



Thyristor Modules

SKET 740

Features

- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate
- UL recognized, file no. E 63 532

Typical Applications*

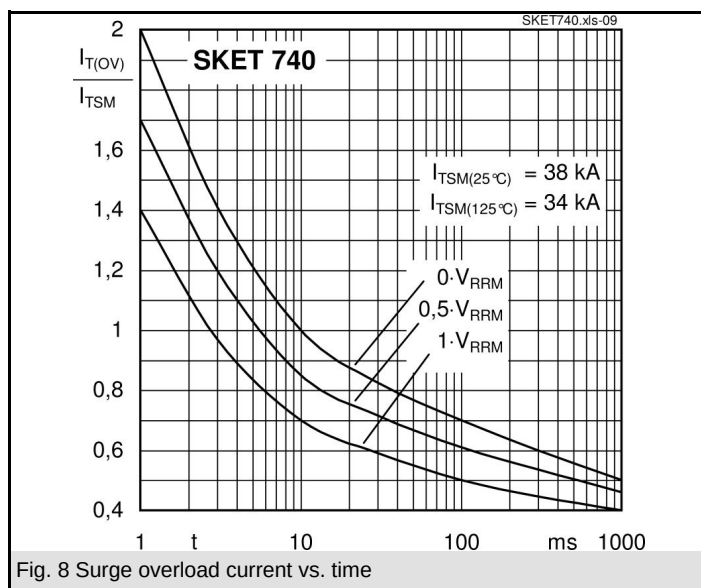
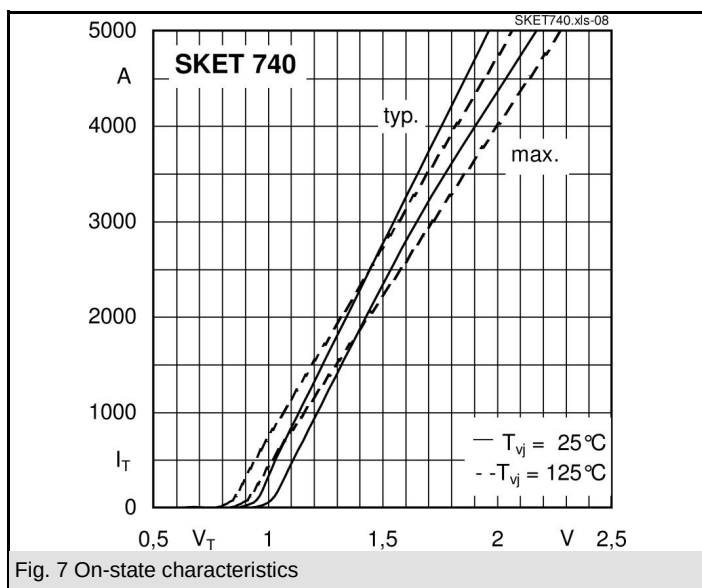
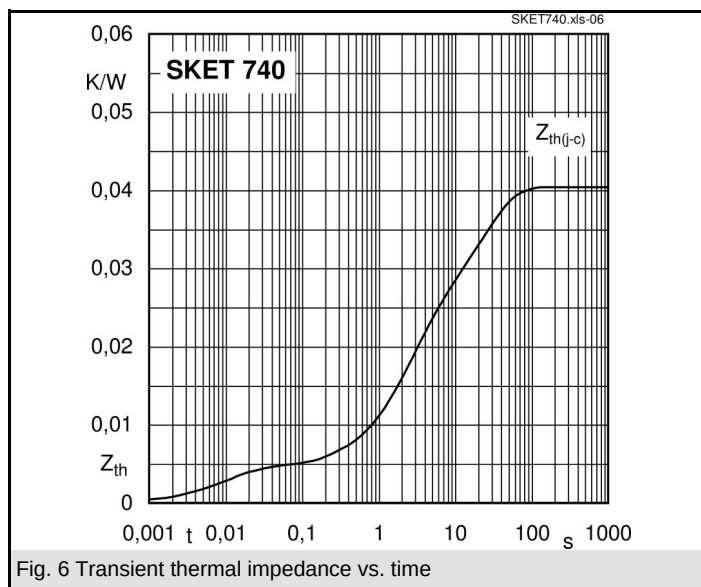
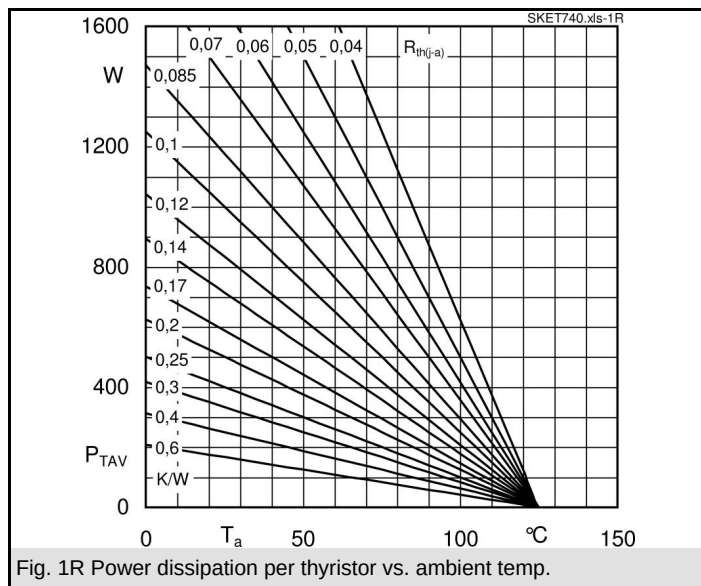
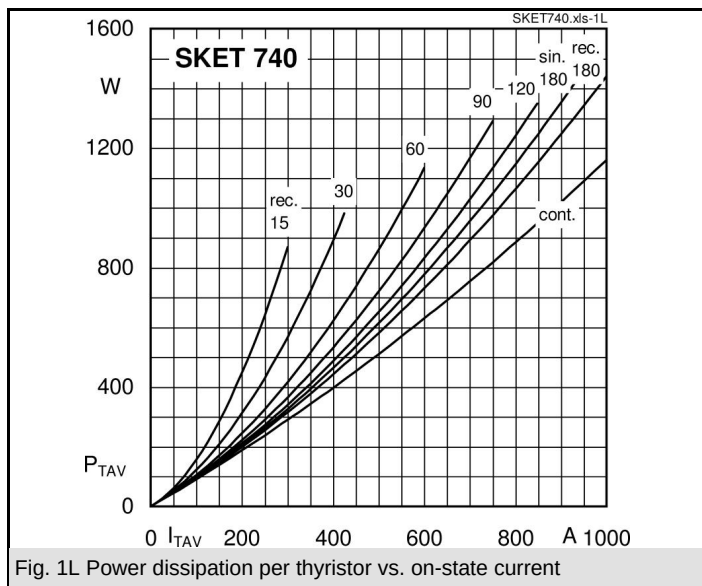
- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Softstart application

