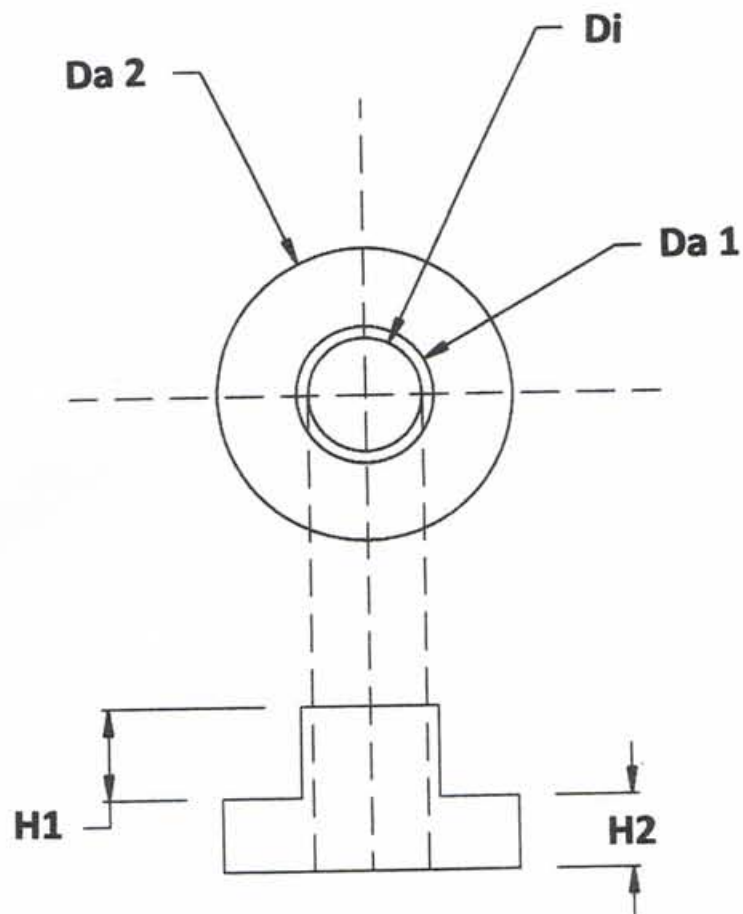


NYLON – ISOLIERBUCHSEN

Abmessungen in mm

Type	D_i	Da_1	Da_2	H_1	H_2
B – TO-220	3.0	3.6	6.1	1.5	1.1
B – TO-220A	3.0	3.6	6.1	2.0	1.2
B – TO-220B	3.0	3.6	6.1	2.5	2.0
B – TO-220D	3.0	3.5	6.1	2.9	1.9
B – TO-3	3.1	3.75	8.0	2.5	2.0
B – TO-3A	3.2	4.2	7.8	0.85	1.95
B – TO-3B	3.2	4.3	8.1	1.8	1.5



NYLON - ISOLIERBUCHSEN

Technical Information:

	Properties	Typical Values	Unit	Test Method
Physical	Color	Beige	Visual	--
	Finish	Smooth	Visual	--
Mechanical	Specific Gravity	1.50 ± 0.1	g/cm ³	ASTM D792
	Tensile Strength	1000	kg/cm ²	ASTM D638
	Elongation	2.5	%	ASTM D638
	Flexural Strength	1300	kg/cm ²	ASTM D790
	Flexural Modulus	50000	kg/cm ²	ASTM D790
	IZOD Impact Strength (Gap 1/8")	5	Kg-cm/cm	ASTM D256
	Rockwell Hardness	120	R-Scale	ASTM D785
	Formation Shrinkage Rate (Floating direction)	0.4~0.5	%	3mmt
	Formation Shrinkage Rate (Horizontal direction)	1.0~1.3	%	3mmt
Electrical	Dielectric Voltage Breakdown	2	KV	ASTM D149
	Dielectric Constant (10 ⁶ Hz)	3.3	---	ASTM D150
	Dielectric Dissipation Factor (10 ⁶ Hz)	0.016	---	ASTM D150
	Arc Resistance	90	Sec	ASTM D495
	Volume Resistivity	10 ¹⁶	Ω • cm	ASTM D257
Thermal	Melting Point	224	°C	DSC
	Melt Flow Index	25	G/10min	ASTM D1238
	Thermal Variation Temperature (18.6 kg/cm ²)	<105	°C	ASTM D648
Regulatory	Flammability Rating	V-0	--	UL94
	RoHS Compliant	Yes	--	Lab. Certification

