

DIODES

Marking system

D61□-250-22-NO-□□□-□

Device type code:

- D – rectifying diode
- R – fast recovery diode

Element size code

Case type code:

- 1 – stud base, ceramic housing
- 2 – stud base, glass-metal housing
- 3.5 – ceramic, hockey puck case
- 4 – flat base, ceramic housing
- 6 – flat base, glass-metal housing

Design version

Special requirements and selection code

External lead code

Special base type code

0 – hockey puck (no base); 1 – flat hex base

Reverse recovery time t_r for diodes (see: table 1)

Polarity:

N – normal (cathode on base)

R – reverse (anode on base)

0 – for hockey puck diodes

Voltage class x 100 [V]

Max. forward current

Table 1

t_r code	1	2	3	4	5	6	7	8	9	0
t_r [μs]	5,0	4,0	3,2	2,5	2,0	1,6	1,0	0,63	0,40	Not specified

MEDIUM CURRENT RECTIFYING DIODES

Type	$I_{F(AV)} / T_c$ (A) / (°C)	I_{FSM} 10 ms (kA)	I^2t 10 ms (kA ² s)	U_{RRM} $T_j = T_{jmax}$ (V)	I_{RRM} $T_j = T_{jmax}$ (V)	$U_{F(TD)}$ $T_j = T_{jmax}$ (V)	r_F $T_j = T_{jmax}$ (mΩ)	U_{FM} / I_{FM} $T = 25^\circ C$ (V) / (A)	R_{thjc} DC (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Mounting torque (Nm)	Weight (g)	Fig.
D22-10	10/105	0,19	0,19	100-1600	6	1,15	14	1,50/31,4	2,00	-25...+140	1,2-1,5	7	1
D22-16	16/105	0,25	0,312	100-1400	8	1,15	8	1,70/50	2,00	-25...+160	1,2-1,5	7	1
D22-20	20/110	0,275	0,378	100-1400	8	1,15	7	1,50/50	1,50	-25...+160	1,2-1,5	7	1
D22-25	25/120	0,275	0,378	100-1400	8	1,15	7	1,50/50	1,50	-25...+190	1,2-1,5	7	1
D42-32	32/100	0,50	1,25	100-1400	6	1,00	7,0	1,70/100	0,90	-25...+150	2,0-2,5	18	2
D42-40	40/95	0,60	1,80	100-1400	6	1,00	4,0	1,40/100	0,90	-25...+150	2,0-2,5	18	2
D42-50	50/100	0,80	3,20	100-1400	5	0,95	4,5	1,80/200	0,60	-25...+150	2,0-2,5	18	2
D42-60	60/100	0,85	3,60	100-1400	5	0,80	3,1	1,40/200	0,60	-25...+150	2,0-2,5	18	2
D42-70	70/100	0,95	4,50	100-1400	10	0,80	2,3	1,35/200	0,55	-25...+150	2,0-2,5	18	2

FAST RECOVERY MEDIUM CURRENT DIODES

Type	$I_{F(AV)} / T_c$ (A) / (°C)	I_{FSM} 10 ms (kA)	I^2t 10 ms (kA ² s)	U_{RRM} $T_j = T_{jmax}$ (V)	I_{RRM} $T_j = T_{jmax}$ (V)	U_{FM} / I_{FM} $T = 25^\circ C$ (V) / (A)	t_r $T = 125^\circ C$ (μs)	R_{thjc} DC (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Mounting torque (Nm)	Weight (g)	Fig.
R22-10	10/100	0,15	0,112	100-1200	6	2,30/31,4	0,63-1,0	1,70	-25...+125	1,2-1,5	7	1
R42-16	16/85	0,50	1,250	100-1200	6	3,15/100	1,0-1,6	0,80	-25...+125	2,0-2,5	18	2
R42-25	25/80	0,50	1,250	100-1200	6	2,30/100	1,0-1,6	0,80	-25...+125	2,0-2,5	18	2
R42-32	32/70	0,50	1,250	100-1200	6	1,95/100	1,0-1,6	0,80	-25...+125	2,0-2,5	18	2
R42-40	40/80	0,50	1,250	100-1200	6	1,95/125	1,6-2,5	0,55	-25...+125	2,0-2,5	18	2

RECTIFYING DIODES - STUD AND FLAT BASE TYPE

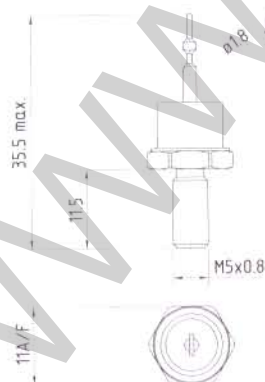
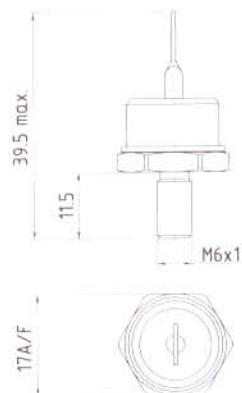
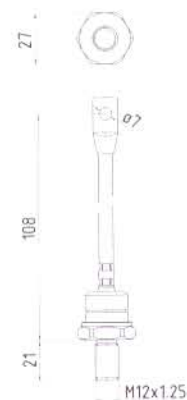
Type	$I_{F(AV)} / T_c$ (A) / (°C)	I_{FSM} 10 ms (kA)	I^2t 10 ms (kA ² s)	U_{RRM} $T_j = T_{jmax}$ (V)	I_{RRM} $T_j = T_{jmax}$ (V)	$U_{F(TD)}$ $T_j = T_{jmax}$ (V)	r_F $T_j = T_{jmax}$ (mΩ)	U_{FM} / I_{FM} $T = 25^\circ C$ (V) / (A)	R_{thjc} DC (°C/W)	R_{thcr} DC (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Clamping force or mounting torque	Weight (g)	Fig.
D52-100	100/140	2,1	22	400-1200	20	1,2	2,37	2,20/470	0,25	0,12	-40...+190	14,0-17,0 Nm	125	4
	100/125			1400-1600							-40...+175			4
D51-100	100/125			1800-2000							-40...+175			3
D52-150	150/120	2,7	36	400-1200	20	1,05	1,66	1,80/470	0,25	0,12	-40...+190			4
	150/105			1400-1600							-40...+175			4
D52-200	200/110	2,9	42	400-1200	20	0,9	1,07	1,45/470	0,25	0,12	-40...+190			4
	200/95			1400-1600							-40...+175			4
D62-200, D66-200	200/145	5,0	125	400-1200	50	0,72	1,85	1,80/800	0,12	0,10	-40...+190	28,0-32,0 Nm,	260,200	6, 11
	200/130			1400-1600							-40...+175	3,5 kN for D64		6, 11
D61-200, D64-200	200/130			1800-3200		0,72	1,85	1,80/800	0,12		-40...+175	and D66	240,180	5, 10
D62-250, D66-250	250/140	5,5	150	400-1200	50	0,70	1,22	1,60/800	0,12	0,10	-40...+190		260,200	6, 11
	250/125			1400-1600	50			1,60/800			-40...+175			6, 11
D61-250, D64-250	250/125			1800-3200		0,70	1,22	1,60/800	0,12	0,10	-40...+175		240,180	5, 10
D62-320, D66-320	320/125	6,3	198	400-1200	50	0,69	0,99	1,40/800	0,12	0,10	-40...+190		260,200	6, 11
	320/110			1400-1600							-40...+175			6, 11
D61-320, D64-320	320/110			1800-2600	50	0,69	0,99	1,40/800	0,12	0,10	-40...+175		240,180	5, 10
D62-400, D66-400	400/125	7,0	245	400-1200	50	0,62	0,563	1,20/800	0,12	0,10	-40...+190		260,200	6, 11
	400/110			1400-1600							-40...+175			6, 11
D61-400, D64-400	400/110	7,0	245	1800-2000	50	0,62	0,563	1,20/800	0,12	0,10	-40...+175		240,180	5, 10
D71-300, D74-300	300/115	6,3	200	2000-4000	50	1,10	0,90	2,15/1500	0,10	0,04	-40...+175	38,0-41,0 Nm,	500,450	7, 12
D71-450, D74-450	450/125	7,7	300	400-1200	50	0,72	0,51	1,60/1500	0,10	0,04	-40...+190	5,5 kN for D74		7, 12
D71-450, D74-450	450/110			1400-3200	50	0,72	0,51	1,60/1500	0,10	0,04	-40...+175	5,5 kN for D74		7, 12
D71-500, D74-500	500/125	10,0	500	400-1200	50	0,62	0,45	1,30/1500	0,10	0,04	-40...+190	5,5 kN for D74		7, 12
D71-500, D74-500	500/110	10,0	500	1400-2200	50	0,62	0,45	1,30/1500	0,10	0,04	-40...+175	5,5 kN for D74		7, 12
D71-600, D74-600	600/115	10,5	551	400-1200	50	0,63	0,34	1,20/1500	0,10	0,04	-40...+190	5,5 kN for D74		7, 12

