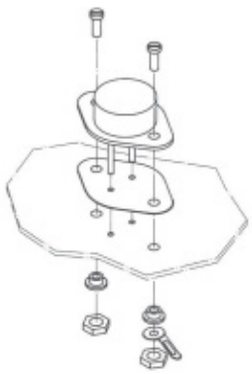
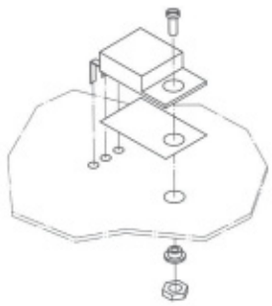
Mounting kits for insulation of power transistors

MST 3
MSTS 3



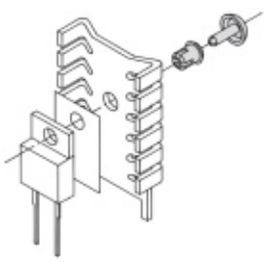
MST 220
MSTS 220

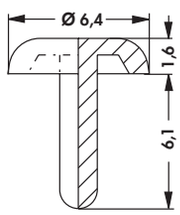


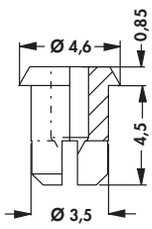
art. no.	for transistor	version	contents of delivery
MST 3	TO 3	with mica wafer GS 3	1 mica wafer, 2 insulator sleeves, 1 tin-plated solder lug, 2 cheese head screws, nickel-plated, 2 screw nuts M3 nickel-plated
MSTS 3	TO 3	with silicone wafer WS 3	1 silicone wafer, 2 insulator sleeves, 1 tin-plated solder lug, 2 cheese head screws, nickel-plated, 2 screw nuts M3 nickel-plated
MST 220	TO 220	with mica wafer GS 220	1 mica wafer, 1 tin-plated solder lug, 1 cheese head screw, nickel-plated, 1 screw nut M3 nickel-plated
MSTS 220	TO 220	with silicone wafer WS 220	1 silicone wafer, 1 insulator sleeve, 1 tin-plated solder lug, 1 cheese head screw, nickel-plated, 1 screw nut M3 nickel-plated

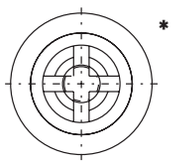
Snap rivet for quick fastening of TO 220

- detachable plastic snap rivet for quick fastening of transistors onto heatsinks and cooling plates (e.g. FK 212-CB, FK 216-CB, FK 222-220, FK 232, FK 233, FK 235-L 1)
- suitable for material thickness: 1 – 1.5 mm
- suitable for hole diameter: 3.5 – 4 mm
- * = bottom view, pin not inserted









