

20
YEARS
ANNIVERSARY

PRODUCT BROCHURE

—
**More Innovation
Less Heat**

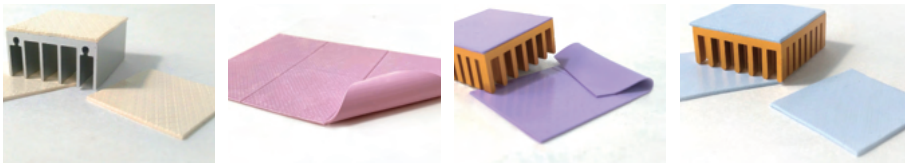
- Thermal Interface Materials
- Heat Sink
- Heat Pipe
- Vapor Chamber
- TEC
- FAM
- Fan
- Thermal Simulation



TG-A series

Ultra Soft Thermal Pad

High thermal conductivity. High compressibility and compliancy.
Electrical insulation. Natural tack.

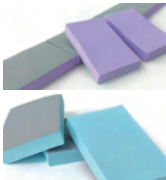


Properties	Unit	TG-A2200	TG-A3500	TG-A4500	TG-A6200	TG-A9000	TG-A1250	TG-A1450	TG-A1660	TG-A1780	TG-AH25	Test Method
Thermal Conductivity	W/mK	2.2	3.5	4.5	6.2	9.0	12.5	14.5	16.6	17.8	25	ASTM D5470
Thickness	mm	0.5~2.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~2.0	0.5~2.0	0.5~2.0	0.8~2.0	ASTM D374
Color	-	Gray	Yellow	Purple	Blue	Pink	Green	Pink	Dark Gray	Light Gray	Dark Gray	Colorimeter
Flame Rating	-	V-1	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	UL94
Dielectric Breakdown Voltage	KV/mm	≥13	≥13	≥10	≥10	≥8	≥10	≥8	≥7	≥8	≥1	ASTM D149
Weight Loss	%	< 1										ASTM E595
Density	g/cm³	2.7	2.3	3.1	3.1	3.2	3.3	3.6	3.6	3.5	3.3	ASTM D792
Operating Temperature	°C	-40~+180	-50~+180									-
Volume Resistivity	Ohm-m	3x10 ¹²	8x10 ¹²	1x10 ¹³	1x10 ¹³	1x10 ¹²	1x10 ¹³	7x10 ¹²	5x10 ¹²	6x10 ¹²	1×10 ⁸	ASTM D257
Elongation	%	55	80	50	50	40	40	30	20	20	10 (J5V-H1000)	ASTM D412
Standard Format	-	Sheet										-
Hardness (Silicone Side)	Shore OO	15	35	50	50	50	55	55	65	70	85	ASTM D2240

TG-A series

Fiberglass Mesh Series Thermal Pad

Very good thermal conductivity. Fiberglass on one side.
Non deforming. Electrical insulation.

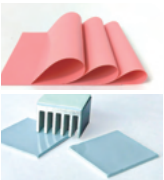


Properties	Unit	TG-A3500F	TG-A4500F	TG-A6200F	Test Method
Thermal Conductivity	W/mK	3	4	5	ASTM D5470
Thickness	mm	0.5~8.0			ASTM D374
Color	-	Yellow	Purple	Blue	Colorimeter
Reinforcement Carrier	-	Fiberglass Mesh			-
Flame Rating	-	V-0			UL94
Dielectric Breakdown Voltage	KV/mm	≥18	≥11	≥12	ASTM D149
Weight Loss	%	<1			ASTM E595
Density	g/cm³	2.3	3.1	3.1	ASTM D792
Operating Temperature	°C	-50~+180			-
Volume Resistivity	Ohm-m	8x10 ¹²	1x10 ¹³	1x10 ¹³	ASTM D257
Elongation	%	80	50	50	ASTM D412
Standard Format	-	Sheet			-
Hardness (Silicone Side)	Shore OO	35	50	50	ASTM2240

TG-A series

Ultra Thin Thermal Pad

Smooth surface. Usable over a wide temperature range.
Electrical insulation and high breakdown voltage.

