

BKKT 162, BKKH 162



V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 250$ A (maximum value for continuous operation)	
		$I_{TAV} = 160$ A (sin.180; $T_c = 83$ °C)	
900	800	BKKT 162/08E	BKKH 162/08E
1300	1200	BKKT 162/12E	BKKH 162/12E
1500	1400	BKKT 162/14E	BKKH 162/14E
1700	1600	BKKT 162/16E	BKKH 162/16E
1900	1800	BKKT 162/18E	BKKH 162/18E

Thyristor / Diode Modules

BKKT 162

BKKH 162

Features

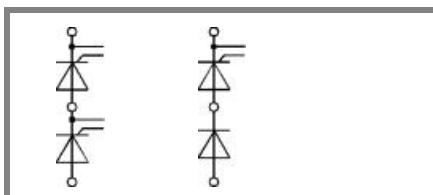
- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications*

- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

1) See the assembly instructions

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85$ (100) °C;	156 (110)	A
I_D	P3/180F; $T_a = 35$ °C; B2 / B6	190 / 230	A
I_{RMS}	P3/180F; $T_a = 35$ °C; W1 / W3	265 / 3 * 185	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	5400	A
	$T_{vj} = 125$ °C; 10 ms	5000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	145000	A ² s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	125000	A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 500$ A	max. 1,6	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 0,85	V
r_T	$T_{vj} = 125$ °C	max. 1,5	mΩ
I_{DD}, I_{RD}	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}, V_{DD} = V_{DRM}$	max. 40	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. 1000	V/μs
t_q	$T_{vj} = 125$ °C	50 ... 150	μs
I_H	$T_{vj} = 25$ °C; typ. / max.	150 / 400	mA
I_L	$T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max.	300 / 1000	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 2	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 150	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.; per thyristor / per module	0,17 / 0,085	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	0,18 / 0,09	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	0,2 / 0,1	K/W
$R_{th(c-s)}$	per thyristor / per module	0,1 / 0,05	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	to heatsink	5 ± 15 % ¹⁾	Nm
M_t	to terminal	5 ± 15 %	Nm
a		5 * 9,81	m/s ²
m	approx.	165	g
Case	BKKT	A 21	
	BKKH	A 22	