art. no.	for transistor
EPN 1	TO 220

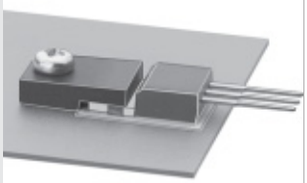
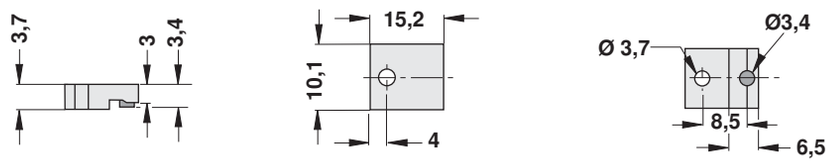
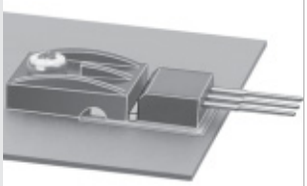
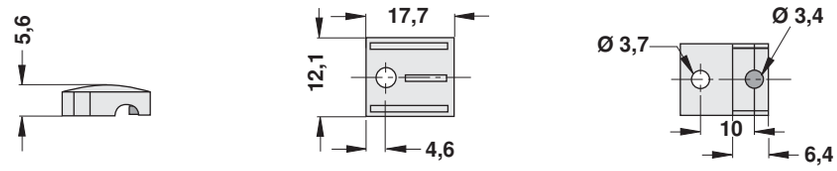
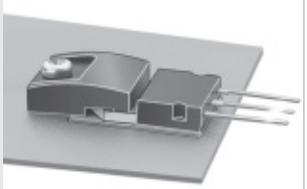
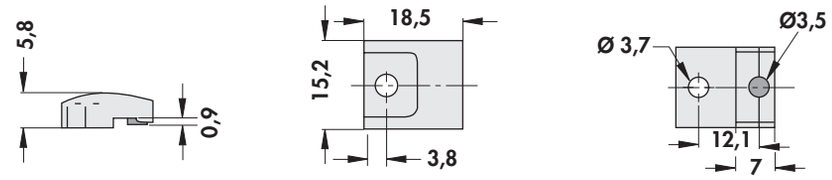
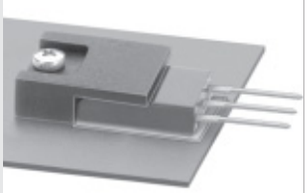
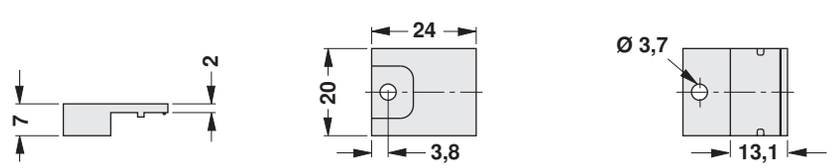
material:	polysulphone, GF reinforced
temperature range:	-70 °C ... +180 ° (5 sec. +260 °C)
class of flammibility:	UL 94 V-0

Mounting parts for heatsinks → **E 47 – 48**
Spacers → **E 38**
Guide rails for PCBs → **E 24 – 28**
Finger-shaped heatsinks → **C 2 – 3**
Vibration dampers → **E 39**
Thermal conductive material → **E 2 – 22**
Retaining springs for transistors → **A 114 – 120**
Technical introduction → **A 2 – 7**

Insulating clamping parts for power transistors

Plastic insulating clamping parts for mounting transistors in cases TO 220, TO 218 and TO 247 for enhanced dielectric stengths

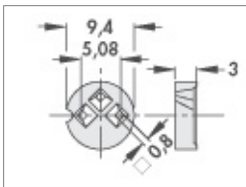
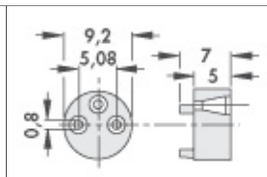
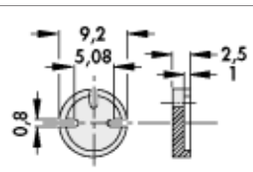
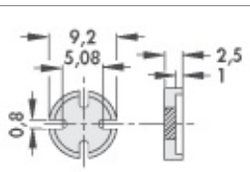
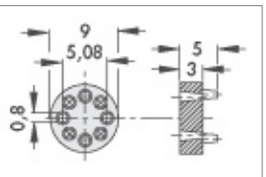
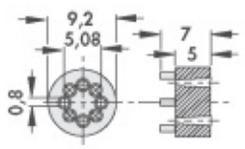
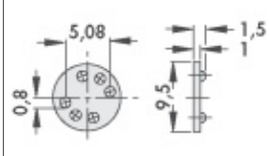
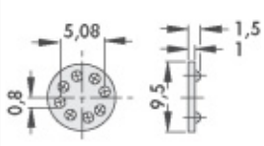
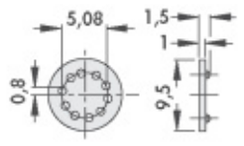
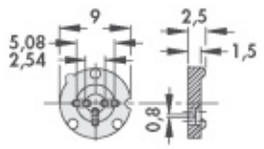
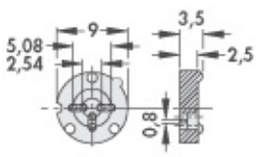
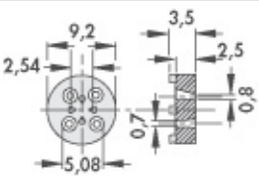
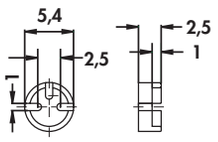
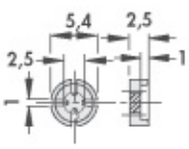
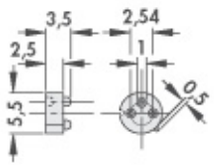
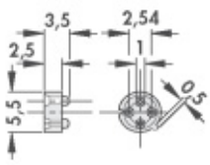
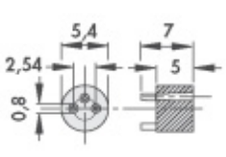
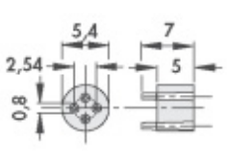
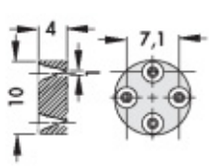
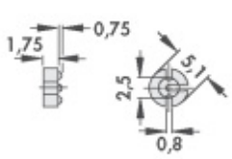
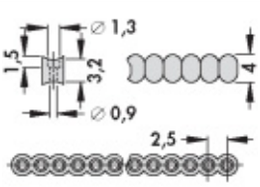
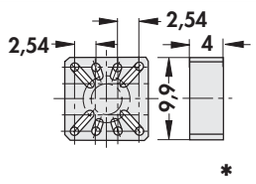
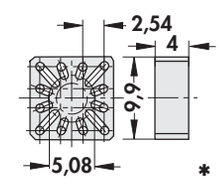
– electrically insulating assembly of the transistor by means of a plastic clamping part
– pin reaching into the hole of the transistor plate
– fastening of clamping part onto the mounting plate by screws, no electroinsulating connection to the transistor
– dielectric strength only determined by the insulating washer between transistor and mounting surface
– no insulating bush necessary, thus no dielectric breakdown