RECTIFYING DIODES – HOCKEY PUK TYPE

Type	$I_{F(AV)} / T_c$ (A) / (°C)	I_{FSM} 10 ms (kA)	Pt 10 ms (kA²s)	U_{RRM} $T_j = T_{jmax}$ (V)	I_{RRM} $T_j = T_{jmax}$ (V)	$U_{F(TO)}$ $T_j = T_{jmax}$ (V)	r_F $T_j = T_{jmax}$ (mΩ)	U_{FM} / I_{FM} $T_j = 25^\circ C$ (V) / (A)	$R_{thj, DC}$ (°C/W)	$R_{thcr, DC}$ (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Clamping force	Weight (g)	Fig.
D63-300	300/140	5,0	125	400-1200	50	0,95	0,85	1,70/800	0,095	0,02	-40...+190	4,5-6,2 kN	60	13
	300/125			1400-3200							-40...+175			13
D63-400	400/125	5,5	150	400-1200	50	0,85	0,72	1,50/800	0,095	0,02	-40...+190			13
	400/110			1400-3200							-40...+175			13
D63-600	600/95	6,4	204	400-1200	50	0,68	0,57	1,20/800	0,095	0,02	-40...+190			13
D73-500	500/115	6,4	204	2200-4400	50	0,80	0,61	1,80/1500	0,07	0,02	-40...+175	9,0-11,0 kN	280	15
D73-800	800/95	7,7	300	400-1200	50	0,70	0,426	1,60/1500	0,07	0,02	-40...+190			15
	800/80			1400-3200							-40...+175			15
D75-1100	1100/75	9,0	405	1400-2400	30	0,763	0,48	1,38/1500	0,04	0,02	-40...+175	9,0-11,0 kN	85	14
D75-1400	1400/75	11,0	605	400-1200	30	0,76	0,308	1,20/1500	0,04	0,02	-40...+190			14
D83-1000	1000/80	11,4	650	400-4400	50	0,87	0,73	1,70/1500	0,032	0,02	-40...+175	12,0-14,0 kN	280	15
D83-1200	1200/100	14,8	1090	1600-3200	50	0,82	0,33	1,35/1500	0,032	0,02	-40...+175			15
D83-1400	1400/85	15,8	1250	400-2000	50	0,78	0,30	1,25/1500	0,032	0,02	-40...+175			15
D83-1600	1600/90	16,7	1400	400-1200	50	0,77	0,191	1,10/1500	0,032	0,02	-40...+175			15
D95-1600	1600/95	20,0	2000	3200-4400	100	0,77	0,375	1,30/1500	0,020	0,01	-40...+175	22,5-25,0 kN	480	16
D95-1800	1800/130	25,0	3125	400-2000	100	0,81	0,162	1,20/1500	0,020	0,01	-40...+190			16
	1800/115			2200-3200							-40...+175			16
D95-2200	2200/110	28,0	3920	400-2000	100	0,80	0,154	1,10/1500	0,020	0,01	-40...+190			16
	2200/95			2200-3000							-40...+175			16
D95-2500	2500/85	31,0	4800	1600-2400	100	0,62	0,164	1,05/1500	0,020	0,01	-40...+175			16
D95-3000	3000/105	35,0	6125	200-1200	100	0,70	0,082	1,00/1500	0,020	0,01	-40...+190			16
D95T-3000	3000/60	31,0	4800	1400-2200	100	0,612	0,164	1,02/1500	0,020	0,01	-40...+180			16
DA3-2500	2500/100	42	8820	3600-4000	100	0,74	0,132	1,25/3000	0,013	0,003	-40...+150	35,0-40,0 kN	1000	17
DB3-3500	3500/85	46	10580	3000-4000	100	0,64	0,096	1,15/4000	0,0115	0,002	-40...+150	35,0-45,0 kN	1130	18
DB3-4000	4000/85	65,5	17900	3600-4000	150	0,80	0,118	1,13/4000	0,0115	0,002	-40...+150	35,0-45,0 kN	1130	18
DB3-4200	4200/85	50	12500	2000-3000	100	0,606	0,105	1,13/4000	0,0115	0,002	-40...+175	35,0-45,0 kN	1130	18
DB3-4500	4500/80	50	12500	1200-2000	100	0,66	0,091	1,03/4000	0,0115	0,002	-40...+175	35,0-45,0 kN	1130	18
DB5-7200	7200/85	75	28100	1200-1600	100	0,704	0,0479	0,90/4000	0,0095	0,02	-40...+175	35,0-45,0 kN	1130	19