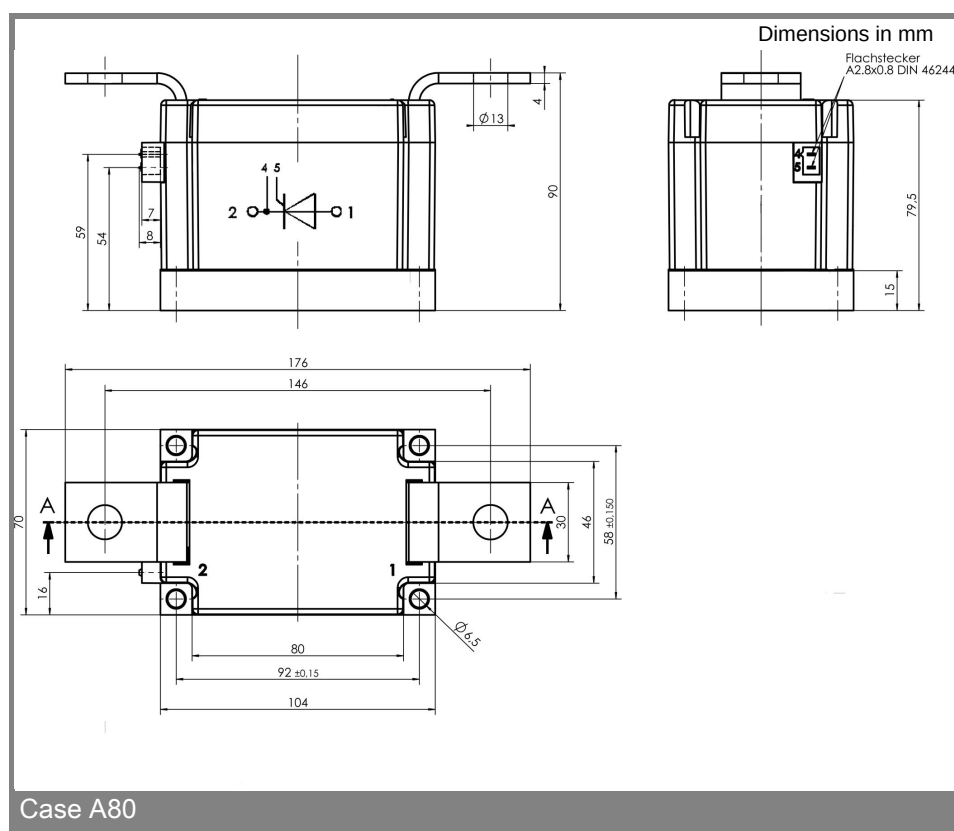
- 1) calculated with characteristic values
 2) characteristic values
 3) T_{vjmax} up to 130°C is allowable for overload conditions, max. time periode for the overload condition is 20s

