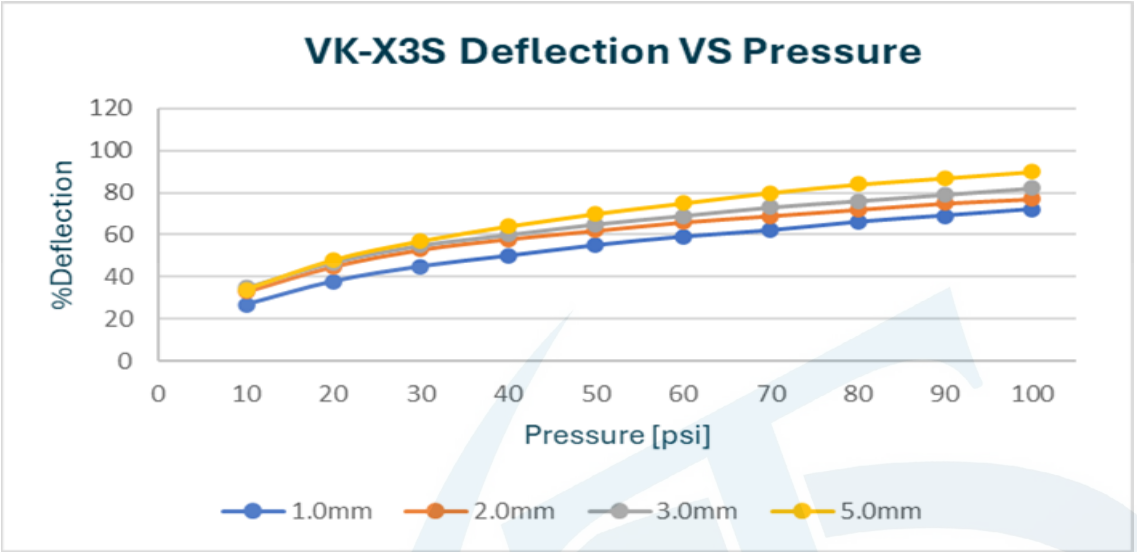
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Limited Warranty: For a period of 12 months from the date of first sale, VOT warrants this product(s) to be free from defects in manufacturing. Our only obligation will be to provide replacement product for any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risks, if any, including the risk of injury, loss or damage, whether direct or consequential, arising out of the use, misuse, or inability to use this product(s).

NOTE: VOT does not assume any responsibility or liability for any advice furnished by it, or for the performance or results of any installation or use of the product(s) or of any final product into which the product(s) may be incorporated by the purchaser and/or user. The purchaser and/or user should perform its own tests to determine the suitability and fitness of the product(s) for the particular purpose desired in any given situation.



VK-	X3S	-	XXXXXX	-	XXX
Gap filler	1: one side tack free 3: VK-6100 on one side 4: fiberglass reinforcement		size 200200=20*20 254254=25.4*25.4		Thickness 008=0.8mm 010=1.0mm

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