FAST RECOVERY DIODES

Type	$I_{F(AV)} / T_c$ (A) / (°C)	I_{FSM} 10 ms (kA)	Pt 10 ms (kA²s)	U_{RRM} $T_j = T_{jmax}$ (V)	I_{RRM} $T_j = T_{jmax}$ (V)	$U_{F(TO)}$ $T_j = T_{jmax}$ (V)	r_F $T_j = T_{jmax}$ (mΩ)	U_{FM} / I_{FM} $T_j = 25^\circ C$ (V) / (A)	t_{rr} $T_j = 25^\circ C$ (μs)	$R_{thj, DC}$ (°C/W)	$R_{thcr, DC}$ (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Clamping force or mounting torque	Weight (g)	Fig.
R52-100	100/75	2,2	24	600-1400	30	1,30	1,90	1,9/314	1,0-2,0	0,25	0,12	-40...+125	14,0-17,0 Nm	125	4
R61-150	150/75	3,5	61	1600-2400	30			2,0/800	2,0	0,17	0,1	-40...+125	28,0-32,0 Nm	250	5
R61-200	200/70	3,5	61	1600-2000	30			1,8/800	3,2	0,17	0,1	-40...+125			5
R61-250	250/85	4,5	100	800-1600	30	0,83	0,62	1,35/800	2,0	0,12	0,1	-40...+125	28,0 – 32,0 Nm	250	5
R63-300	300/65	3,5	61	800-1200	30	1,10	0,98	1,85/800	1,0-2,0	0,095	0,02	-40...+125	4,5-6,2 kN	60	13
				1600-2400					2,0			-40...+125			13
R63-400	400/55	4,5	100	800-1200	30	1,08	0,68	1,60/800	2,0	0,095	0,02	-40...+125			13
R73-200	200/115	3,2	51	3400-4500	50	1,40	2,54	4,50/1500	5,0	0,06	0,02	-40...+150	9,0-11,0 kN	280	15
R73-470	470/95	6,5	210	2400-2600	50	1,00	0,665	1,90/1500	4,0	0,06	0,02	-40...+150			15
R75-600	600/95	7,0	245	800-1200	50	1,09	0,65	1,80/1500	2,0	0,04	0,02	-40...+150	9,0-11,0 kN	85	14
				1400-1600					2,0-3,2			-40...+150			14
R75-800	800/85	9,5	450	800-1200	50	0,90	0,46	1,50/1500	2,0	0,04	0,02	-40...+150			14
				1400-1600					3,2						14
R83-400	400/100	6,0	180	3000-4000	50			3,50/1500	5,0	0,037	0,02	-40...+150	12,0-14,0 kN	280	15
R83-600	600/100	10,0	500	1600-2400	50			2,00/1500	4,0	0,037	0,02	-40...+150			15
R83-800	800/90	12,5	780	800-1600	50	1,03	0,4	1,70/1500	2,0	0,037	0,02	-40...+150			15
R95-900	900/70	14,0	980	2200-3000	100			3,00/1500	4,0	0,023	0,005	-40...+150	22,5-25,0 kN	480	16
				3200-3600					5,0			-40...+150			16
R95-1100	1100/70	17,3	1500	1600-2400	100			2,30/1500	5,0	0,023	0,005	-40...+150			16
R95-1500	1500/94	19,0	1800	1600-1800	100	0,98	0,193	1,35/1500	2,0	0,020	0,005	-40...+150			16