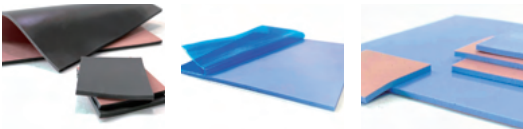


Properties	Unit	GT10D	TG-ALC	TG-A6200LC	TG-A1250LC	Test Method
Thermal Conductivity	W/mK	1.5	4.2	5	10	ASTM D5470
Thickness	mm	0.25	0.2/0.3	0.5~2.5	1.0~4.0	ASTM D374
Color	-	Pink	Green	Pad-Blue LC-Green	Pad-Green LC-Green	Colorimeter
Reinforcement Carrier	-	Fiberglass mesh	-	-	-	-
Flame Rating	-	-	V-0			UL94
Dielectric Breakdown Voltage	KV	≥6	≥4	≥6	≥6	ASTM D149
Weight Loss	%	<0.2	<1			ASTM E595
Density	g/cm³	2	2.9	3	3.3	ASTM D792
Operating Temperature	°C	-45~+180	-50~+180			-
Volume Resistivity	Ohm-m	>10 ¹²	1X10 ¹²	1X10 ¹⁰		ASTM D257
Elongation	%	50	10	50	40	ASTM D412
Tensile Strength	kgf/cm²	150	-	-	-	ASTM D412
Standard Format	-	Sheet				-
Hardness (Silicone Side)	Shore	A 75	A 60	OO 50	OO 60	ASTM D2240

TG-AK series

High Performance Thermal Pad

Great thermal conductivity.
Difficult to be deformed.
Easy to assemble.

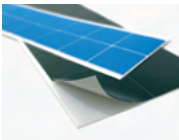


Properties	Unit	TG-20KX	TG-A38KX	TG-A20KF	TG-A38KF	Test Method
Thermal Conductivity	W/mK	2	3.8	1.8	3.3	ASTM D5470
Thickness	mm	0.3~10.0		0.5~10.0		ASTM D374
Color	-	Dark Gray	Blue	Dark Gray	Blue	Colorimeter
Reinforcement Carrier	-	-		Fiberglass Mesh		-
Flame Rating	-	V-0				UL94
Dielectric Breakdown Voltage	KV/mm	≥12	≥10	≥13	≥10	ASTM D149
Weight Loss	%	<1				ASTM E595
Density	g/cm³	2	3.1	2.1	3.1	ASTM D792
Operating Temperature	°C	-40~+180	-40~+200	-40~+180	-40~+200	-
Volume Resistivity	Ohm-m	3x10 ¹²				ASTM D257
Elongation (Silicone side)	%	160	110	160	110	ASTM D412
Standard Format	-	Sheet				-
Hardness (Silicone Side)	ShoreOO	55	60	55	60	ASTM2240

- ※ The thickness is less than 1.0mm, considering that it's too soft to pick up from the bottom paper, therefore, adjusting the hardness to 50~75 for production line.
- ※ Different tolerances according to the selected thickness.
- ※ Diecut for different shapes.

TG-T1000 Series Thermal Tape

Good adhesion(Acrylic PSA). Great reliability. Cost effective with great performance. Easy to assemble. Customization services for different industries.



Properties	Unit	TG-T1000		TG-T1000T	Test Method
Thermal Conductivity	W/mK	1	1	1.3	ASTM D5470
Thickness	mm	0.15	0.25	0.11	ASTM D374
Color	-	White		Gray	Visual
Reinforcement Carrier	-	Fiberglass Mesh		PET	-
Continuous Operating Temperature	°C	-30~+120		-40~+120	-
Short Time Use Temperature (30sec)	°C	180		200	-
Density	g/cm³	1.2		1.5	ASTM D792
Initial Tack	cm	19	11	24	PSTC-6
Holding Power 1000g @25° Cusing 1in²	min	>3000		>1000	PSTC-7
180° Peeling Strength (aluminum)	N/25mm	>14	>16	≥7	PSTC-101
Dielectric Breakdown Voltage (AC)	KV	≥3	≥6	≥4	ASTM D149
Thermal Impedance @10psi	°C-in²/W	0.93	1.26	0.68	ASTM D5470
Thermal Impedance @30psi	°C-in²/W	0.76	1.06	0.66	ASTM D5470
Thermal Impedance @50psi	°C-in²/W	0.61	1.05	0.65	ASTM D5470

Thermal Grease

Good leveling agent. No overflow. Effectively fill the gap of the interface.