BKKT

BKKH

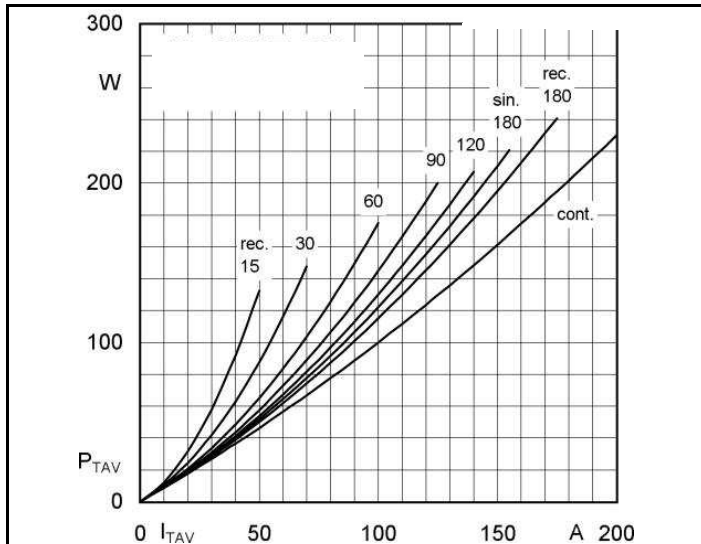


Fig. 1L Power dissipation per thyristor vs. on-state current

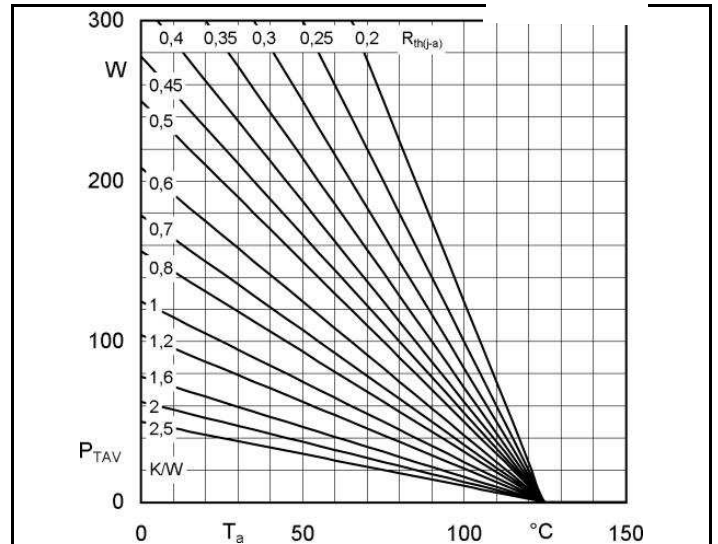


Fig. 1R Power dissipation per thyristor vs. ambient temp.

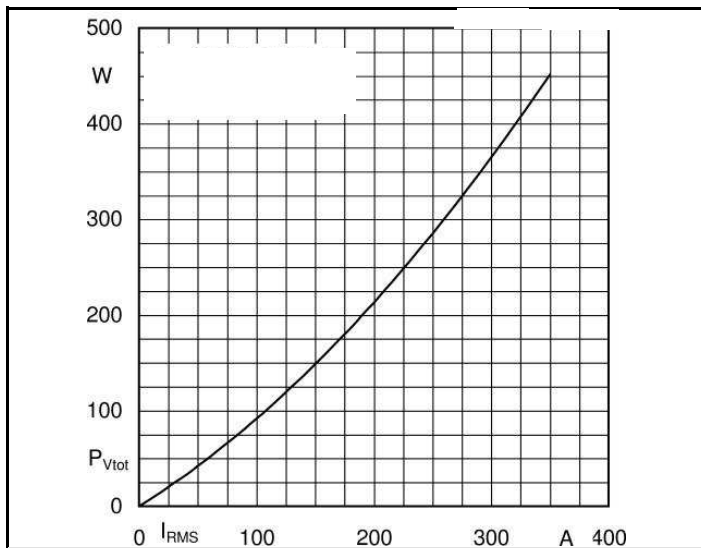


Fig. 2L Power dissipation per module vs. rms current

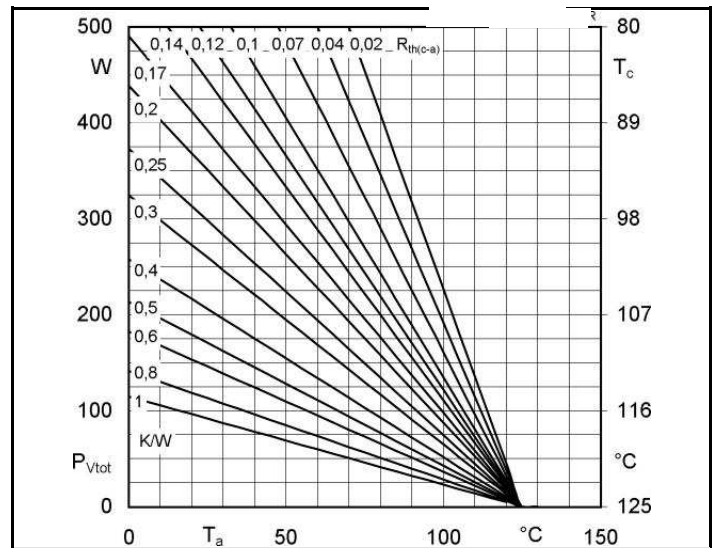


Fig. 2R Power dissipation per module vs. case temp.