Fig. 1
D22, R22Fig. 2
D42, R42Fig. 3
D51

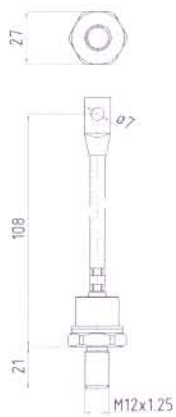


Fig. 4
D52

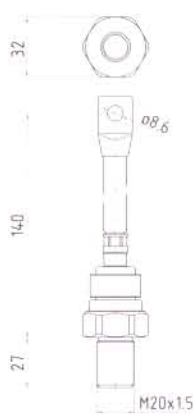


Fig. 5
D61

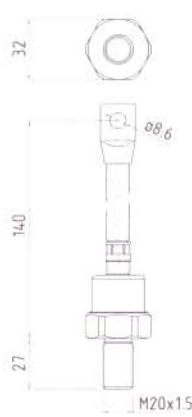


Fig. 6
D62

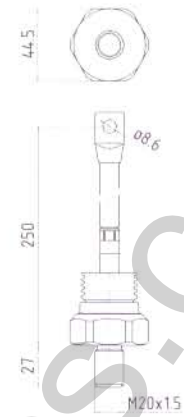


Fig. 7
D71

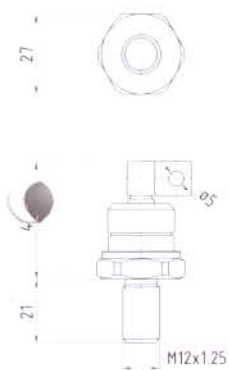


Fig. 8
D51-A1

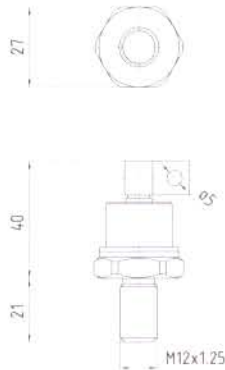


Fig. 9
D52-A1

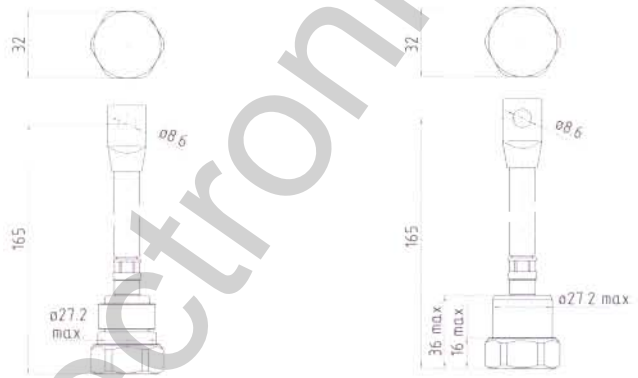


Fig. 10
D64

Fig. 11
D66

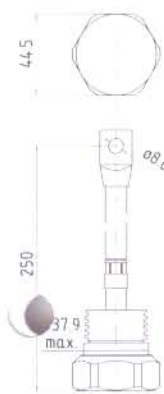


Fig. 12
D74

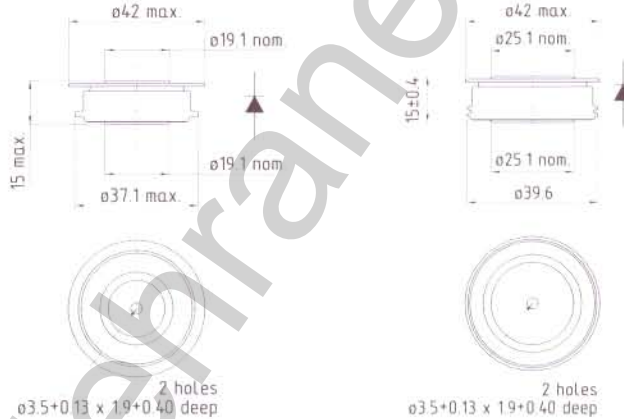


Fig. 13
D63, R63



Fig. 14
D75, R75

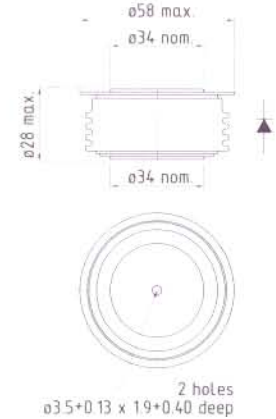


Fig. 15
D73, D83, R73, R83

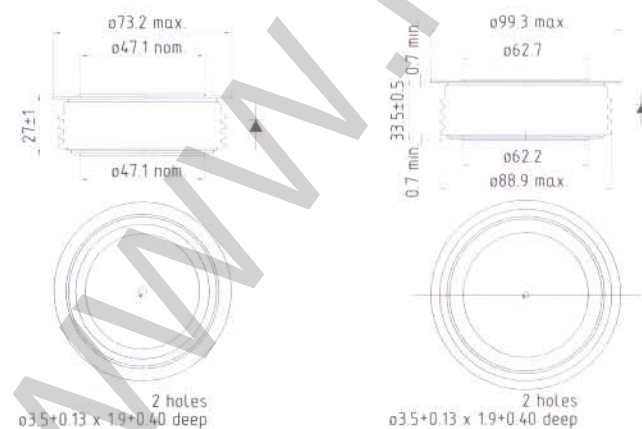


Fig. 16
D95, R95

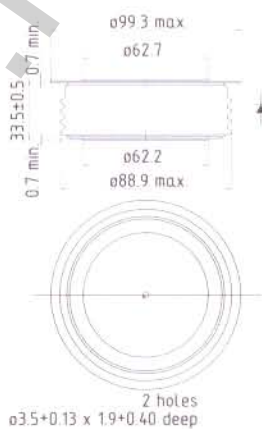


Fig. 17
DA3

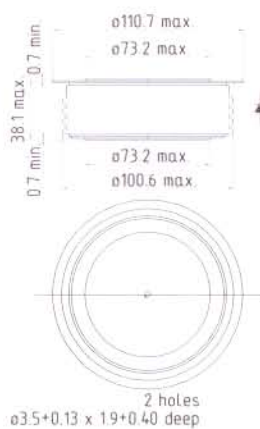


Fig. 18
DB3

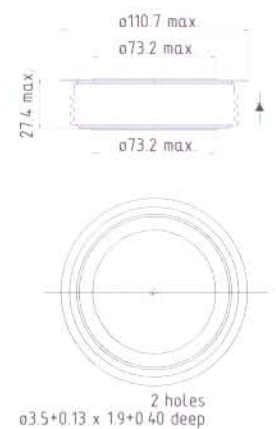


Fig. 19
DB5

THYRISTORS

Marking system

T63□-300-12-50-□□□-□

Device type code

T – standard thyristor

F – fast switching thyristor

P – inverter type thyristor

Element size code

Case type code:

1 – stud base, ceramic housing

2 – stud base, glass-metal housing

3.5 – ceramic, hockey puk case

4 – flat base, ceramic housing

6 – flat base, glass-metal housing

Design version

Special demands and selection code

External leads code

Stud type code

0 – hockey puk (no base)

1 – flat hex base

t_g group code (tab. 2)

du/dt group code (tab. 2)

voltage class x 100 [V]

maximum average forward current

Table 2

du/dt and t _g codes	E	R	P	K	H	1	2	3	4	5	6	7	8	9	0
du/dt [V/μs]	-	-	-	-	-	20	50	100	200	320	500	1000	-	-	Not specified
t _g [μs]	350	250	150	100	80	63	50	40	32	25	20	16	12.5	8	

MEDIUM CURRENT THYRISTORS

Type	I _{T(AV)} / T _c (A) / (°C)	I _{TSM} 10 ms (kA)	Pt 10 ms (kA ² s)	U _{DRM} U _{RRM} T _j =T _{jmax} (V)	I _{DRM} I _{RRM} T _j =T _{jmax} (mA)	U _{T(TO)} T _j =T _{jmax} (V)	r _T T _j =T _{jmax} (mΩ)	U _{TM} / I _{TM} T _j =25°C (V) / (A)	I _{GT} (mA)	U _{GT} (V)	du _d /dt (min.) (V/μs)	R _{thJC} DC (°C/W)	T _{jmin} -T _{jmax} (°C)	Mounting torque (Nm)	Weight (g)	Fig.
T32-16	16/90	0.30	0.450	100-1400	7	1.15	19	2.10/50	75	3.0	100	1.0	-25...+125	2.0-2.5	14	1
T32-20	20/85	0.35	0.620	100-1400	7	1.15	13	1.85/50	75	3.0	100	1.0	-25...+125	2.0-2.5	14	1
T32-25	25/80	0.35	0.620	100-1400	7	1.15	8	1.50/50	75	3.0	100	1.0	-25...+125	2.0-2.5	14	1

FAST SWITCHING MEDIUM CURRENT THYRISTORS

Type	I _{T(AV)} / T _c (A) / (°C)	I _{TSM} 10 ms (kA)	Pt 10 ms (kA ² s)	U _{DRM} U _{RRM} T _j =T _{jmax} (V)	I _{DRM} I _{RRM} T _j =T _{jmax} (mA)	U _{TM} / I _{TM} T _j =25°C (V) / (A)	I _{GT} (mA)	U _{GT} (V)	t _g (μs)	du _d /dt (min.) (V/μs)	R _{thJC} DC (°C/W)	T _{jmin} -T _{jmax} (°C)	Mounting torque (Nm)	Weight (g)	Fig.
F32-16	16/90	0.30	0.45	100-800	7	2.3/50	75	3.0	12.5-32.0	100	0.95	-25...+125	2.0-2.5	14	1
F32-20	20/80	0.30	0.45	100-800	7	2.0/50	75	3.0	12.5-32.0	100	0.95	-25...+125	2.0-2.5	14	1
F32-25	25/80	0.30	0.45	100-800	7	1.65/50	75	3.0	12.5-32.0	100	0.95	-25...+125	2.0-2.5	14	1