Properties	Unit	TG-AS808 / TG-S808	TG-N909	TG-AS606B / S606B	TG-AS606C / S606C	Test Method
Thermal Conductivity	W/mK	8	9	1.9	5.3	ASTM D5470
Color	-	Gray	Gray	White	Gray	Visual
Oil Dispersible	wt%	< 0.1	< 0.1	< 0.2	< 0.05	24hrs@150°C
Weight Loss	wt%	< 0.1	< 0.1	< 0.5	< 0.5	ASTM E595
Density	g/cm³	3.2	3.3	2.3	2.3	ASTM D792
Operating Temperature	°C	-40~+200		-40~+180		-
Viscosity	Pa·s	-	-	30	125	ASTM D2196
Volume Resistivity	Ohm·m	> 10 ¹³		> 10 ¹¹	> 10 ¹²	ASTM D257
Standard Package	-	Pot		Tube/Pot		-

Thermal Putty

Low thermal resistance. Shapeable and compressible.



Properties	Unit	TG4040 PUTTY	TG6060 PUTTY	TG-A7000 PUTTY	Test Method
Thermal Conductivity	W/mK	3.2	6.3	7.0	ASTM D5470
Color	-	Blue		Green	Visual
Viscosity	Pa·s	@0.5rpm 3000	@0.5rpm 2,500~3,000	@1rpm/5mins 180~270	Brookfield
Density	g/cm³	3	3.3	3.5	ASTM D792
Volume Resistivity	Ohm·m	10 ¹³			ASTM D257
Operating Temperature	°C	-50~+180			-
Standard Package	-	Tube/Pot			-

Potting Compound

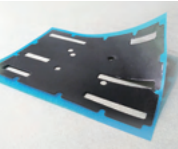
High stability. Heat curing.



Properties	Unit	TG-A09AB	Test Method
Thermal Conductivity	W/mK	2.8	ASTM D5470
Color	-	Gray(Mix)	Visual
Dielectric Breakdown Voltage	KV/mm	≥11	ASTM D149
Volume Resistivity	Ohm·m	≥10 ¹²	ASTM D257
Density	g/cm³	2.52	ASTM D792
Operating Temperature	°C	-50~+150	-
Tensile Strength @3.0mm	kgf/cm²	230	ASTM D412
Elongation	%	55	ASTM D412
Viscoity @1RPM/5mins	Pa·s	100~250	Brookfield
Weight Loss	%	< 1	ASTM E595
Curing Time @25° C	Hrs	6	-
Curing Time @80° C	Hrs	0.08	-
Standard Package	-	Pot	-
Hardness	Shore OO	90	-
Mixing Ratio	gram	1:1	-

T68 Artificial Graphite Sheet

High thermal conductivity. Low mass.



Properties	Unit	T68	Test Method
Thermal Conductivity (XY axis)	W/mK	1500	AC Calorimeter
Thermal Conductivity (Z axis)	W/mK	5	Laser Flash
Thickness	µm	25	Micrometer
Color	-	Black	Visual
Flame Rating	-	V-0	UL94
Thermal Diffusivity	cm²/s	8.5	AC Calorimeter
Density	g/cm³	2.1	Archimedes Law
Electrical Conductivity	S/cm	>13000	JIS K7194
Bending Test	times	10000	-
Operating Temperature	%	-40~+400	AC Calorimeter
Heat Capacity (SHC)	J/g·K	0.895	-

T62 Natural Graphite Sheet

Low mass decreases space, EMI reduction.