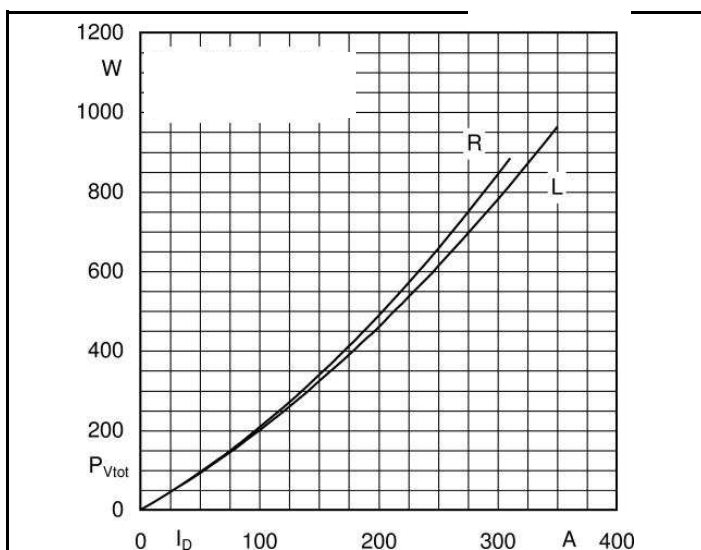


Fig. 3L Power dissipation of two modules vs. direct current

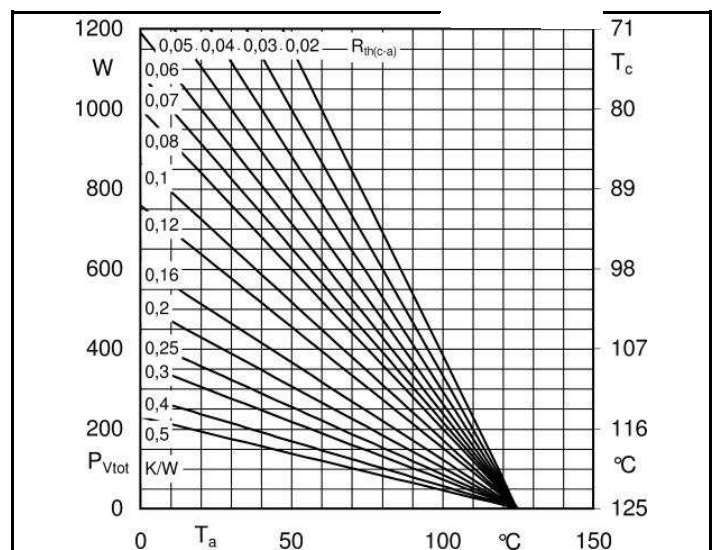


Fig. 3R Power dissipation of two modules vs. case temp.