art. no.		
ISP 220		
ISP 220 V		
ISP 218		
ISP 247		

material:	polyamide 6, GF reinforced
dielectric strength:	>27 kV/mm
heat distortion:	205(1,8 MPa)135(8 MPa)
dielectric constant:	8 [100 Hz] / 4.5 [1 MHz]
dielectric loss factor:	1300 [100 Hz] 450 [1 MHz]
specific volume resistance:	$>10^{13}$ Ω/cm
colour:	black
class of flammibility:	UL 94 V-0

Profiles for PCB components → **A 91**
Heatsinks for PCB → **A 89**
Profiles for PCB mounting → **A 89 – 111**
Thermal conductive material → **E 2 – 21**
Insulating distance sleeves → **E 30 – 32**
Vibration dampers → **E 39**
Aluminium oxide wafers → **E 15 – 16**
Technical introduction → **A 2 – 7**

Mounts

				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
MS 53 3 TO 5	**MS 53 7** TO 5	**MS 53 25** TO 5	**MS 54 25** TO 5	**MS 58 5** TO 5-8 p.
				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
MS 58 7 TO 5-8 p.	**MS 56 15** TO 5-6 p.	**MS 58 15** TO 5-8 p.	**MS 510 15** TO 5-10 p.	**MS 3518 25** TO 5/ TO 18
				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
MS 3518 35 TO 5/ TO 18	**MS 34 518** TO 5 / TO 18	**MS 183 25** TO 18	**MS 184 25** TO 18	**MS 183 35** TO 18
				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
MS 184 35 TO 18	**MS 183 7** TO 18	**MS 184 7** TO 18	**MS 84 4** TO 8	**MS 923 25** TO 92
				
art. no.	**art. no.**	**art. no.**		
MS 4016 max. 16 contacts	**US 58 4** TO 5	**US 512 4** TO 5		

* = **mounting pads**: the US-pads convent the TO 5 pin circle to a pitch of .1".

