SESI 思尔赛

Thermal Interface Material

Suzhou SESI Electronic Co.,Ltd

1. Company Brief.

Located in Wuzhong District ,Suzhou,China. Next to the Suzhou New district and Tai lake tourist resort. Good transportation infrastructure around.

2. Orperantion Principle

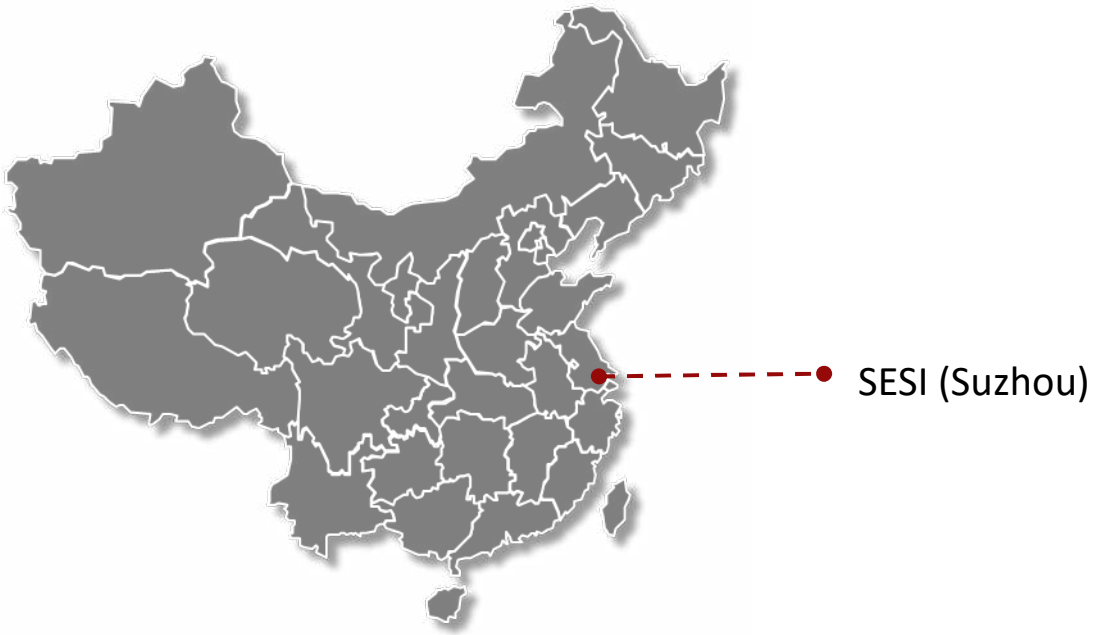
We believe in altruism is egoism. We focus on customer, quality ,technology and process innovation. Within ISO-9001 quality management system

3. Business Scope

Mainly produce thermal comductive gap pad material, Thermally Conductive Insulators,Pouring sealant of thermal conductivity and thermal cundctive gease. Die-cutting Insulator material like（PET、PC、PP etc）、EMI material （conductive fabric and foam、adhesive products （3M.Nitto.Tesa）etc.

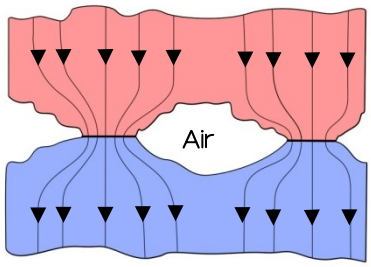
4.Application

Our product used on eco-friendly automobile, 3C product, Computer peripheral ,solar equipement, TV,LED , adaptor and spower storage areas etc.

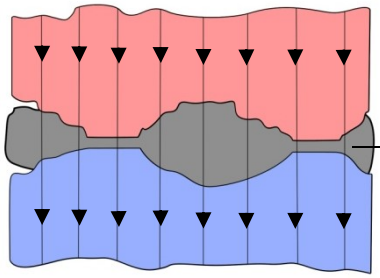


Thermal Conductive Theory

Heat can be conductive efficiently, protect the Heating components



Before using



After using

Thermal conductivity coefficient (K)

Through unit area and thickness, and leading to temperature difference of 2 surfaces is 1 (K, or C), the ratio of its heat and time, is Thermal conductive coefficient, it is material property, nothing to do with parts size and shape.