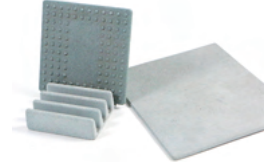
Properties	Unit	T62	T62-1	T62-2	Test Method
Thermal Conductivity (XY axis)	W/mK	400			AC Calorimeter
Thermal Conductivity (Z axis)	W/mK	20	15	5	Laser Flash
Thickness	mm	0.13	0.16	0.2	Micrometer
Color	-	Black			Visual
Structure	-	Graphite	Graphite +Adhesive	PET+Graphite +Adhesive	-
Density	g/cm³	1.5	1.5~1.8		ASTM D792
Graphite Contained	%	>98			-
Operating Temperature	°C	-30~+100			-

Open-porous structure increases air contact area.



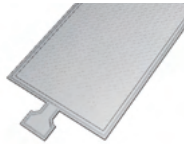
Properties	Unit	XL-25	Test Method
Thermal Conductivity	W/mK	10	-
Color	-	Gray/Green	Visual
Dielectric Breakdown Voltage	KV/mm	≥0.5	ASTM D149
Bulk Density	g/cm³	1.89	CNS 619
Flexural Strength	kgf/cm²	47.5	CNS 12701
Porosity	%	25	CNS 619
Water Absorption	%	16	CNS 619
Operating Temperature	°C	<500	-
Linear Thermal Expansion Coefficient	10 ⁻⁶	4.13	RT–300°C
Main Composition	-	SiC/Al ₂ O ₃ /SiO ₂	-
Hardness	Moh's	5–6	DIN En101-1992

High reliability. Non toxic. High temperature resistance.



Properties	Unit	XL-25W	XL-25D	Test Method
Thermal Conductivity	W/mK	25	190~210	-
Color	-	White	Dark Gray	Visual
Dielectric Breakdown Voltage	KV/mm	≥15	≥18.45	ASTM D149
Bulk Density	g/cm³	≥3.8	3.32	CNS 619
Volume Resistivity	Ohm-m	10 ¹²	1.4x10 ¹³	-
Flexural Strength	kgf/cm²	4078.8	3416	CNS 12701
Linear Thermal Expansion Coefficient	10 ⁻⁶	6.6~8	2.805	RT~300°C
Main Composition	-	Al ₂ O ₃	AlN	-

Horizontally conduction. Passive components. High stability. Efficiency higher than heat pipe 10 times.

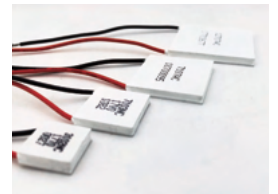


Properties	Unit	VC001	VC002	VC003	XVC-A001	XVC-A002	Tolerance
Size	mm	56x56	106x70	106x70	90x60	80x80	±0.3
Thickness	mm	3.0	3.0	25.5	0.4	0.4	±0.05
Thermal Resistance	°C/W	≤0.21	≤0.16	≤0.16	<0.02	<0.02	-
Material	-	Pure Copper			Copper Alloy		-
Surface Finishing	-	Anti-oxidation					-
Extra Components	-	-	-	Copper Heat Sink	-	-	-
Operation Power (Q _{max})	W	≥110	≥150	≥150	10	10	-
Image	-						-

Fast heat-balancing.
Passive components. Light-weighted.



Small bulk. Light weight. Vibration-free. Noise-free.
Precise temperature control. High strength for rugged environments.



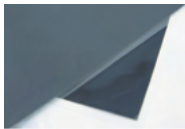
Diameter(mm)	Thickness(mm)	Width(mm)
Ø4	2	5.65
	2.5	5.55
	3	5.45
Ø5	2	6.91
	2.5	6.59
	3	6.32
	3.5	6.01
	4	5.68
Ø6	2	8.50
	2.5	8.18
	3	7.95
	3.5	7.65
	4	7.39
Ø8	2	11.65
	2.5	11.39
	3	11.15
	3.5	10.83
	4	10.60
	4.5	10.27
	5	10.01
	6	9.36
• Thickness tolerance: +0.05/-0.10mm • Width tolerance: +0.15/-0.20mm		