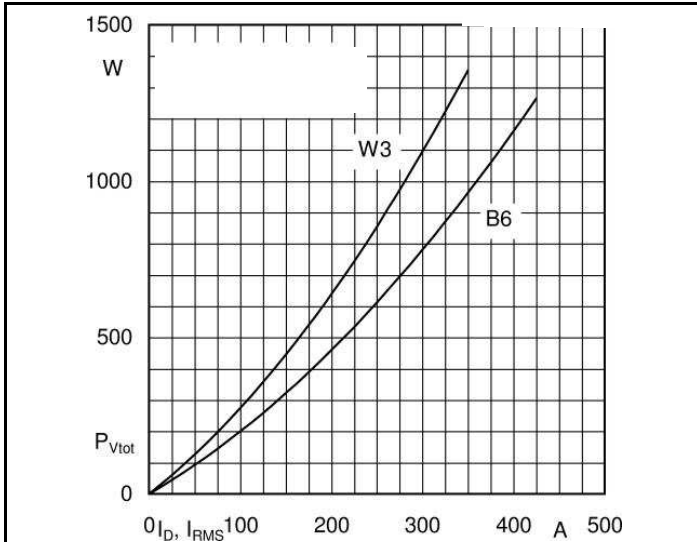


Fig. 4L Power dissipation of three modules vs. direct and rms current

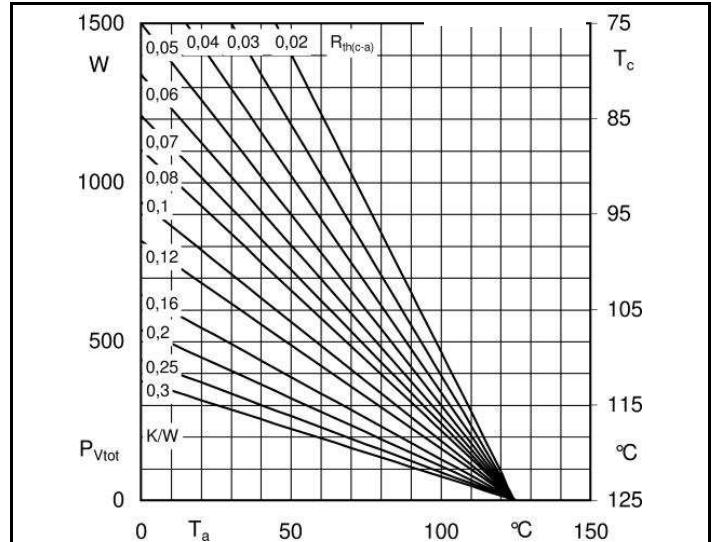


Fig. 4R Power dissipation of three modules vs. case temp.