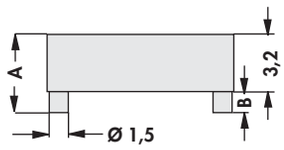
material:	polyamide 6, GF reinforced
temperature range:	-40 °C ... +205 °C
class of flammibility:	UL 94 V-0 (at thickness ≥3 mm), UL 94 V-1

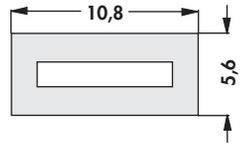
Mounting parts for heatsinks → **E 47 – 48**
Heatsinks for PCB → **A 89 – 92**
Profiles for PCB mounting → **A 89 – 111**
Thermal conductive material → **E 2 – 22**
Insulating distance sleeves → **E 30 – 32**
Finger-shaped heatsinks → **C 2 – 3**
Retaining springs for transistors → **A 114 – 120**
Technical introduction → **A 2 – 7**

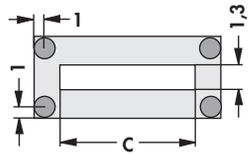
Mounts

Mounts for power transistors

– for TO 220, TO 219, TO 202 and similar
– for vertical and horizontal mounting
– also suitable as mounting bracket for angled connections





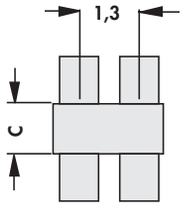


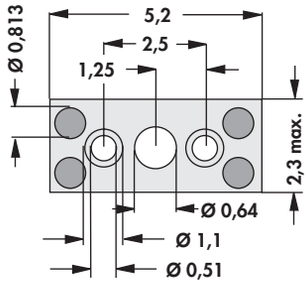
art. no.	colour	dim. [mm] A	B	C
MLW 32	white	3.2	—	7.1
MLW 44	white	4.4	1.3	7.1
MLW 51	white	5.1	1.9	7.1

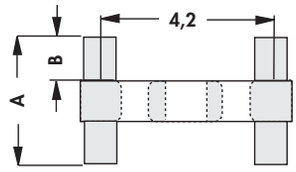
material:	polyamide 6 (nylon)
temperature range:	-40 °C ... +120 °C
class of flammibility:	UL 94 V-2

Mounts for rectangular LEDs

– for LED 2x4 mm oder 2x5 mm
– symmetric version for easy assembly
– self-adhesive





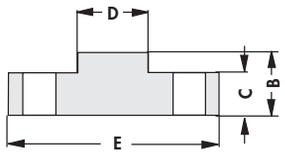


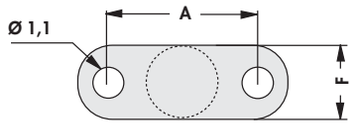
art. no.	colour	dim. [mm] A	B	C
MRL 20	white	2	0.5	1

material:	polyamide 6 (nylon)
temperature range:	-40 °C ... +120 °C
class of flammibility:	UL 94 V-2

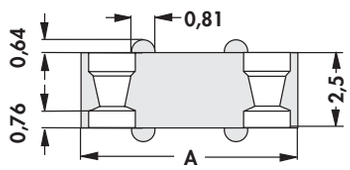
Mounts for discrete components

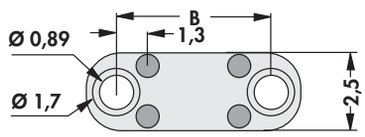
– suitable for various components e.g. resistors, capacitors etc.



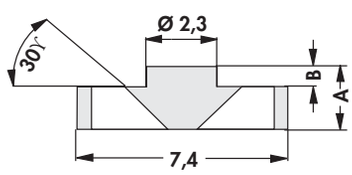


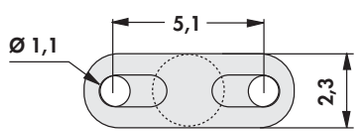
art. no.	dim. [mm] A	B	C	D	E	F	art. no.	dim. [mm] A	B	C	D	E	F
MD A 04	2.5	1.1	0.55	1.3	4.6	2.3	**MD A 09**	7.6	1.1	0.66	3.6	9.9	2.3
MD A 06	3.8	1.1	0.55	2.3	6.9	3.2	**MD A 12**	10.2	1.1	0.76	4.8	12.4	2.3
MD A 07	5.1	1.1	0.55	2.3	7.4	2.3							





art. no.	dim. [mm] A	B	art. no.	dim. [mm] A	B
MD B 07	7.6	5.1	**MD B 12**	12.7	10.2
MD B 10	10.2	7.6	**MD B 15**	15.2	12.7
MD B 11	11.4	8.9			