THYRISTORS – STUD AND FLAT BASE TYPE

Type	I _{T(AV)} / T _c (A) / (°C)	I _{TSM} 10 ms (kA)	Pt 10 ms (kA ² s)	U _{DRM} U _{RRM} T _j =125°C (V)	I _{DRM} I _{RRM} T _j =125°C (mA)	U _{T(TO)} T _j =125°C (V)	r _T T _j =125°C (mΩ)	U _{TM} / I _{TM} T _j =25°C (V) / (A)	I _{GT} (mA)	U _{GT} (V)	t _g (Type.) (μs)	du _d /dt (min.) (V/μs)	R _{thJC} DC (°C/W)	R _{thJA} DC (°C/W)	T _{jmin} -T _{jmax} (°C)	Clamping force or mounting torque	Weight (g)	Fig.
T52-80	80/90	1.45	10.5	400-1200	10	0.93	3.2	2.2/500	150	3	100	320	0.25	0.12	-40...+125	14.0-17.0 Nm	125	3
T51-80	80/90	1.45	10.5	1400-1600	10	0.93	3.2	2.2/500	150	3	100	320	0.25	0.12	-40...+125	14.0-17.0 Nm	250	5.10
T52-100	100/85	1.6	12.8	400-1200	10	0.82	2.3	1.80/500	150	3	100	320	0.25	0.12	-40...+125	14.0-17.0 Nm	250	5.10
T51-100	100/85	1.6	12.8	1400-1600	10	0.82	2.3	1.80/500	150	3	100	320	0.25	0.12	-40...+125	14.0-17.0 Nm	250	5.10
T62E-150; T66E-150	150/95	3.6	65	400-1200	22	1.26	1.50	2.00/625	150	3	100	320	0.10	0.075	-40...+125	28.0-32.0 Nm for T61 and T62	250	4.9
T61E-150; T64E-150	150/95	3.6	65	1400-1600	22	1.26	1.50	2.00/625	150	3	100	320	0.10	0.075	-40...+125	28.0-32.0 Nm for T61 and T62	250	4.9
T62E-200; T66E-200	200/90	4.2	88	400-1200	22	0.91	1.4	1.70/625	150	3	100	320	0.10	0.075	-40...+125	3.5kN for T64 and T66	200	5.10
T61E-200; T64E-200	200/90	4.2	88	1400-2000	22	0.91	1.4	1.70/625	150	3	100	320	0.10	0.075	-40...+125	3.5kN for T64 and T66	200	5.10
T62E-250; T66E-250	250/85	5.0	125	400-1200	22	0.84	0.96	1.40/625	150	3	100	320	0.10	0.075	-40...+125	3.5kN for T64 and T66	200	4.9
T61E-250; T64E-250	250/85	5.0	125	1400-1600	22	0.84	0.96	1.40/625	150	3	100	320	0.10	0.075	-40...+125	3.5kN for T64 and T66	200	4.9
T62E-280; T66E-280	280/90	6.4	205	400-600	22	0.78	0.50	1.20/625	150	3	100	320	0.10	0.075	-40...+125	3.5kN for T64 and T66	200	4.9
T71-250; T74-250	250/75	6.3	200	1200-2400	33	1.13	1.00	2.60/1500	200	3	250	320	0.10	0.05	-40...+125	38.0-41.0 Nm for T71	500	6.11
T71-300; T74-300	300/70	7.6	290	400-2400	33	1.02	0.80	2.20/1500	200	3	250	320	0.10	0.05	-40...+125	38.0-41.0 Nm for T71	500	6.11
T71-350; T74-350	350/70	9.1	415	400-2400	33	0.86	0.60	1.80/1500	200	3	200	320	0.10	0.05	-40...+125	5.5kN for T74	450	6.11

THYRISTORS – HOCKEY PUK TYPE

Type	I _{T(AV)} / T _c (A) / (°C)	I _{TSM} 10 ms (kA)	Pt 10 ms (kA ² s)	U _{DRM} U _{RRM} T _j =125°C (V)	I _{DRM} I _{RRM} T _j =125°C (mA)	U _{T(TO)} T _j =125°C (V)	r _T T _j =125°C (mΩ)	U _{TM} / I _{TM} T _j =25°C (V) / (A)	I _{GT} (mA)	U _{GT} (V)	t _g (Type.) (μs)	du _d /dt (min.) (V/μs)	R _{thJC} DC (°C/W)	R _{thJA} DC (°C/W)	T _{jmin} -T _{jmax} (°C)	Clamping force	Weight (g)	Fig.
T63-200	200/90	3.6	65	400-2200	22	1.24	1.60	2.05/625	150	3	250	320	0.08	0.02	-40...+125	4.5-6.5 kN	60	12
T63-250	250/85	4.0	80	400-2200	22	1.15	1.15	1.85/625	150	3	250	320	0.08	0.02	-40...+125	4.5-6.5 kN	60	12
T63-300	300/80	4.5	101	400-1800	22	1.10	0.86	1.55/625	150	3	200	320	0.08	0.02	-40...+125	4.5-6.5 kN	60	12
T63-400	400/65	4.7	110	400-1600	22	0.95	0.80	1.40/625	150	3	200	320	0.08	0.02	-40...+125	4.5-6.5 kN	60	12
T63-500	500/65	6.3	200	200-600	22	0.76	0.46	1.15/625	150	3	150	320	0.08	0.02	-40...+125	4.5-6.5 kN	60	12
T73-450	450/70	7.6	290	400-2400	33	1.00	0.80	2.20/1500	200	3	250	320	0.06	0.02	-40...+125	9.0-11.0 kN	280	14
T73-550	550/65	9.1	415	400-2400	33	0.86	0.60	1.80/1500	200	3	200	320	0.06	0.02	-40...+125	9.0-11.0 kN	280	14
T73-600	600/60	9.1	415	400-2400	33	0.85	0.55	1.70/1500	200	3	150	320	0.06	0.02	-40...+125	9.0-11.0 kN	280	14
T75-650	650/65	8.1	330	400-2000	30	0.93	0.71	2.00/1500	150	3	150	320	0.04	0.02	-40...+125	9.0-11.0 kN	85	13
T75-700	700/65	8.8	386	400-2000	30	0.87	0.60	1.80/1500	150	3	150	320	0.04	0.02	-40...+125	9.0-11.0 kN	85	13
T75-750	750/65	9.5	450	400-1600	30	0.89	0.48	1.70/1500	150	3	150	320	0.04	0.02	-40...+125	9.0-11.0 kN	85	13
T75-980	980/65	11.4	650	200-800	30	0.80	0.23	1.21/1500	150	3	100	320	0.04	0.02	-40...+125	9.0-11.0 kN	85	13
T83-630	630/70	10.2	520	400-2400	50	1.25	0.80	2.10/1500	200	3	200	320	0.032	0.02	-40...+125	12.0-14.0 kN	280	14
T83-800	800/70	13.0	845	400-2400	50	0.99	0.49	1.70/1500	200	3	200	320	0.032	0.02	-40...+125	12.0-14.0 kN	280	14
T83-900	900/70	13.2	870	400-2000	50	0.97	0.34	1.45/1500	200	3	200	320	0.032	0.02	-40...+125	12.0-14.0 kN	280	14
T83-1000	1000/80	18.0	1620	200-1200	60	0.79	0.20	1.25/1500	200	3	150	320	0.032	0.02	-40...+125	12.0-14.0 kN	280	14
T95-800	800/80	17	1445	1800-3000	100	1.22	0.50	1.95/1500	200	3	200	320	0.023	0.01	-40...+125	22.5-25.0 kN	480	15
T95-1000	1000/70	20.0	2000	400-2400	100	1.15	0.415	1.75/1500	200	3	200	320	0.023	0.01	-40...+125	22.5-25.0 kN	480	15
T95-1250	1250/70	22.0	2400	400-2400	100	1.10	0.214	1.40/1500	200	3	150	320	0.023	0.01	-40...+125	22.5-25.0 kN	480	15
T95-1400	1400/75	24.0	2880	400-2400	100	0.83	0.214	1.35/1500	200	3	150	320	0.021	0.01	-40...+125	22.5-25.0 kN	480	15
T95-1600	1600/70	27.0	3600	200-1600	100	0.78	0.18	1.20/1500	200	3	100	320	0.021	0.01	-40...+125	22.5-25.0 kN	480	15
T95-1900	1900/60	30.0	4500	200-1200	100	0.73	0.16	1.10/1500	200	3	100	320	0.021	0.01	-40...+125	22.5-25.0 kN	480	15