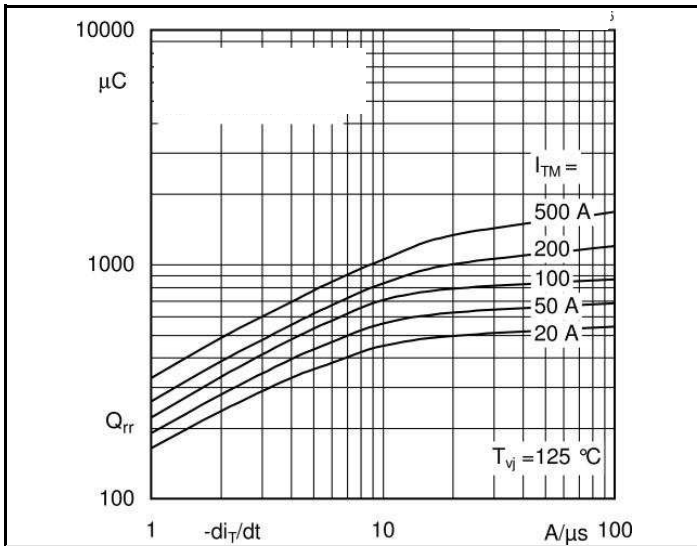


Fig. 5 Recovered charge vs. current decrease

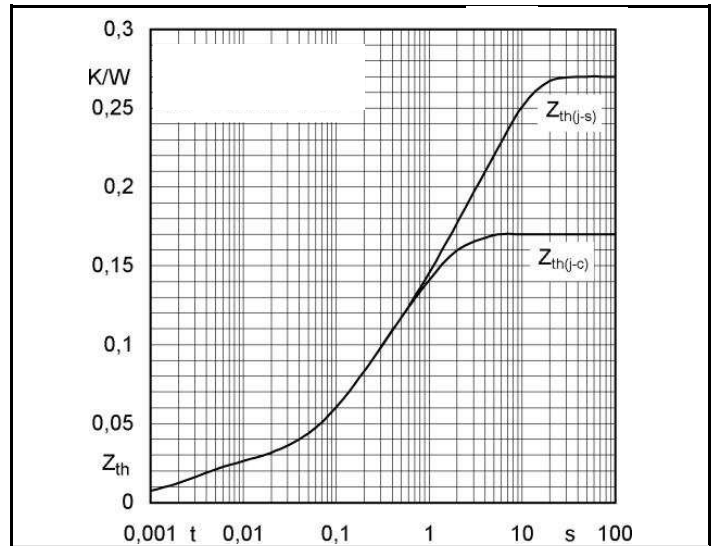


Fig. 6 Transient thermal impedance vs. time

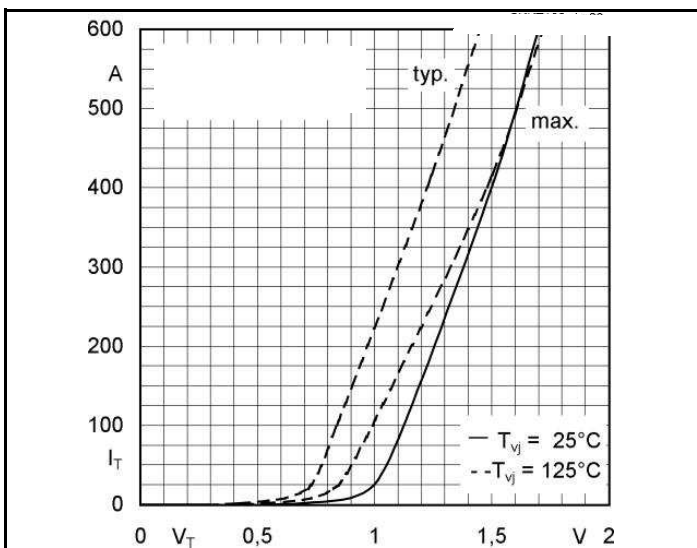


Fig. 7 On-state characteristics

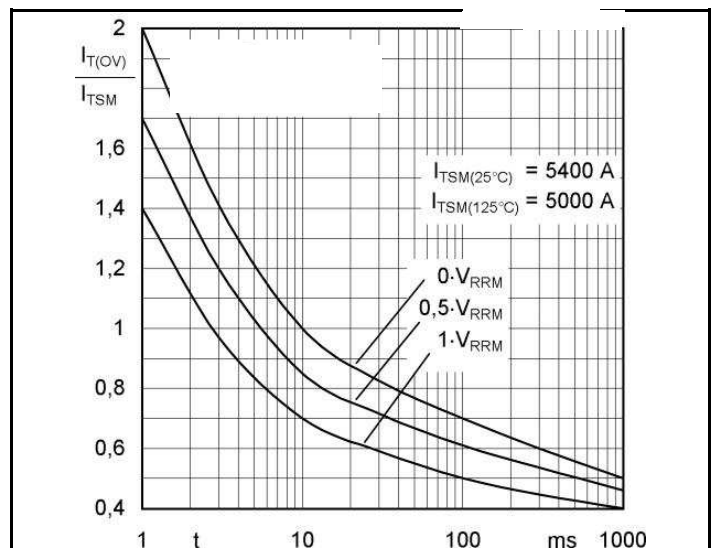
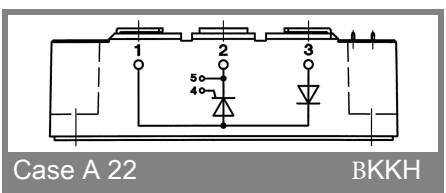