Size(mm)	Height(mm)	I _{max} (A)	V _{max} (V)	Watt(W)	@27° Q _{max} (W)	@50° Q _{max} (W)	R(Ω)
15×15	3.1	6.0	3.8	22.8	13	14.3	0.45Ω±10%
	3.4	8.5	2.1	17.9	10.3	11.3	0.20Ω±10%
	3.6	3.9	3.8	14.8	8.6	9.5	0.85Ω±10%
	3.8	3.0	3.8	11.4	7.3	8.0	1.00Ω±10%
	3.9	6.0	2.1	12.6	7.4	8.2	0.30Ω±10%
	4.7	2.0	3.8	7.6	4.4	5.0	1.65Ω±10%
20×20	3.1	6.0	8.8	52.8	29.7	32.7	1.05Ω±10%
	3.4	8.5	3.8	32.3	18.8	20.8	0.35Ω±10%
	3.6	3.9	8.8	34.3	18.7	20.9	1.95Ω±10%
	3.8	3.0	8.8	26.4	16.6	18	2.20Ω±10%
	3.9	6.0	3.8	22.8	13.6	14.9	0.55Ω±10%
	4.7	2.0	8.8	17.6	10.2	11.2	3.70Ω±10%
30×30	3.15	6.0	15.7	94.2	53.1	59.1	1.90Ω±10%
	3.45	8.5	8.8	74.8	43.1	48	0.85Ω±10%
	3.65	3.9	15.7	61.2	35.2	39	3.50Ω±10%
	3.85	3.0	15.7	47.1	29.8	32.5	4.00Ω±10%
	3.95	6.0	8.8	52.8	31.1	34.2	1.25Ω±10%
	3.95	6.0	11.8	70.8	48	52.8	1.65Ω±10%
	4.75	2.0	15.7	31.4	18.2	19.5	6.70Ω±10%
40×40	3.45	8.5	15.7	133.5	77.1	85	1.50Ω±10%
	3.95	6.0	15.7	94.2	55.6	61	2.20Ω±10%
• The above are our standard sizes. For other special sizes, please contact our product consultants.							

TG-P100 series

Graphene

Ultra thin, Available for unventilated design,
No dusting issue.

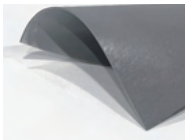


Properties	Unit	TG-P10050	TG-P10090	Test Method
Thermal Conductivity (XY axis)	W/mK	1500~1800		AC Calorimeter
Thermal Conductivity (Z axis)	W/mK	12		Laser Flash
Total Thickness	μm	50	90	Meter
Copper Foil Thickness	μm	35	75	Meter
Coating Thickness	μm	15		Meter
Vertical Resistivity	Ohm-inch ²	2.57		QJ1523-1988
Parallel Resistivity	Ohm-inch ²	0.66		QJ1523-1988
Cross-Cut Tape Test	-	4B		ASTM D3359B
Pencil Hardness Test	-	2H		ASTM D3363
Solvent Resistance (Alcohol)	-	Pass(5 times)		ASTM D5402
Rubber Abrasive Test	-	Pass(150 times)		ASTM D7835
High Temperature & Humidity Test	-	Pass(500 hrs)		IEC-60068-2-78
Thermal Shock Test@-20~+80°C	-	Pass(500 cycles)		IEC-60068-2-14
Temperature Range of Utility	°C	-20~+120		ISO 16750-4

TG-V series

Phase Change Material

With the good flow ability over phase change temperature,
surface irregularities can be well filled.

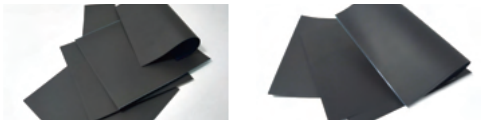


Properties	Unit	TG-V833	TG-V838	Test Method
Thermal Conductivity	W/mK	3.3	3.8	ASTM D5470
Thickness	mm	0.13/0.2/0.3		ASTM D374
Color	-	Gray		Visual
Phase Transition Temperature	°C	50		-
Breakdown Voltage (AC)	KV	≥1		ASTM D149
Density	g/cm ³	3.4	2.5	ASTM D792
Operating Temperature	°C	-40~+125		-
Volume Resistivity	Ohm-m	3x10 ¹¹	3x10 ¹⁰	ASTM D257
Thermal Impedance @10psi	°C-in ² /W	0.126	0.165	ASTM D5470
Thermal Impedance @30psi	°C-in ² /W	0.105	0.137	ASTM D5470
Thermal Impedance @50psi	°C-in ² /W	0.097	0.121	ASTM D5470
Dielectric Constant @1KHz	-	13.3		ASTM D150

TG-FAM series

Flexible Absorbent Material

Provide effective EMI suppression in a wide frequency range.