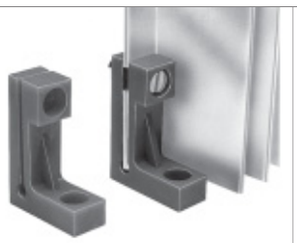
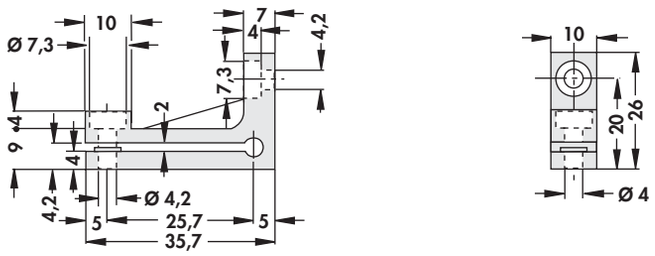
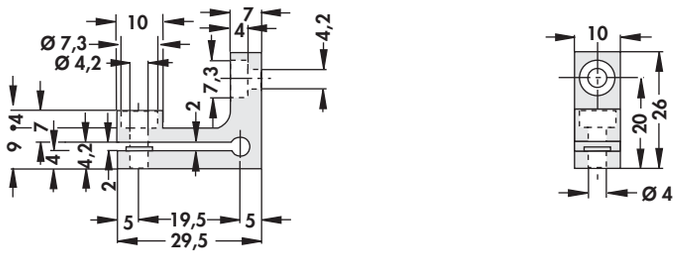
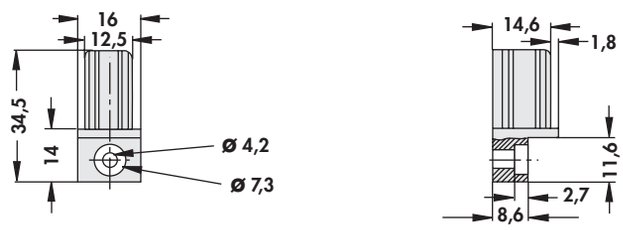
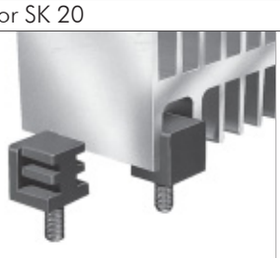


art. no.	dim. [mm] A	art. no.	dim. [mm] A	B
MD C 13	1.3	**MD C 22**	2.2	0.89

material:	polyamide 6 (nylon)
temperature range:	-30 °C ... +110 °C
class of flammibility:	UL 94 V-2

Mounting parts for heatsinks → **E 47 – 48**
Heatsinks for PCB → **A 89 – 92**
Profiles for PCB mounting → **A 89 – 111**
Thermal conductive material → **E 2 – 22**
Insulating distance sleeves → **E 30 – 32**
Finger-shaped heatsinks → **C 2 – 3**
Retaining springs for transistors → **A 114 – 120**
Technical introduction → **A 2 – 7**

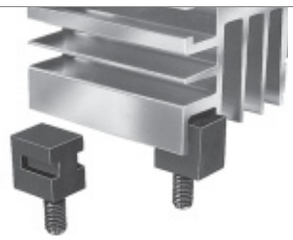
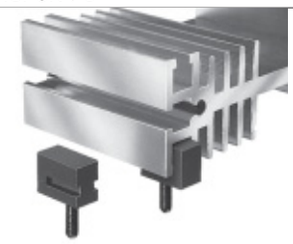
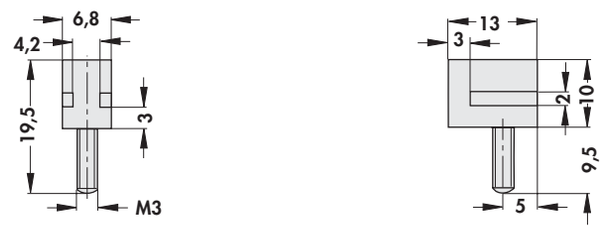
Mounting parts for heatsinks

art. no.		
		