* The above testing results comes from laboratory report, information are for your reference only.

INSULATING & HEAT SINK MATERIAL

Thermal Insulator Caps



Characteristic:

Insulation, heat sink, anti-friction, flame retardation, anti-compression and RoHS compliance.

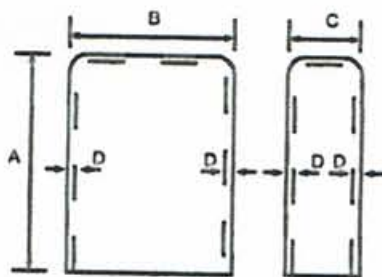
Usage:

Heat sink and insulating purpose for electronic parts.

Specification:

P-TO-220-A, P-TO-220-B, P-TO-220-C, P-TO-3P-A, P-TO-3P-B, P-TO-232.

Color: Grau



Dimension(mm)				
Item No	Dim.A	Dim.B	Dim.C	Dim.D
P-TO-220-A	21.5±0.1	11.5±0.1	5.9±0.1	0.5±0.1
P-TO-220-B	16.0±0.1	11.5±0.1	5.9±0.1	0.5±0.1
P-TO-220-C	21.8±0.1	12.1±0.5	6.5±0.3	0.8±0.1
P-TO-3P-A	28.5±0.1	17.5±0.5	5.9±0.3	0.5±0.1
P-TO-3P-B	28.8±0.1	18.2±0.5	6.6±0.3	0.8±0.1
P-TO-232	10.0±0.1	11.5±0.1	5.9±0.1	0.5±0.1

Technical Information:

	Properties	D = 0.5mm	D = 0.8mm	Unit	Test Method
Physical	Color	Gray	Gray	Visual	--
	Operating Temperature	-40~+180	-40~+180	°C	--
Mechanical	Specific Gravity	1.70	1.70	g/cm ³	ASTM D792
	Tensile Strength	16.5 ± 3	20.5 ± 3	kgf/cm ²	ASTM D412
	Tensile Change	+4.3	+5.4	%	ASTM D573
	Elongation	140	160	%	ASTM D412
	Hardness	70 ± 5	70 ± 5	Shore A	ASTM D2240
Electrical	Voltage Breakdown	3.5	4.0	kV	ASTM D149
	Volume Change	0.36	0.48	%	ASTM D570
Thermal	Thermal Conductivity	0.3	0.3	W/m.k	ASTM D5470
Regulatory	Flammability Rating	V-0	V-0	--	UL 94
	RoHS Compliant	Yes	Yes	--	Lab. Certification
	PFOA Compliant	Yes	Yes	--	Lab. Certification
	PFOS Compliant	Yes	Yes	--	Lab. Certification
	SVHC Compliant	Yes	Yes	--	Lab. Certification

* The above testing results comes from laboratory report, information are for your reference only.

INSULATING & HEAT SINK MATERIAL

Thermal Insulator Pads



Characteristic:

Insulation, heat sink, anti-friction, flame retardation, anti-compression and RoHS compliance.

Usage:

For use in products applications such as electrical appliances, electronic devices, car mechanical machinery for heat sink and insulating purpose. Dimensions and shapes can vary depending on the application.