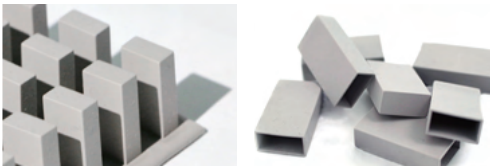


Properties	Unit	TG-FAM1	TG-FAM3	TG-FAM6	TG-FAM7
Frequency	GHz	0.001-18.0		0.001-9.0	0.001-3.0
Thickness	mm	0.12-2.50	0.25/0.50/0.75	0.05/0.1/0.2/0.3/0.5	0.08/0.12/0.22
Maximum Size	mm	400 x 400		210 x 297(A4 Size)	130 x 130
Material	-	Magnetic Particles+Rubber			Sintering Iron-core
Magnetic Inductivity (μ'@1MHz)	-	25	50	170	140
Halogen	-	Halogen Contained		Halogen Free	
Operating Temperature	°C	-40~+85		-40~+155	-30~+120
Density	g/cm ³	3.6	4.8	4.4	3.8
Surface Resistivity	Ohm	10 ⁶		10 ⁵	10 ⁹

CP series

Thermal Insulation Rubber Cap

Low thermal contact resistance. Electrically isolating. Easy to assemble.



Properties	Unit	CP22/CP23/CP33	Test Method
Thermal Conductivity	W/mK	2	ASTM D5470
Thickness	mm	0.3/0.45	ASTM D374
Color	-	Gray	Visual
Operating Temperature	°C	-45~+180	-
Density	g/cm ³	2.55	ASTM D792
Dielectric Breakdown Voltage (AC)	KV	≥4.1/6.1	ASTM D149
Dielectric Breakdown Voltage (DC)	KV	≥6.1/8.1	ASTM D149
Dielectric Constant	1000 Hz	5.8	ASTM D150
Thermal Impedance @10psi	°C-in ² /w	1.13	ASTM D5470
Thermal Impedance @20psi	°C-in ² /w	1.07	ASTM D5470
Thermal Impedance @50psi	°C-in ² /w	0.97	ASTM D5470
Hardness	Shore A	65	ASTM D2240

Online Instant Calculator /

Fast Evaluation of

Suitable Thermal Solutions

Stuck with thermal dissipation testing?

How much heat could my design solve with?

Struggling what thermal interface material to apply?

Save Time of Testing and Provide

More Possibilities in Thermal Solutions

1

Enter Dissipation Mechanism Data

2

Receive Recommendation of Thermal Solution Products

3

Help You with Design Improving and Cost Saving

New!