IS 1	for SK 01, 02, 03, 11, 14, 21, 30, 34, 36, 39, 46, 69; heatsink length: 50 mm	
art. no.		
		
IS 2	for SK 01, 02, 03, 11, 14, 21, 30, 34, 36, 39, 46, 69; heatsink length: 37,5 75 100 mm	
art. no.		
		
IS 3	for SK 01, 02, 03, 11, 14, 21, 30, 34, 36, 39, 46, 69	
art. no.		
		
IS 4	for SK 06	
art. no.		
		
IS 5	for SK 20	
art. no.		
		
IS 6	for SK 67	

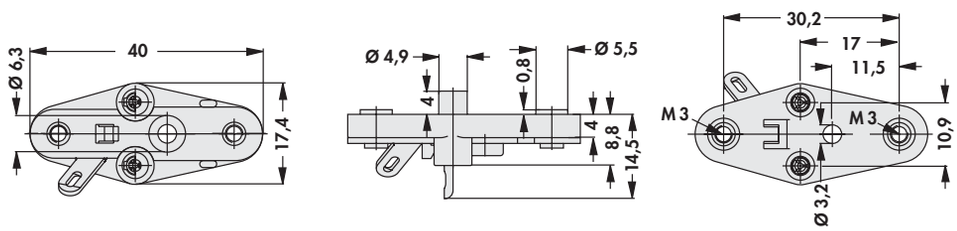
material:	polyamide 6, GF reinforced
class of flammibility:	UL 94 V-0

Heatsink profile-overview → A 13 – 17
Profiles for PCB mounting → A 89 – 111
Heatsinks for PCB → A 89 – 92
Insulating distance sleeves → E 30 – 32
Insulting clamping parts → E 43
Mounting pads for transistors → E 45
Mounting pads for single components → E 46
Technical introduction → A 2 – 7

Mounting parts for heatsinks

art. no.		
		
IS 7	for SK 70	
art. no.		
IS 8	for SK 20	
material:	polyamide 6, GF reinforced	
class of flammibility:	UL 94 V-0	

Sockets for power transistors TO 3



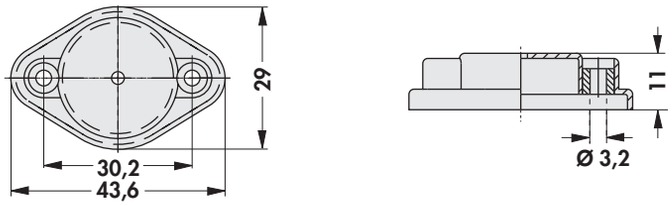
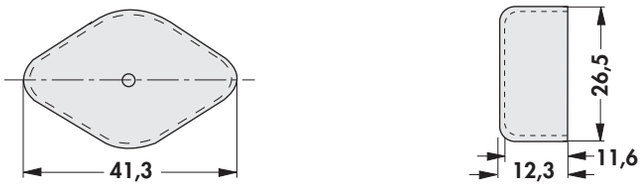
art. no.	no. of contacts
TF 3 2	3

insulator:	PCT, glassfibre filled
contact:	beryllium copper; 4 ... 6 µm Sn
current rating:	15 A max.
contact resistance:	<10 mΩ
temperature range:	-65 °C ... +290 °C
insulation resistance:	$>10^{10}$ Ω/cm
capacity:	1 pF
test voltage:	1650 V
class of flammibility:	UL 94 V-0

Heatsink profile-overview → **A 13 – 17**
Profiles for PCB mounting → **A 89 – 111**
Heatsinks for PCB → **A 89 – 92**
Insulating distance sleeves → **E 30 – 32**
Insulting clamping parts → **E 43**
Mounting pads for transistors → **E 45**
Mounting pads for single components → **E 46**
Technical introduction → **A 2 – 7**