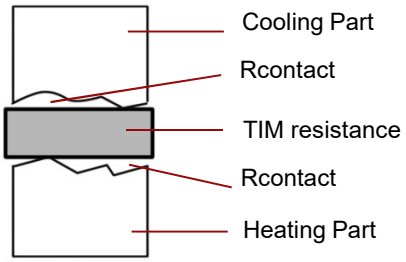
$$K = \frac{\Phi * dx}{A * dt}$$

Thermal resistance (R)

$$R = \frac{X\ (thickness\ )}{K} + R_{contact}$$

The resistance of preventing heat from passing through an interface or material , which is related to thickness and area.

Rcontact: Contact Resistance



导热材料应用领域/TIM Application

Eco-friendly automobile & charging stakes

Server

telecommunication base station

Notebook

TV

Mobile terminal

Medical products

solar panel

LED

Thermal comductive Gap pad

Thermal Conductive Grease

Thermal Conductive Gel

Thermal conductive Phase change material

Thermally Conductive Insulators

Pouring sealant of thermal conductivity

导热硅胶填充材料/Sesi -TGP-10

Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-10 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 1.0 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance

Typical Application

Automobile lithium battery radiator
LED Lighting equipment
Power conversion
Computer and peripherals

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-10 Property List

Parameter			Test equipment	**Test standard**
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Light grey	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	2.32±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	15-60 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	62% @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.55 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	56.4%		
Thermal	Thermal conductivity	1.0 W/m.k	DRL-Ⅲ Thermal conductivity tester	ASTM D5470
	thermal resistance	2.2 ° C-in2/W @20psi @ 1mm	DRL-ⅢThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.29 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	11.2 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$4.5*10^{10}$ Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	6.79 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.0057		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP- 15

Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-15 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 1.5W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance

Typical Application

Automobile lithium battery radiator
LED Lighting equipment
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-15 Property List

Parameter			Test equipment	**Test standard**
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Grey	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	2.62±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	10-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	56% @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.52 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	97.3%		
Thermal	Thermal conductivity	1.5 W/m.k	DRL-Ⅲ Thermal conductivity tester	ASTM D5470
	thermal resistance	1.85 ° C-in2/W @20psi @ 1mm	DRL-ⅢThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.85 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	8.3 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$6.7*10^{10}$ Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	6.54 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.0121		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP-20

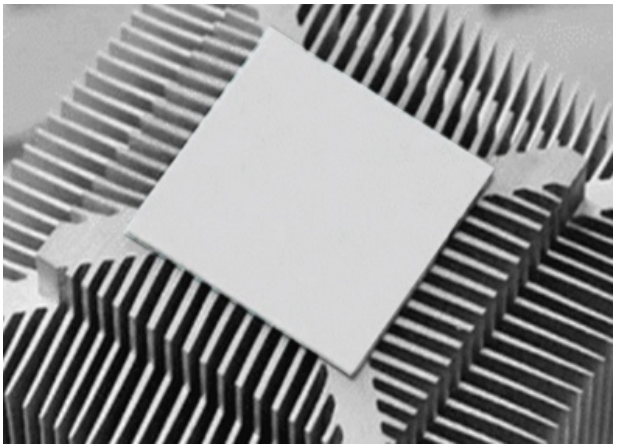
Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-20 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 2.0 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance



Typical Application

Automobile lithium battery radiator
LED Lighting equipment
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-20 Property List

Parameter			Test equipment	Test standard
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Grey-White	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	2.8 ±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	10-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	61 % @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.43 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	104.5 %		
Thermal	Thermal conductivity	2.0 W/m.k	DRL-Ⅲ Thermal conductivity tester	ASTM D5470
	thermal resistance	1.43 ° C-in2/W @20psi @ 1mm	DRL-ⅢThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.71 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	8.8 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$1.1*10^{10}$ Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	7.22 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.0011		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP-25

