Technical Data

Thermal Insulation Pad TIP 2.5Q

Features & Benefits

- Thermal Conductivity of 2.5 W/m-K
- Low mounting pressure
- Excellent cut through resistance (Aluminum foil reinforced)
- Maximum heat transfer and **electrically conductive**
- Low Interfacial Resistance

Applications

- Power Converter
- Storage Devices
- Power Semiconductors
- Automotive/Industrial Electronics

Introduction

TCLAD TIP 2.5Q is a composite of aluminum foil-coated on both sides with thermally/electrically conductive silicone-based gap filling pad type material. The purpose of the material is to fill a gap or space and minimize thermal resistance between the heat source, and the heat sink or heat spreader. TIP series has excellent thermal conductivity cushioning and gap-filling properties, and electrical isolation is not needed. Ideal replacement for thermal grease.

Typical properties of gap filling pad type materials have the following characteristics: thermal conductivity, hardness, volume resistivity, etc. It is typically offered in sheets or custom part size and shapes.

How to use: Place the pad onto the first surface, PCB, component or heatsink. Remove the second liner and apply the mating surface as needed in the application.

Useable life and storage: TIP products perform best if stored in a cool and dry / non-humid environment, especially where it is not exposed to any sunlight. Typical shelf life is up to 12 months when properly stored.

Package Information: Typical package can be individual, or bulk packed or can be in trays or tape and reel.

Precautions: Please review the technical data sheet of the material before use of the product in terms of the material characteristics to fit one's application. All values stated here are typical values.

We provide custom solutions for your applications. For further inquiries, please contact your local sales agent or directly TCLAD sales in your region.

Item	Condition	Unit	Value	Method
General				
Color	Visual	-	Black	-
Continuous Use Temp	-	°C	-60 ~ 200	-
Thickness	Mitutoyo	mm	0.4 ~ 1.0	-
Density	25°C	g/cc	1.8	ASTM D792
Hardness	Shore	A	80	ASTM D2240
Electrical				
Volume Resistivity (0.4 mm @10 psi)	-	Ω·m	$>1\times10^{12}$	ASTM D257
Thermal				
Thermal Conductivity	-	W/m-K	2.5	ASTM D5470
Thermal Impedance	@ 50 psi	°C-in²/W	0.35	ASTM D5470
Thermal Impedance	@ 40 psi	°C-in²/W	0.35	ASTM D5470
Thermal Impedance	@ 30 psi	°C-in²/W	0.37	ASTM D5470
Thermal Impedance	@ 20 psi	°C-in²/W	0.39	ASTM D5470
Thermal Impedance	@ 10 psi	°C-in²/W	0.42	ASTM D5470
Durability				
RoHS	-	-	Compliant	
Flame Rating	Vertical Burn Test	-	V-0	UL94

Application Tips:

- **Clean Surfaces**: Ensure that surfaces are thoroughly cleaned and free from debris before applying thermal pads. This will help achieve optimal thermal contact and performance.
- **Select the Right Thickness**: Choose the appropriate pad thickness based on the gap to be filled and the desired level of compression for optimal thermal management.
- **Apply Light Pressure**: Apply light, even pressure when placing the pad to ensure proper adhesion and maximize thermal efficiency between the components.
- **Choose Based on Thermal Conductivity**: Select the thermal pad with the appropriate conductivity for your specific application to ensure effective heat transfer.
- **Proper Storage**: Store pads in a cool, dry environment to maintain

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