Insulating caps

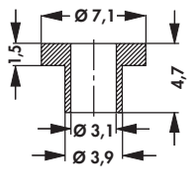
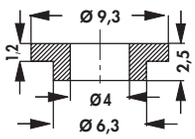
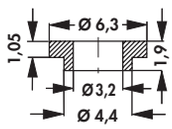
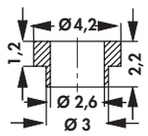
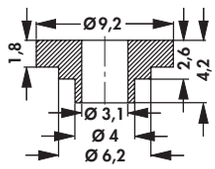
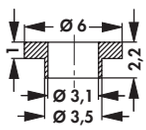
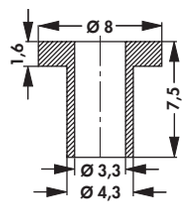
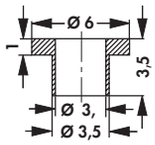
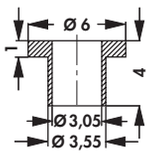
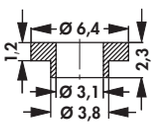
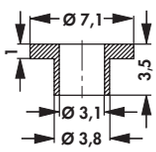
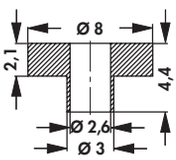
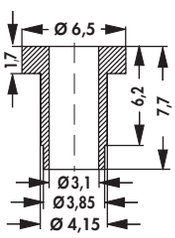
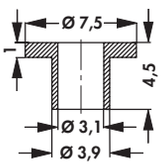
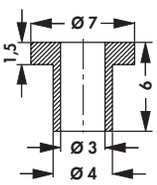
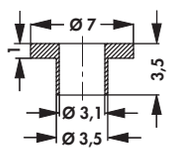
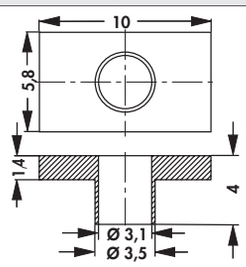
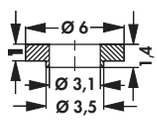
– different transistor flange levels will be by the sleeves

art. no.		
IK 341 3		
art. no.		
IK 3		

material:	polyamide, GF reinforced
pressed-in sleeves:	brass, nickel-plated
class of flammibility:	UL 94 V-0

Mica wafers	**→ E 17**	**Aluminium oxide wafers**	**→ E 15 – 16**
Thermal conductive material	**→ E 2 – 5**	**Thermal conductive paste**	**→ E 19 – 20**
Mounting for TO 3 angle	**→ A 123**	**Thermal conductive glue**	**→ E 21 – 22**
Die-cast heatsinks	**→ A 123 – 126**	**Technical introduction**	**→ A 2 – 7**

Insulating bush

				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
IB 1 / IBT 1	**IB 2 / IBT 2**	**IB 3 / IBT 3**	**IB 4 / IBT 4**	**IB 5**
				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
IB 6 / IBT 6	**IB 7 / IBT 7**	**IB 8 / IBT 8**	**IB 9 / IBT 9**	**IB 10 / IBT 10**
				
art. no.	**art. no.**	**art. no.**	**art. no.**	**art. no.**
IB 11 / IBT 11	**IB 12 / IBT 12**	**IB 13**	**IB 14 / IBT 14**	**IB 15 / IBT 15**
				
art. no.	**art. no.**	**art. no.**		
IB 16	**IB 17**	**IB 18 / IBT 18**		

	IB 1 - IB 7 / 18	IBT 1 - IBT 15 / 18	IB 8 - IB 17
material	polyamide 4.6, GF reinforced	PTFE (teflon)	thermoplastic resin
form stability	-40 °C ... +250°C (1,8 MPa)	-260 °C ... +250 °C	-40 °C ... +200 °C
dielectric strength	>30 kV/mm	>40 kV/mm	>38 kV/mm
class of flammibility	UL 94 V-0		

Mica wafers → **E 17**
Thermal conductive material → **E 2 – 5**
Mounting for TO 3 angle → **A 123**
Die-cast heatsinks → **A 123 – 126**
Aluminium oxide wafers → **E 15 – 16**
Thermal conductive paste → **E 19 – 20**
Thermal conductive glue → **E 21 – 22**
Technical introduction → **A 2 – 7**