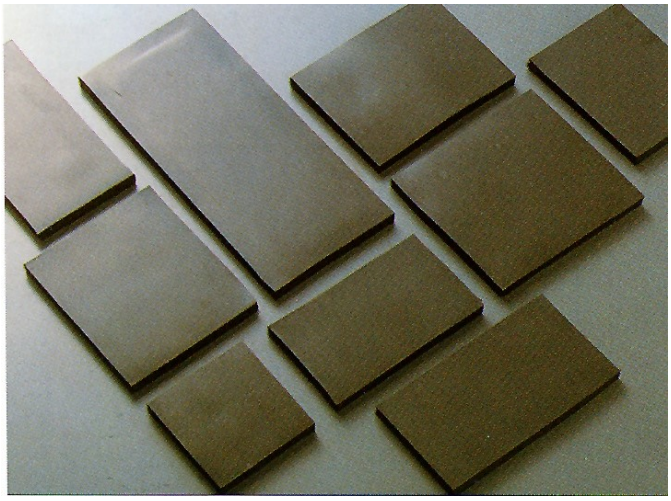
Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-25 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 2.5 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance



Typical Application

Automobile lithium battery radiator
LED Lighting equipment
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-25 Property List

Parameter			Test equipment	Test standard
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Grey-Black	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	3.0 ±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	15-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	52 % @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.3 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	86.5 %		
Thermal	Thermal conductivity	3.0 W/m.k	DRL-III Thermal conductivity tester	ASTM D5470
	thermal resistance	0.99 ° C-in2/W @20psi @ 1mm	DRL-IIIThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.68 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	7.5 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$2.3*10^{11}$ Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	6.33 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.0021		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP-30

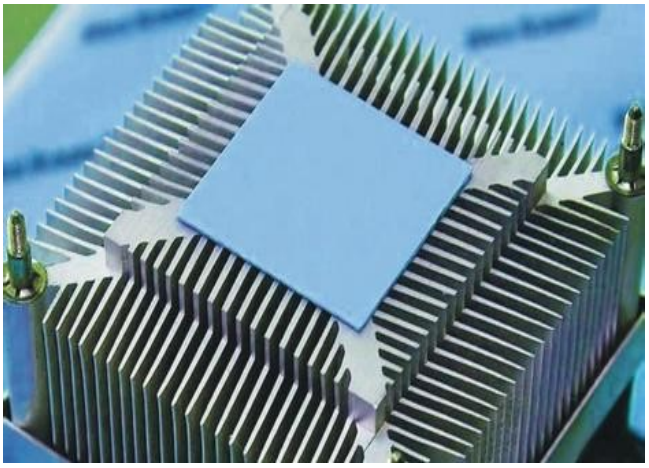
Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-30 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 3.0 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance



Typical Application

Server
LED Lighting equipment
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-30 Property List

Parameter			Test equipment	**Test standard**
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Blue	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	3.05 ±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	25-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	58 % @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.28 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	58.8 %		
Thermal	Thermal conductivity	3.5 W/m.k	DRL-III Thermal conductivity tester	ASTM D5470
	thermal resistance	0.76 ° C-in2/W @20psi @ 1mm	DRL-IIIThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.49 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	9 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$8.0*10^{11}$ Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	5.25 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.0089		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP-35

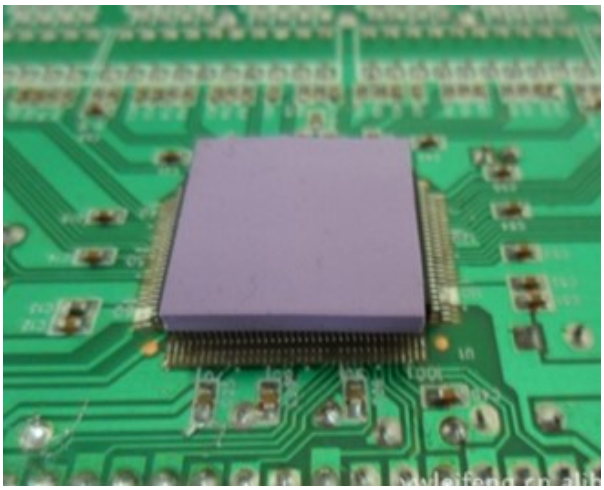
Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-35 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 3.5 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance



Typical Application

Server
High-speed mass storage drives
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-35 Property List