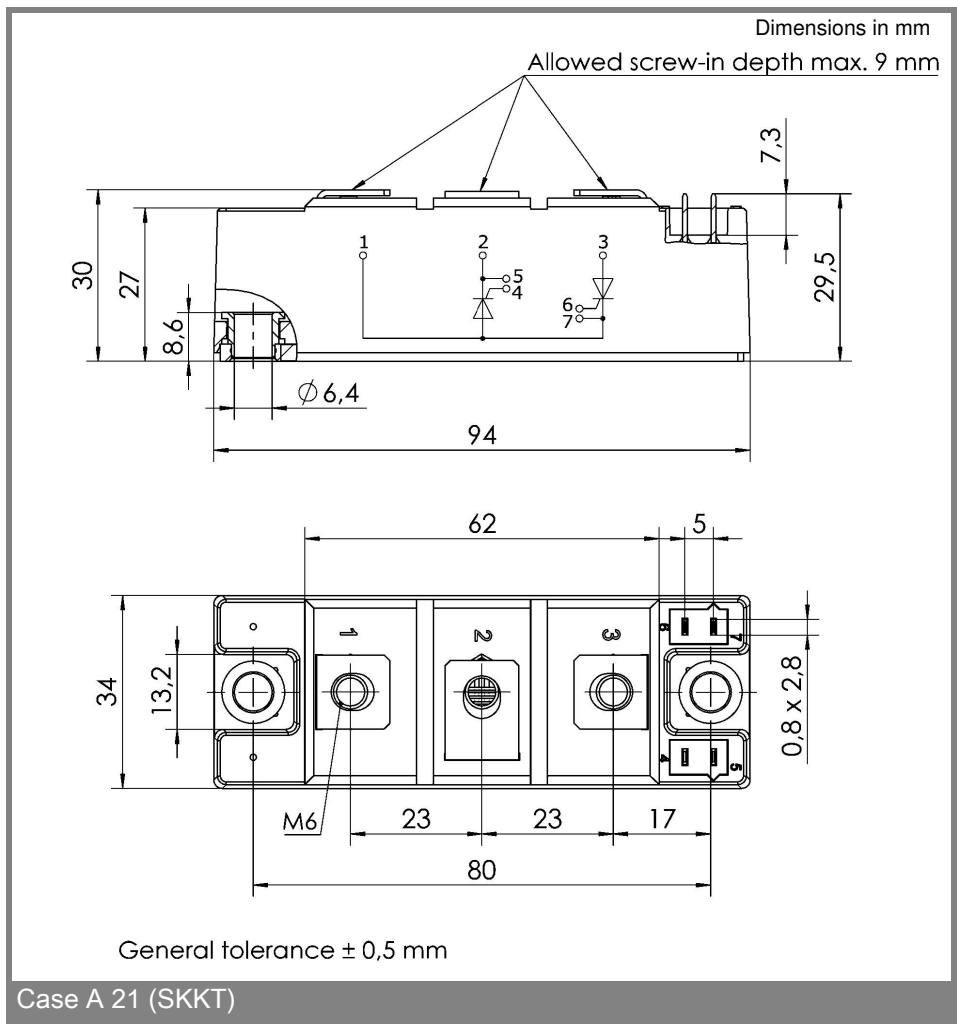
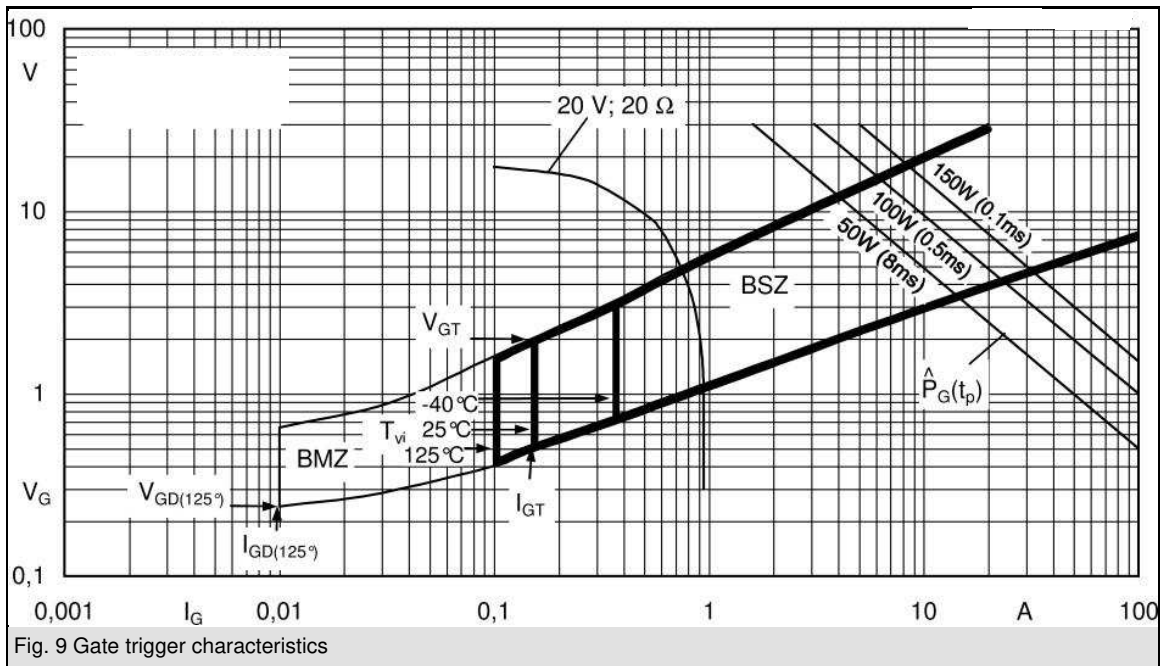


Fig. 8 Surge overload current vs. time



This is an electrostatic discharge sensitive device (ESDS) due to international standard IEC 61340.

***IMPORTANT INFORMATION AND WARNINGS**

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