Closed System

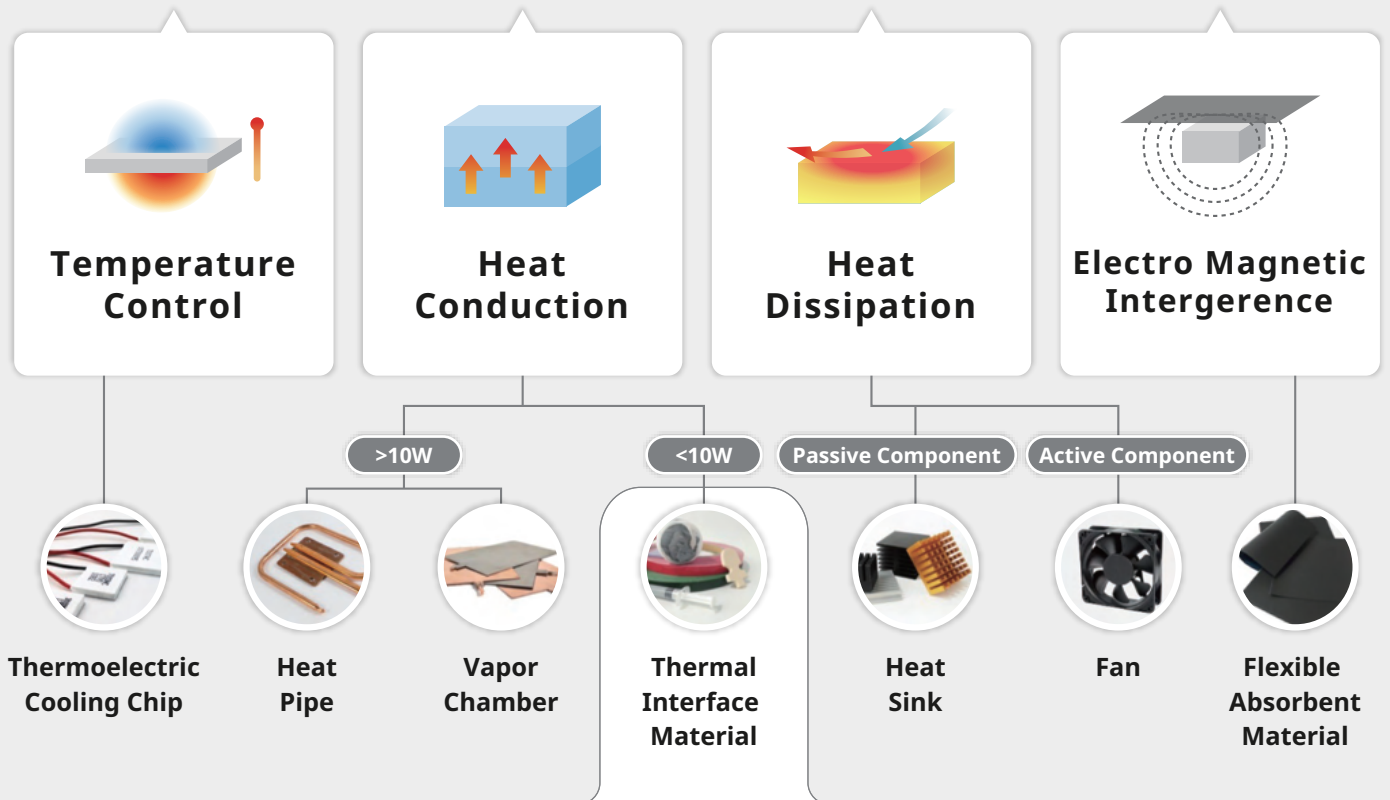
Heat Pipe

Open System

Try now!

Selection Guide

Which Product Will Best Fit Your Needs?



Z axis

heat conduction

Sheet

High K value

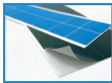
Thermal Pad



1.5-17.8 W/mK

High viscosity

Thermal Tape



High Electrical Insulation

Grease

Low thermal resistance

Thermal Grease



High viscosity

Thermal Putty



Aging & curing

Potting Compound

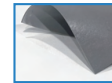


Often used for products with large temperature changes

Special shape

Cool down quickly

Phase Change Material



Insulation

Thermal Insulation Rubber Cap



XY axis

heat conduction

Graphite

Lightweight

Copper

Graphite Sheet

High thermal conductivity/EMI reduction

Graphene

Available for unventilated design/No dusting issue

Used for mobile phone



NOTICE: The information contained herein is to the best of our knowledge true and accurate. Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. All specifications are subject to change without notice. The protective film and release paper does not affect the function of the product. If there is no special requirement, the default depends on T-Global. Since the varied conditions of potential use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part and users should make their own test to determine the suitability of our products in any specific situation. This product is sold without warranty either expressed or implied, of fitness for a particular purpose or otherwise, except that this product shall be of standard quality, and except to the extent otherwise stated in T-Global Technology's invoice, quotation, or order acknowledgment. We disclaim any and all liabilities incurred in connection with the use of information contained herein, or otherwise. All risks of such are assumed by the user. Furthermore, nothing contained herein shall be construed as a recommendation to use any process or to manufacture or to use any product in conflict with existing or future patents covering any product or material or its use.

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