Parameter			Test equipment	Test standard
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Light Red	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	3.05 ±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	25-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	58 % @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.28 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	58.8 %		
Thermal	Thermal conductivity	3.5 W/m.k	DRL-III Thermal conductivity tester	ASTM D5470
	thermal resistance	0.76 ° C-in2/W @20psi @ 1mm	DRL-IIIThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.49 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	9 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$8.0*10^{11}$ Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	5.25 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.0089		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP-40

Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-40 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 4.0 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance

Typical Application

Server
Telecommunications equipment
High-speed mass storage drives
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-40 Property List				
Parameter			Test equipment	**Test standard**
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Grey	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	3.1 ±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	30-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	47 % @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.25 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	84.7 %		
Thermal	Thermal conductivity	4.0 W/m.k	DRL-Ⅲ Thermal conductivity tester	ASTM D5470
	thermal resistance	0.52 ° C-in2/W @20psi @ 1mm	DRL-ⅢThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.47 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	9.8 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	4.5*10^{10}Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	7.06 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.019		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅胶填充材料/Sesi-TGP-50

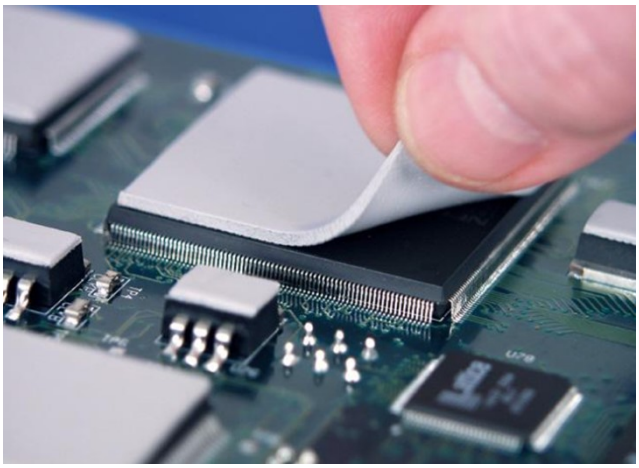
Thermal Conductive Gap Filler Pads

Introduction

Sesi-TGP-50 Gap pad, Highly conformable / low hardness, Good compressibility & self-adhesive strength, excellent filling performance.

Property

K: 5.0 W/m-k
Easily spread out on the uneven surface,
Good insulation ,Flame retardant & self-adhesive performance,
Low thermal resistance



Typical Application

Server
Telecommunications equipment
High-speed mass storage drives
Power conversion
Computer and peripherals
Router
Memory modules

Size

Hardness tolerance： ±5
Size：200mm×400mm, shape to die cutting by requirement
Thickness：0.25mm to 14mm

Sesi-TGP-50 Property List

Parameter			Test equipment	Test standard
Physical	Composition	Ceramic filled silicone rubber	--	--
	Color	Grey	N/A	By visual
	Thickness	0.25 - 14 mm	TECLOCK Thickness gauge	ASTM D374
	Size	As requirement	--	ASTM D1204
	Density	2.7 ±0.2 g/cm3	BS-H Electronic balance	ASTM D792
	hardness	30-55 ±5 Shore 00	TECLOCK Hardness tester	ASTM 2240
	Compression ratio	50 % @50psi	Compressive force tester	ASTMD575-1991
	tensile strength	0.25 MPa	Tensile testing machine	ASTM D412-1998A
	elongation	45 %		
Thermal	Thermal conductivity	5.0 W/m.k	DRL-III Thermal conductivity tester	ASTM D5470
	thermal resistance	0.35 ° C-in2/W @20psi @ 1mm	DRL-IIIThermal conductivity tester	ASTM D5470
	thermo-gravimetric loss	0.45 %（120℃,7d）	Environment test chamber	ASTM E595-2006
Electrical	Dielectric Breakdown Voltage	>10 KV/mm	MS2676A dielectric strength tester	ASTM D149
	Volume resistivity	$3.0*10^{13}$Ω.cm	ZC-36High insulation resistance tester	ASTM D257
	Dielectric constant	5 @1MHz	WY2851D Digital display Q meter	ASTM D150
	Dielectric loss	0.012		
Others	Flame Rating	UL 94 V0	Flame retardant tester	UL 94
	Operating Temperature Range,	-50℃～200℃	Environment test chamber	--