Specification:

TO-220, TO-220-BH, TO-3, TO-3P, TO-3P-BH

Color: Grau

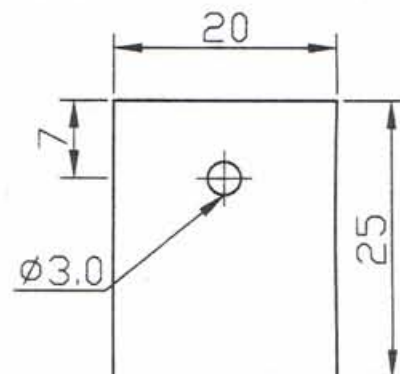
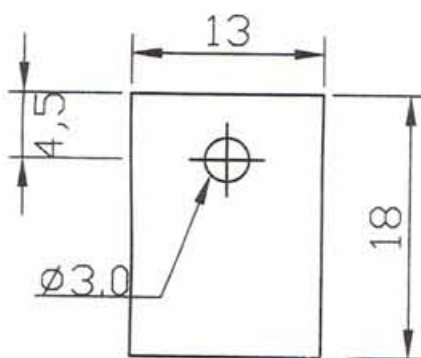
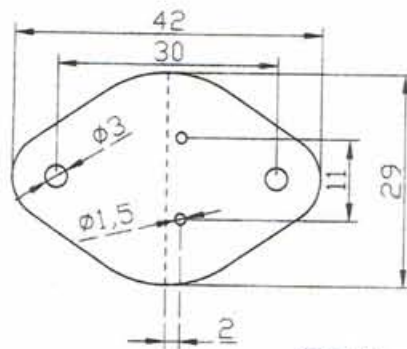
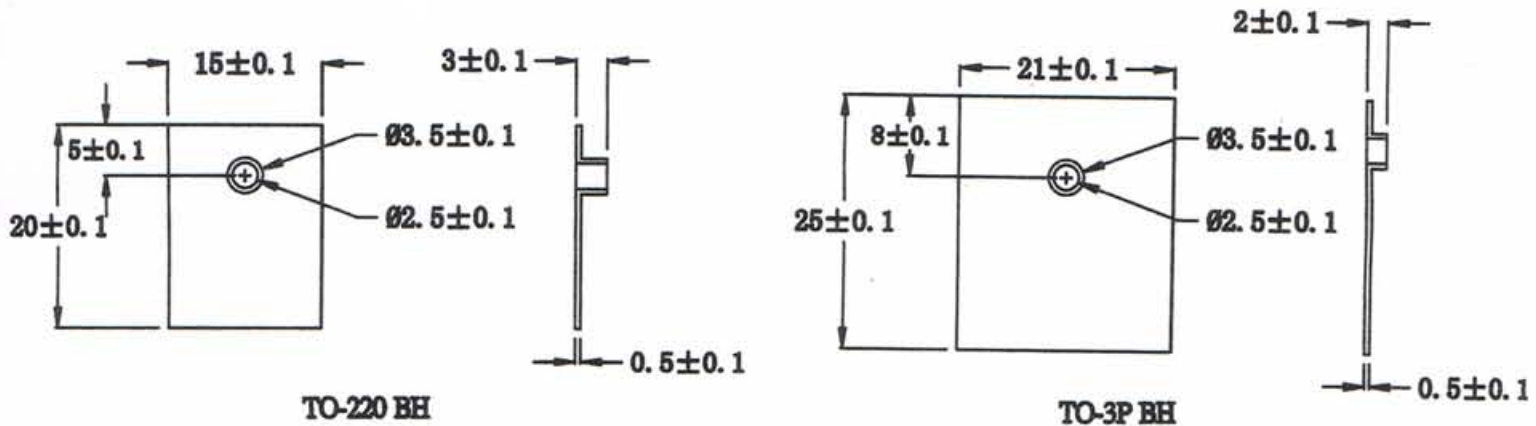
Technical Information:

	Properties	HC-1000	Unit	Test Method
Physical	Color	Gray	Visual	--
	Reinforcement Layer	Fiberglass	--	--
	Finish	Smooth	Visual	--
	Thickness (Tol. ± 0.02)	0.23~0.8	mm	ASTM D374
	Operating Temperature	-40~+220	°C	--
Mechanical	Specific Gravity	1.60	g/cm ³	ASTM D792
	Tensile Strength	150	kgf/cm ²	ASTM D412
	Tear Strength	6.70	kgf/cm	ASTM D642
	Elongation	7~12	%	ASTM D412
	Hardness	70 \pm 5	Shore A	ASTM D2240
Electrical	Voltage Breakdown	3.5	kV	ASTM D149
	Volume Resistivity	2.0 x 10 ¹³	$\Omega \cdot \text{cm}$	ASTM D257
Thermal	Thermal Conductivity	0.3	W/m.k	ASTM D5470
Regulatory	Flammability Rating	V-0	--	UL 94
	RoHS Compliant	Yes	--	Lab. Certification
	PFOA Compliant	Yes	--	Lab. Certification
	PFOS Compliant	Yes	--	Lab. Certification
	SVHC Compliant	Yes	--	Lab. Certification

* The above testing results comes from laboratory report, information are for your reference only.

INSULATING & HEAT SINK MATERIAL

Thermal Insulator Pads



The dimension tolerance between 0 to 10 mm is ± 0.1 mm
 The dimension tolerance between 10 to 100 mm is ± 0.2 mm
 The dimension tolerance over 100 mm is ± 0.3 mm
 The thicknesses are 0.23 to 0.8 mm, tolerance is ± 0.02 mm

INSULATING & HEAT SINK MATERIAL

Mica Sheets



Characteristic:

Insulation, heat sink, temperature endurance, compression Endurance, high transparency.

Usage:

Electrical appliances, electronic devices, car mechanical machinery and internal parts. For example, hair dryers, motors, lamps, converter, etc.

Specification:

TO-220-MIC, TO-3P-MIC, TO-3-MIC

Technical Information:

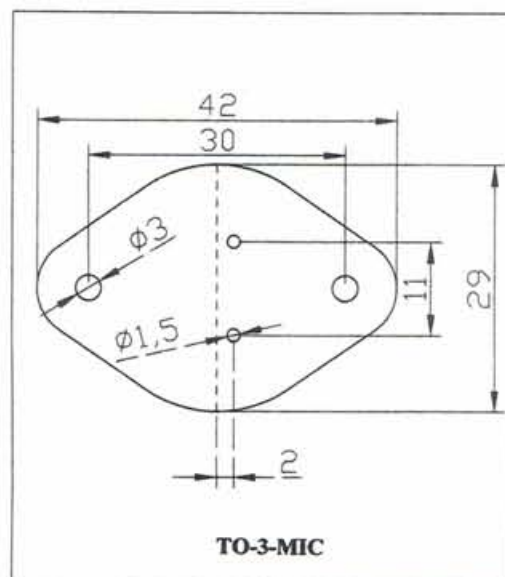
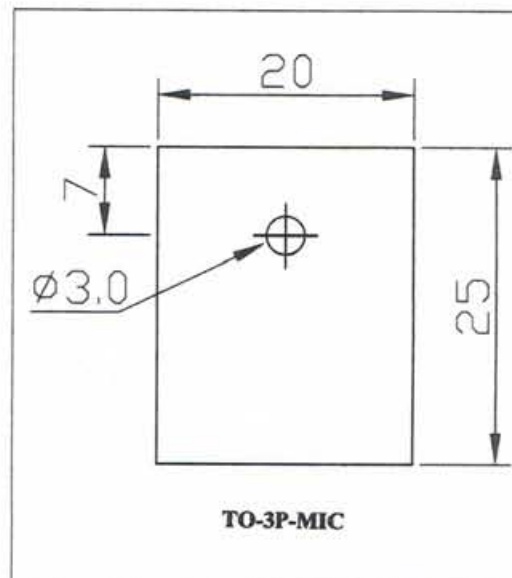
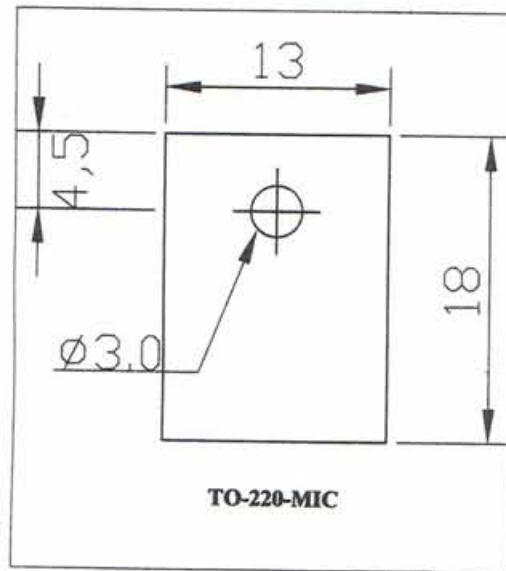
	Properties	Typical Values	Unit
Physical	Color	Transparent	Visual
	Finish	Smooth	Visual
	Thickness	0.1	mm
	Max. Operating Temperature	550	°C
Mechanical	Specific Gravity	2.82	gm/cm ³
	Tensile Strength	275	kgf/cm ²
	Hardness	80~150	Shore A
Electrical	Dielectric Constant	3.5	AT 10 ⁵ HZ
	Voltage Breakdown	2.4	kV
	Volume Resistivity	10 ¹³ ~10 ¹⁷	Ω • cm
Thermal	Thermal Resistance	3500	W/mm
	Melting Point	1250~1300	°C
Chemical	Silica	45%	SiO ₂
	Alumina	37%	Al ₂ O ₃
	Potash	10%	K ₂ O
	pH for Water	5%	pH Value

- * Above data are for Natural Mica Specification only. Fabricated mica sheet specifications are available upon request.
- * The above testing results comes from laboratory report, information are for your reference only.

INSULATING & HEAT SINK MATERIAL

Mica Sheets

Dimensions: mm



INSULATING & HEAT SINK MATERIAL

Thermal Insulator Sleeves



Characteristic:

Insulation, heat sink, temperature endurance, flame retardation and RoHS compliance.

Usage:

Electrical appliances, electronic devices, car mechanical machinery and internal parts for machinery in order to achieve heat sink and insulating purpose.

Specification:

ID: 10, 12, 14 & 16 mm

Thickness: 0.5 mm

Color: Gray

Technical Information:

	Properties	Typical Values	Unit	Test Method
Physical	Color	Gray	Visual	--
	Finish	Smooth	Visual	--
	Thickness	0.5	mm	ASTM D374
	Operating Temperature	-30~+220	°C	--
Mechanical	Specific Gravity	1.50 ± 0.1	g/cm ³	ASTM D792
	Tensile Strength	30 ± 5	kgf/cm ²	ASTM D412
	Elongation	≥150	%	ASTM D412
	Hardness	70 ± 5	Shore A	ASTM D2240
Electrical	Voltage Breakdown	4.0	kV	ASTM D149
	Volume Resistivity	1.5 x 10 ¹⁴	Ω • cm	ASTM D257
Thermal	Thermal Conductivity	0.3	W/m.k	ASTM D5470
Regulatory	Flammability Rating	VW-1	--	UL 224
	RoHS Compliant	Yes	--	Lab. Certification
	PFOA Compliant	Yes	--	Lab. Certification
	PFOS Compliant	Yes	--	Lab. Certification
	SVHC Compliant	Yes	--	Lab. Certification

* The above testing results comes from laboratory report, information are for your reference only.