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 1500$ A (maximum value for continuous operation) $I_{TAV} = 740$ A (sin. 180; $T_c = 82$ °C)		
1900	1800	SKET 740/18G H4		
2300	2200	SKET 740/22G H4		

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85$ (100) °C;	700 (490)	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	36000	A
	$T_{vj} = 125$ °C; 10 ms	31000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	6480000	A²s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	4805000	A²s
V_T	$T_{vj} = 25$ °C; $I_T = 3000$ A	max. 1,65	V
$V_{T(typ.)}^{(2)}$	$T_{vj} = 25$ °C; $I_T = 3000$ A	1,55	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 0,88	V
r_T	$T_{vj} = 125$ °C	max. 0,28	mΩ
$V_{T(TO)(typ.)}^{(2)}$	$T_{vj} = 125$ °C	0,82	V
$r_{T(typ.)}^{(2)}$	$T_{vj} = 125$ °C	0,25	mΩ
I_{DD}, I_{RD}	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}, V_{DD} = V_{DRM}$	max. 150	mA
t_{gd}	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs	1	μs
t_{gr}	$V_D = 0,67 * V_{DRM}$	2	μs
$(di/dt)_{cr}$	$T_{vj} = 125$ °C	max. 200	A/μs
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C	max. 2000	V/μs
t_q	$T_{vj} = 125$ °C ,	200	μs
I_H	$T_{vj} = 25$ °C; typ. / max.	1000 / 2000	mA
I_L	$T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max.	1500 / 2500	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 300	mA
V_{GD}	$T_{vj} = 125$ °C; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 125$ °C; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.	0,0405	K/W
$R_{th(j-c)}$	sin. 180	0,042	K/W
$R_{th(j-c)}$	rec. 120	0,043	K/W
$R_{th(c-s)}$		0,01	K/W
T_{vj}		- 40 ... + 125 ³⁾	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1s / 1 min.	4800 / 4000	V~
V_{isol}		745 / 520	V~
M_s	to heatsink	6 ± 15 %	Nm
M_t	to terminal	18 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	2150	g
Case		A80	







* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.