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导热硅脂/Sesi-TGC-12

Thermal Conductive Grease

Introduction

Sesi-TGC-12 Thermal Conductive Grease , As a medium of heat transfer, it has excellent thermal conductivity, good lubrication and electrical insulation, and has good performance of high & low temperature resistance. Low consistency and easy to operate, the products on the basis of polysiloxane, complementary with high thermal conductivity filler, non-toxic tasteless non-corrosive, conforms to the ROHS environmental, stable in chemical & physics aspect.

Property

K 1.2 W/m·k
thermal resistance 0.025 ° C·in2/W (@ 50 psi)
Well contact surface to improve cooling effect
Safe and environmentally friendly, RoHS compatible

Application

Chips and chipsets
The graphics card
Computer cooling fan
Mass storage facility

Configuration, Stotage

1 kg/Tank, 2 kg/Tank, 10 kg/ bucket； 30 cc injection syringe

Stored in a cool, dry place. Shelf life is 12 months.

Sesi-TGC-12 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	White	By Visual
	Viscosity	cps	3.5×10^{5}	Brookfield DV-II+ Spindle–T-F; Speed 2 rpm
	Density	g/cm3	2.5	ASTM D792
Thermal	Thermal conductivity	W/m.k	1.2	ISO 22007-2:2008
	thermal resistance	@50psi	0.025 ° C·in2/W	ASTM D5470
Electrical	Volume resistivity	Ω·cm	$\geq7.0\times10^{11}$	ASTM D257
	Dielectric constant	@1 MHz	5.8	ASTM D150
Others	Operating Temperature Range,	° C	-40 to 200	--
	RoHS Compliant	--	pass	RoHS 2.0

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导热硅脂/Sesi-TGC-20

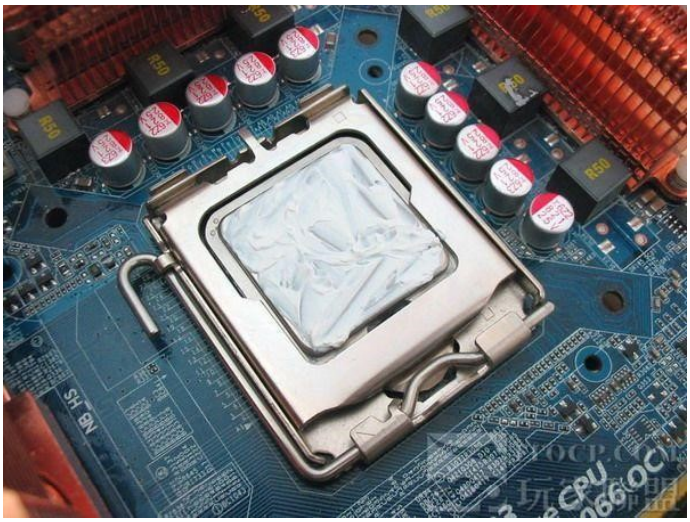
Thermal Conductive Grease

Introduction

Sesi-TGC-20 Thermal Conductive Grease , As a medium of heat transfer, it has excellent thermal conductivity, good lubrication and electrical insulation, and has good performance of high & low temperature resistance. Low consistency and easy to operate, the products on the basis of polysiloxane, complementary with high thermal conductivity filler, non-toxic tasteless non-corrosive, conforms to the ROHS environmental, stable in chemical & physics aspect.

Property

K 2.0 W/m·k
thermal resistance 0.020 ° C·in2/W (@ 50 psi)
Well contact surface to improve cooling effect
Safe and environmentally friendly, RoHS compatible



Application

Chips and chipsets
The graphics card
Computer cooling fan
Mass storage facility

Configuration, Stotage

1 kg/Tank, 2 kg/Tank , 10 kg/ bucket ； 30 cc injection syringe

Stored in a cool, dry place. Shelf life is 12 months.