FAST SWITCHING THYRISTORS

Type	$I_{T(AV)} / T_c$ (A)/(°C)	I_{TSM} 10 ms (kA)	I_{Tt} 10 ms (kA²s)	U_{DRM} / U_{RRM} $T_j=125$ (V)	I_{DRM} / I_{RRM} $T_j=125$ (mA)	$U_{T(TO)}$ $T_j=125$ (V)	r_T $T_j=125$ (mΩ)	U_{TM} / I_{TM} $T_j=25$ (V) / (A)	I_{GT} (mA)	U_{GT} (V)	t_a (μs)	di/dt (A/μs)	du_v/dt (min.) (V/μs)	$R_{thj,DC}$ (°C/W)	$R_{thcr,DC}$ (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Clamping force or mounting torque	Weight (g)	Fig.
F52-63	63/80	1,08	5,8	800	10			3,15/500	150	3	12,5	150	320	0,32	0,12	-40...+125	14,0-17,0 Nm	125	3
F52-63				1000							16,0								3
F52-63				1200							20,0								3
F51-63	63/80			1600							32,0								2
F52-80	80/75	1,26	7,9	800	10			2,50/500	150	3	20,0	150	320	0,32	0,12	-40...+125	14,0-17,0 Nm	125	3
F52-80				1200							25,0								3
F52-100	100/70	1,45	10,5	600	10			2,00/500	150	3	25,0	150	320	0,32	0,12	-40...+125	14,0-17,0 Nm	125	3
F52-100				800							32,0								3
F61-125	125/85	3,6	65	1600	22			2,10/625	150	3	40,0	150	320	0,14	0,075	-40...+125	28,0-32,0 Nm	250	4
F61-125				2000-2200							63,0								4
F62-150	150/85	4,0	80	800	22			1,90/625	150	3	12,5	150	320	0,14	0,075	-40...+125	28,0-32,0 Nm	250	5
F62-150				1000-1200							16,0								5
F62-170	170/85	4,2	88	800-1200	22	1,00	1,18	1,70/625	150	3	20,0	150	320	0,14	0,075	-40...+125	28,0-32,0 Nm	250	5
F71-225	225/80	6,1	186	1200	33			2,25/1500	200	3	20,0	150	320	0,1	0,05	-40...+125	38,-41,0 Nm	500	6
F71-225				1600							40,0								6
F71-300	300/70	7,4	274	600-800	33	1,14	0,70	2,00/1500	200	3	20,0	150	320	0,1	0,05	-40...+125	38,-41,0 Nm	500	6
F71-300				1200							25,0								6
F63-200	200/85	3,1	48	1600	22			2,35/625	150	3	40,0	150	320	0,08	0,02	-40...+125	4,5-6,5 kN	60	12
F63-200				2000-2200							63,0								12
F63-250	250/78	3,6	65	800	22	1,22	1,23	2,10/625	150	3	10,0	150	320	0,08	0,02	-40...+125	4,5-6,5 kN	60	12
F63-250				1000							12,5								12
F63-250				1200							16,0								12
F63-300	300/70	4,0	80	800-1200	22			1,90/625	150	3	20,0	150	320	0,08	0,02	-40...+125	4,5-6,5 kN	60	12
F75-500				1200							25,0								13
F75-500				1600							40,0								13
F75-700	700/70	8,5	361	400-800	30			1,70/1500	150	3	20,0	200	320	0,04	0,02	-40...+125	9,0-11,0 kN	85	13
F75-500	500/70	8,0	320	800	33			2,10/1500	200	3	20,0	200	320	0,06	0,02	-40...+125	9,0-11,0 kN	280	14

INVERTER THYRISTORS

Type	$I_{T(AV)} / T_c$ (A)/(°C)	I_{TSM} 10 ms (kA)	I_{Tt} 10 ms (kA²s)	U_{DRM} / U_{RRM} $T_j=125$ (V)	I_{DRM} / I_{RRM} $T_j=125$ (mA)	$U_{T(TO)}$ $T_j=125$ (V)	r_T $T_j=125$ (mΩ)	U_{TM} / I_{TM} $T_j=25$ (V) / (A)	I_{GT} (mA)	U_{GT} (V)	t_a (μs)	di/dt (A/μs)	du_v/dt (min.) (V/μs)	$R_{thj,DC}$ (°C/W)	$R_{thcr,DC}$ (°C/W)	$T_{jmin} - T_{jmax}$ (°C)	Clamping force or mounting torque	Weight (g)	Fig.
P71-225	225/80	6,1	186	1200	33			2,25/1500	200	3	25,0	250	320	0,1	0,05	-40...+125	38,-41,0 Nm	500	6
P71-225				1600							40,0								6
P71-300	300/75	7,4	274	600-800	33			2,00/1500	200	3	20,0	250	320	0,1	0,05	-40...+125	38,-41,0 Nm	500	6
P71-300				1200							32,0								6
P73-500	500/70	8,0	320	800-1200	33			2,10/1500	200	3	20,0	250	320	0,06	0,02	-40...+125	9,0-11,0 kN	280	14
P75-600	600/55(Th)	7,0	245	1400-1600	30	1,37	0,62	2,2/1500	300	3	32,0	400	320	0,04Th	0,01	-40...+125	9,0-11,0 kN	85	13
P75-700	700/55(Th)	9,2	423	800-1200	30	1,14	0,475	1,9/1500	300	3	25,0	400	320	0,04Th	0,01	-40...+125	9,0-11,0 kN	85	13
P83-500	500/80	8,0	320	1600	50	1,35	0,65	2,30/1500	200	3	40,0	400	320	0,037	0,02	-40...+125	12,0-14,0 kN	280	14
P83-600	600/75	9,6	460	800-1200	50	1,20	0,52	2,00/1500			20,0	400	320	0,037	0,02	-40...+125	12,0-14,0 kN	280	14
P83-600				1400							32,0								14
P95-900	900/75	15,0	1125	1600-1800	100	1,37	0,37	1,85/1500	200	3	63,0	300	320	0,023	0,01	-40...+125	22,5-25,0 kN	480	15
P95-1000	1000/75	15,0	1125	800-1000	100	1,33	0,27	1,80/1500	200	3	20,0	300	320	0,023	0,01	-40...+125	22,5-25,0 kN	480	15
P95-1000				1200-1400							32,0								15

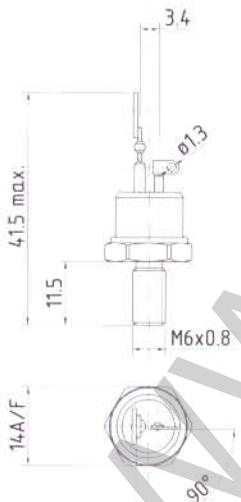


Fig. 1
T32, F32

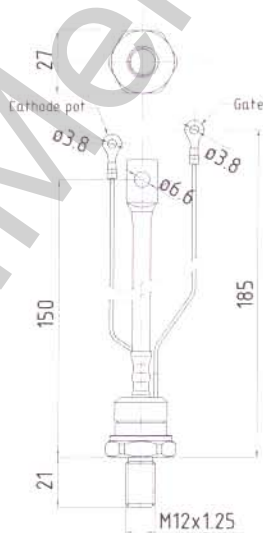


Fig. 2
T51, F51

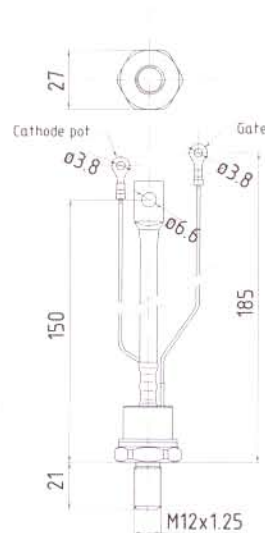


Fig. 3
T52, F52

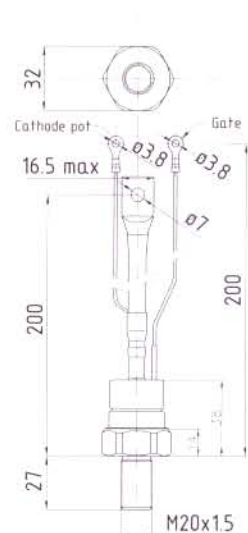
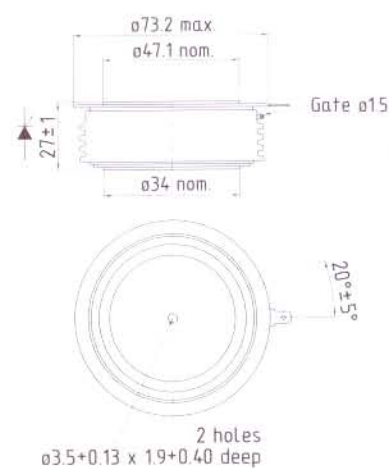
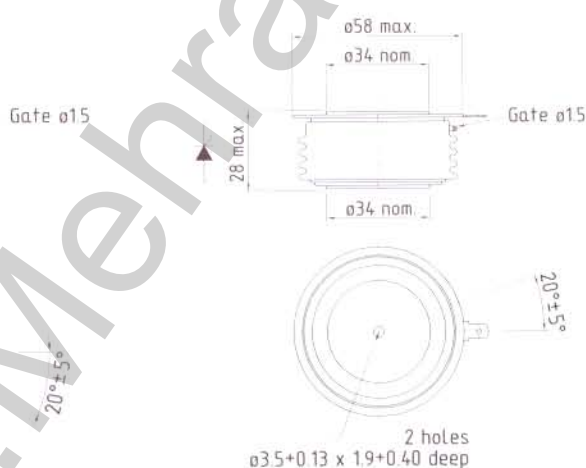
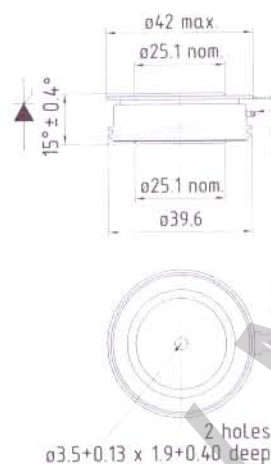
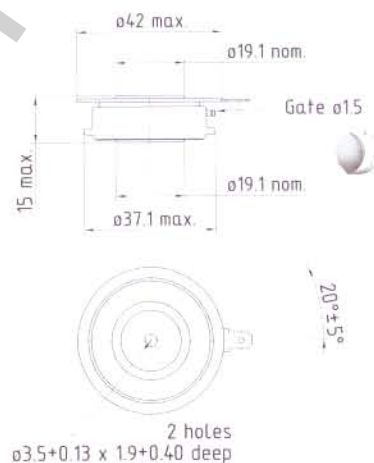
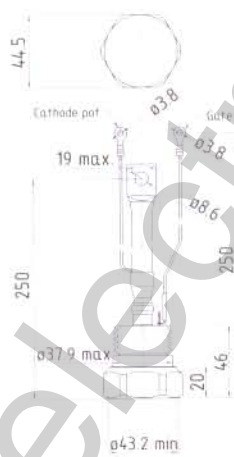
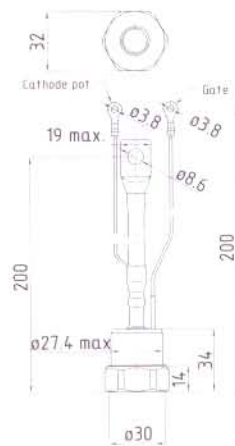
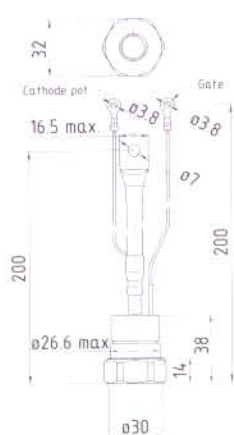
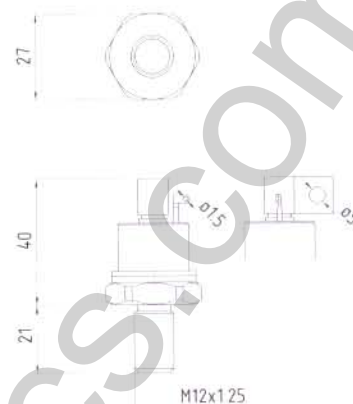
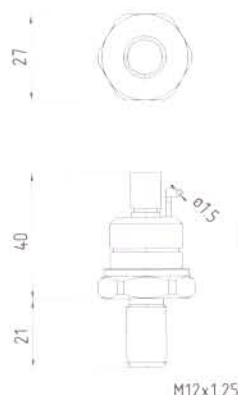
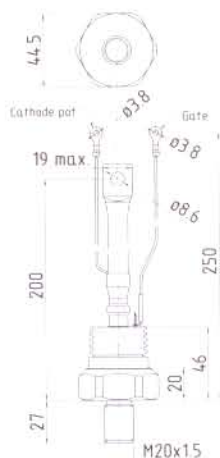
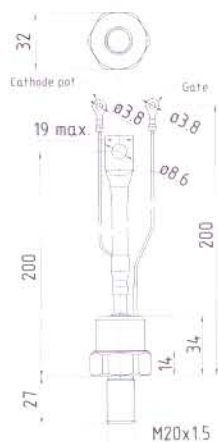