Sesi-TGC-20 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	White	By Visual
	Viscosity	cps	2.5×10^{5}	Brookfield DV-II+ Spindle–T-F; Speed 2 rpm
	Density	g/cm3	2.4	ASTM D792
Thermal	Thermal conductivity	W/m.k	2	ISO 22007-2:2008
	thermal resistance	@50psi	0.020 ° C·in2/W	ASTM D5470
Electrical	Volume resistivity	Ω·cm	$\geq9.0\times10^{13}$	ASTM D257
	Dielectric constant	@1 MHz	6.5	ASTM D150
Others	Operating Temperature Range,	° C	-40 to 200	--
	RoHS Compliant	--	pass	RoHS 2.0

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导热硅脂/Sesi-TGC-35

Thermal Conductive Grease

Introduction

Sesi-TGC-35 Thermal Conductive Grease , As a medium of heat transfer, it has excellent thermal conductivity, good lubrication and electrical insulation, and has good performance of high & low temperature resistance. Low consistency and easy to operate, the products on the basis of polysiloxane, complementary with high thermal conductivity filler, non-toxic tasteless non-corrosive, conforms to the ROHS environmental, stable in chemical & physics aspect.

Property

K 3.5 W/m·k
thermal resistance 0.015 ° C·in2/W (@ 50 psi)
Well contact surface to improve cooling effect
Safe and environmentally friendly, RoHS compatible

Application

Chips and chipsets
The graphics card
Computer cooling fan
Mass storage facility

Configuration, Stotage

1 kg/Can, 2 kg/Can , 10 kg/ bucket ； 30 cc injection syringe

Stored in a cool, dry place. Shelf life is 12 months.

Sesi-TGC-35 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	Grey	By Visual
	Viscosity	cps	5.0×10^5	Brookfield DV-II+ Spindle–T-F; Speed 2 rpm
	Density	g/cm3	2.81	ASTM D792
Thermal	Thermal conductivity	W/m.k	3.5	ISO 22007-2:2008
	thermal resistance	@50psi	0.015 ° C·in2/W	ASTM D5470
Electrical	Volume resistivity	Ω·cm	≥8.0×1013	ASTM D257
	Dielectric constant	@1 MHz	5.7	ASTM D150
Others	Operating Temperature Range,	° C	-40 to 200	--
	RoHS Compliant	--	pass	RoHS 2.0

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导热凝胶/Sesi-TGL-20

Thermal Conductive Putty (GEL)

Introduction

Sesi TGL - 20 thermal conductive gel is a –low deforming force materials, plastically similar to the plasticine , is suitable for a wide variation in thickness requirement of cooling modules or components. Its adhesive properties, without glue layer, good wettability, which can cover the micro uneven surface matching parts fully contact to improve the efficiency of heat conduction.

Different from the heat-conductive grease, the Sesi TGL - 20 conductive gel has no subsidence, which is suitable for screen printing or scraping, and can be customized for parts of different thickness.

Property

K 2.0 W/m·k
Good plasticity , good replacement of Grease
Excellent wettability， Minimize contact heat resistance
V-0 Flame Rating
Safe and environmentally friendly, RoHS compatible

Application

CPU
Chips and chipsets
The graphics card
Computer cooling fan
Mass storage facility
Cooling Fan

Configuration, Stotage

Per Sheet Size 230×230 mm， Thickness from 0.50 to 8.0 mm
Canned： 1 kg/Can, 10 kg / bucket

Stored in a cool, dry place. Shelf life is 12 months.

Sesi-TGL-20 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	White	By Visual
	hardness	Shore 00	5	ASTM D2240
	Density	g/cm3	2.8	ASTM D792
Thermal	Thermal conductivity	W/m.k	2.0	ISO 22007-2:2008
	thermal resistance	@ 1mm, 20 psi	0.40 ° C·in2/W	ASTM D5470
Electrical	Dielectric Breakdown Voltage	KV/mm	>10.0	ASTM D149
	Volume resistivity	Ω·cm	≥1.0×1014	ASTM D257
	Dielectric constant	@1 MHz	7.2	ASTM D150
Others	Flame Rating	-	94-V0	U.L
	Operating Temperature Range,	° C	-60 to 200	--
	RoHS Compliant	--	pass	RoHS 2.0

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导热凝胶/Sesi-TGL-35

Thermal Conductive Putty (GEL)

Introduction

Sesi TGL - 35 thermal conductive gel is a –low deforming force materials, plastically similar to the plasticine , is suitable for a wide variation in thickness requirement of cooling modules or components. Its adhesive properties, without glue layer, good wettability, which can cover the micro uneven surface matching parts fully contact to improve the efficiency of heat conduction.