Fig. 4
T61E, F61



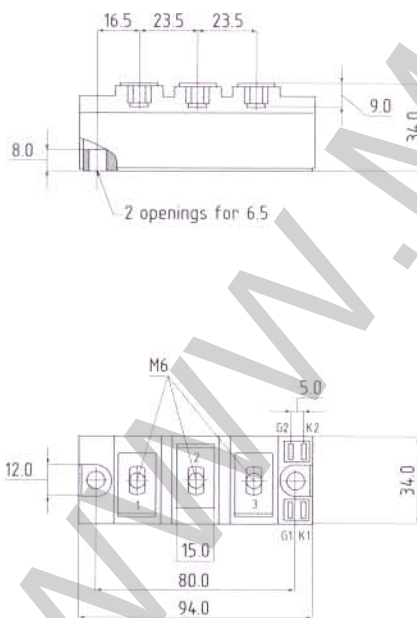
Turn off time code (t_3 – see table 2); standard 100 - 150 μ s.
du/dt code (see table 2); for thyristor marking only
Voltage class x 100 [V]
Average current $I_{T(AV)}$ for thyristors and $I_{F(AV)}$ for diodes

ELECTRICALLY ISOLATED BASE MODULES



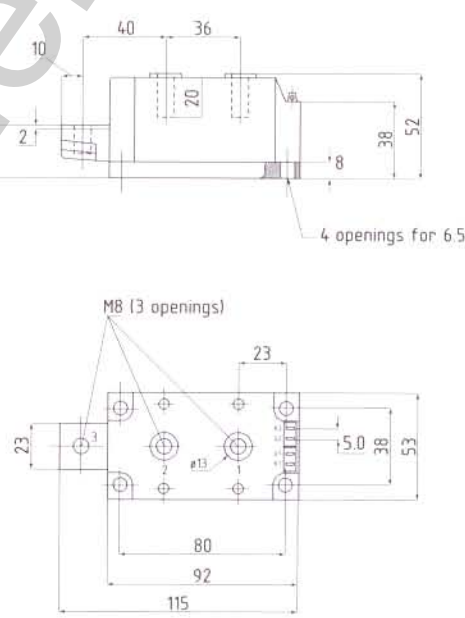
Typ	$I_{T(AV)} / T_c$ (A) / (°C)	I_{TSM} 10 ms (kA)	I^2t 10 ms (kA ² s)	U_{DRM}, U_{RRM} $T_j=125$ (°C) (V)	I_{DRM}, I_{RRM} $T_j=125$ (°C) (mA)	$U_{T(TO)}$ $T_j=125$ (°C) (V)	U_{TM} / I_{TM} $T_j=25$ °C (V) / (A)	R_{thjc} DC (°C/W)	$T_{jmin}-T_{jmax}$ (°C)	Config.	Fig.
DUAL THYRISTOR MODULES											
MT_-150	150/85	4,2	88	400 -1600	20	0,915	1,7/62 5	0,17	-40...+125	Tab. 1	1
MT_-170	170/85	5,0	125	400 -1600	20	0,8 3	1,4/625	0,17	-40...+125	Tab. 1	1
MT_-260	260/85	7,0	245	400 -1600	30	0,84	1,7/1500	0,11	-40...+125	Tab. 2	2
MT_-300	300/85	8,0	320	400 -1600	30	0,70	1,4/1500	0,11	-40...+125	Tab. 2	2
MT_-500	500/85	17,0	1445	400 -1800	60	0,70	1,31/1500	0,06	-40...+125	Tab. 2	3
THYRISTOR-DIODE, DIODE-THYRISTOR MODULES											
MH_-150	150/85	4,2	88	400 -1600	20	0,915	1,7/625	0,17	-40...+125	Tab. 1	1
MH_-170	170/85	5,0	125	400 -1600	20	0,8 3	1,4/625	0,17	-40...+125	Tab. 1	1
MH_-260	260/85	7,0	245	400 -1600	30	0,84	1,7/1500	0,11	-40...+125	Tab. 2	2
MH_-300	300/85	8,0	320	400 -1600	30	0,70	1,4/1500	0,11	-40...+125	Tab. 2	2
MH_-500	500/85	17,0	1445	400 -1800	60	0,70	1,31/ 1500	0,06	-40...+125	Tab. 2	3
Type	$I_{F(AV)} / T_c$ (A) / (°C)	I_{FSM} 10 ms (kA)	I^2t 10 ms (kA ² s)	U_{RRM} $T_j=150$ (°C) (V)	I_{RRM} $T_j=150$ (°C) (mA)	$U_{F(TO)}$ $T_j=150$ (°C) (V)	U_{FM} / I_{FM} $T_j=25$ °C (V) / (A)	R_{thjc} DC (°C/W)	$T_{jmin}-T_{jmax}$ (°C)	Config.	Fig.
DUAL DIODE MODULES											
MD_-170	170/100	5,0	125	400 -1600	30	0,85	1,85/800	0,18	-40...+150	Tab. 1	1
MD_-200	200/100	5,5	150	400 -1600	30	0,71	1,6/800	0,18	-40...+150	Tab. 1	1
MD_-410	410/100	10	500	400 -1600	30	0,71	1,2/1500	0,11	-40...+150	Tab. 2	2
MD_-470	470/100	11	605	400 -1600	30	0,62	1,1/1500	0,11	-40...+150	Tab. 2	2
MD_-660	660/100	18	1620	400 -1800	50	0,60	1,1/1500	0,065	-40...+150	Tab. 2	3

Fig. 1



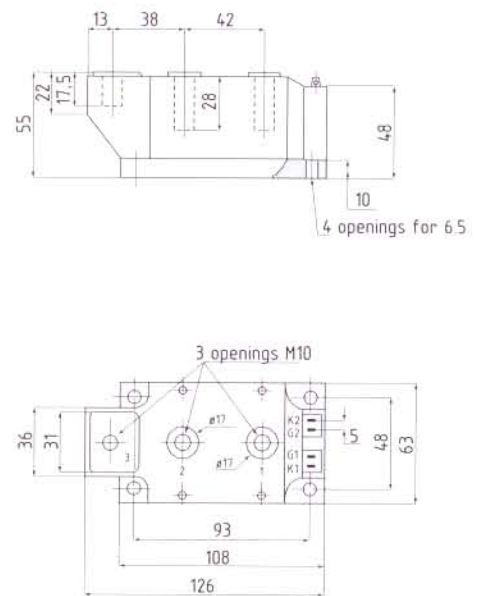
Weight ca. 360 g

Fig. 2



Weight ca. 840 g

Fig. 3



Weight ca. 1490 g

AVAILABLE CONFIGURATIONS OF CIRCUITS

Tab. 2

	MD	MH	MT
A			
B			
C			
D			
E			
F			
K			
L			
1			
2			
3			
4			
5			
6			
7			
8			

Tab. 1

	MD	MH	MT
A			
B			
C			
D			
E			
F			
K			
L			
1			
2			
3			
4			
5			
6			
7			
8			