Different from the heat-conductive grease, the Sesi TGL - 35 conductive gel has no subsidence, which is suitable for screen printing or scraping, and can be customized for parts of different thickness.

Property

K 3.5 W/m·k
Good plasticity , good replacement of Grease
Excellent wettability， Minimize contact heat resistance
V-0 Flame Rating
Safe and environmentally friendly, RoHS compatible

Application

CPU
Chips and chipsets
The graphics card
Computer cooling fan
Mass storage facility
Cooling Fan

Configuration, Stotage

Per Sheet Size 230×230 mm， Thickness from 0.50 to 8.0 mm
Canned： 1 kg/Can, 10 kg / bucket

Stored in a cool, dry place. Shelf life is 12 months.

Sesi-TGL-35 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	Pink	By Visual
	hardness	Shore 00	10	ASTM D2240
	Density	g/cm3	3.05	ASTM D792
Thermal	Thermal conductivity	W/m.k	3.5	ISO 22007-2:2008
	thermal resistance	@ 1mm, 20 psi	0.07 ° C·in2/W	ASTM D5470
Electrical	Dielectric Breakdown Voltage	KV/mm	>8.0	ASTM D149
	Volume resistivity	Ω·cm	≥1.0×10^{14}	ASTM D257
	Dielectric constant	@1 MHz	6.8	ASTM D150
Others	Flame Rating	-	94-V0	U.L
	Operating Temperature Range,	° C	-60 to 200	--
	RoHS Compliant	--	pass	RoHS 2.0

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导热相变材料/Sesi-TPC-30

Thermal Conductive Phase Change Material

Introduction

Sesi TPC - 30 thermal conductivity of phase change materials provides extreme low thermal resistance for such as high efficiency processor & the cooling module, the material phase change in 50 to 52 ℃, has certain liquidity but won't overflow, can fill the gap, wetting contact surface, improving heat transfer ability between hot parts and cooling parts.

Its adhesive properties, without glue layer, good wettability, which can cover the micro uneven surface matching parts fully contact to improve the efficiency of heat conduction

Property

Extreme low thermal resistance （0.016 ° C·in2/W @ 20psi）
Good Adhesive surface， easy to use
RoHS compatible

Application

Desktop, laptop and server
The microprocessor
Chips and chipsets
NB the cooling module
The graphics card
Storage module

Configuration, Stotage

Standard size 240 × 240 mm, can be cut as demand
Thickness can be customized
Can be added one adhesive layer
This product is non-toxic and non-hazardous, which is transported by general chemicals and stored in cool (room temperature) & dry place.

Sesi-TPC-30 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	Dark Grey	By Visual
	Thickness	mm	0.12~0.25	ASTM D374
	Enhancement layer	-	N/A	-
	Density	g/cm3	2.87	ASTM D792
Thermal	Thermal conductivity	W/m.k	3.0	ASTM D5470
	thermal resistance	@10psi	0.021 ° C·in2/W	ASTM D5470
		@20psi	0.016 ° C·in2/W	
		@50psi	0.013 ° C·in2/W	
	Phase transition temperature	° C	50	DSC
Electrical	Volume resistivity	Ω·cm	3.0×10^{12}	ASTM D257
Others	Operating Temperature Range,	° C	-40 to 125	-
	RoHS Compliant	-	pass	RoHS 2.0

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导热绝缘片/Sesi-TIS-15

Thermal Conductive Insulator Sheet

Introduction

Sesi - TIS - 15 thermal insulation sheet specifically designed for the situation which need both heat transfer and insulation voltage resistance , high-performance elastomeric insulation material based on glass fiber as the reinforced material ,has excellent cutting resistance and thermal performance, is widely used in electronic appliances industries.

Property

Low thermal resistance 0.55° C·in2/W (@ 50 psi)
High insulation and voltage resistance
Wear-resisting ,hard to pierce, easy to use
V-0 Flame Rating

Application

Desktop, laptop and server
The microprocessor
Chips and chipsets
NB the cooling module
The graphics card
Storage module

Configuration, Stotage

Standard size Per roll:300mm × 50 m, can be cut as demand
Can be added one adhesive layer
This product is non-toxic and non-hazardous, which is transported by general chemicals and stored in cool (room temperature) & dry place.

Sesi-TIS-15 Property List

	Property	Unit	Parameter	Test standard
Physical	Color	--	Pink	By Visual
	Thickness	mm	0.15~0.3	ASTM D374
	Enhancement layer	-	Glass Fiber	-
	tensile strength	Mpa	35	ASTM D412
	elongation	%	30	ASTM D412
	Hardness	Shore A	85	ASTM D2240
Thermal	Thermal conductivity	W/m.k	1.5	ASTM D5470
	thermal resistance	@10psi	0.85 ° C·in2/W	ASTM D5470
		@50psi	0.55 ° C·in2/W	
Electrical	Breakdown Voltage	Kv	≥5.0	ASTM D149
	Dielectric constant	@1 MHz	5.9	ASTM D150
	Volume resistivity	Ω·cm	≥3.0×10^{12}	ASTM D257
Others	Flame Rating	-	94-V0	UL
	Operating Temperature Range,	° C	-60 to 180	-
	RoHS Compliant	-	pass	RoHS 2.0

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导热灌封胶/TPS-11
Thermal Conductive Pouring sealant

Introduction
Sesi-TPS-11 The sealant is a high performance elastomer – be solidified into by a low viscosity double component formed by the addition of the reaction. Available by room temperature or heat curing, the higher the temperature, the faster the solidification. Elastomer after curing with good electrical properties, ageing resistance, High and low temperature resistance (- 60 ~ 200)° C, waterproof and moistureproof, deep layer cured well, adhesion, suitable for the surface of PC, PP, ABS, PVC and metal alloy materials, without corrosion effect and no pollution to the surrounding environment; Comply with RoHS and environmental requirements.

Property
Low viscosity, easy to operate
Solidification by room temperature and heat curing
Good electrical insulation and weathering resistance

Process
1. Measurement-- Weigh the exact amount of A and B component ; (before weighing, the A and B component need to be well / evenly stirred , make the slightly settled padding evenly distributed into the gel.)
2. Mixing-- Mix B component into A evenly with the proportion 1:1.
3. Defoaming-- Place the mixture in a vacuum container around 1-5 min.
4. Pouring-- Pour the mixture and seal it into the parts. (The part surface and mixing containers have to be kept clean and dry in advance, cannot be exposed to N, P, S, Sn, Pb, Hg, As and so on, in order not to affect solidification.)
5.Solidification --The finished parts kept in room temperature or heat curing .In winter, recommend to use heat cure.

Configuration, Stotage
20kg Group： A component 10kg/ bucket, B component 10kg/bucket
40kg Group： A component 20kg/ bucket, B component 20kg/bucket
This product is non-toxic and non-hazardous, which is transported by general chemicals and stored in cool (room temperature) & dry place. Shelf life 12 months.

Sesi-TPS-11 Property List

	Property	Unit	A Component	B Component
Physical	Color	--	Grey Fluid	By Visual
	Viscosity	cps	3000-3500	3000-3500
	Blend viscosity	cps	3000-3500	
	Hardness	Shore 00	40-60	
	Density	g/cm3	1.55	
Process	Mix proportion	--	1:1	
	Operating time	min	≤80 (@25° C)	
	Total curing time	--	10min (@90° C)	
			3-5 h (@25° C)	
Thermal	Thermal conductivity	W/m.k	1.0	
Electrical	Breakdown Voltage	KV/mm	21	
	Volume resistivity	Ω·cm	1.0×10^{15}	
	Dielectric constant	@1 MHz	3	
Others	Flame Rating	-	UL 94-V0	
	Operating Temperature Range,	° C	-60 to 200	
	RoHS Compliant	--	pass	

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