

# SKKT 172, SKKH 172



**SEMIPACK<sup>®</sup> 2**

## Thyristor / Diode Modules

**SKKH 172**

**SKKT 172**

### 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\*

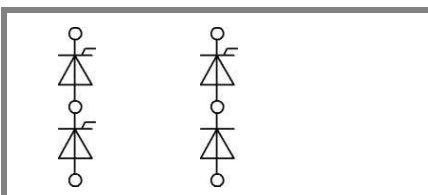
- DC motor control (e.g. for machine tools)
- AC motor soft starters

1) Characteristic values

2) See the assembly instructions

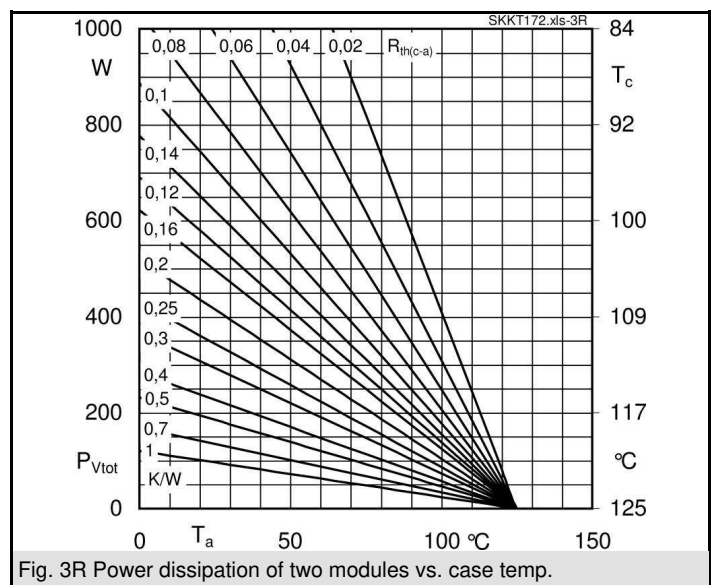
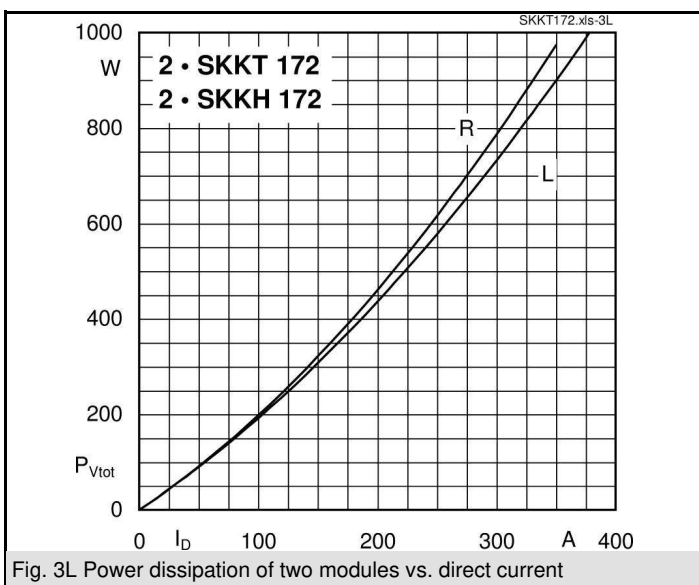
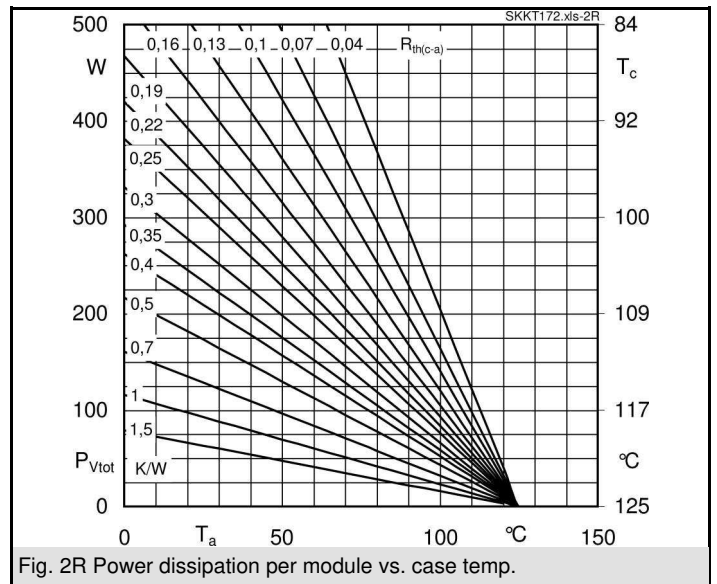
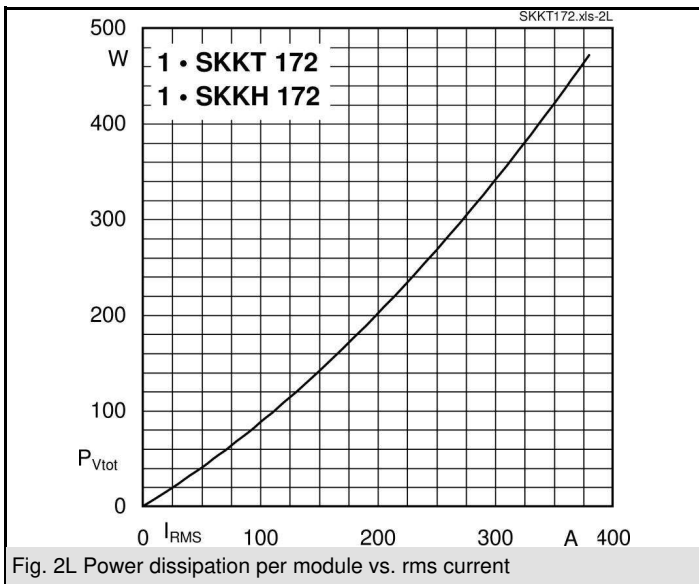
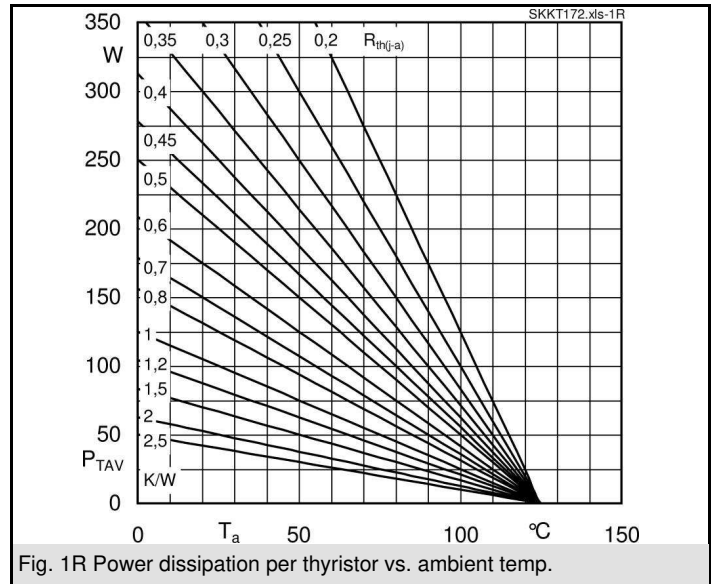
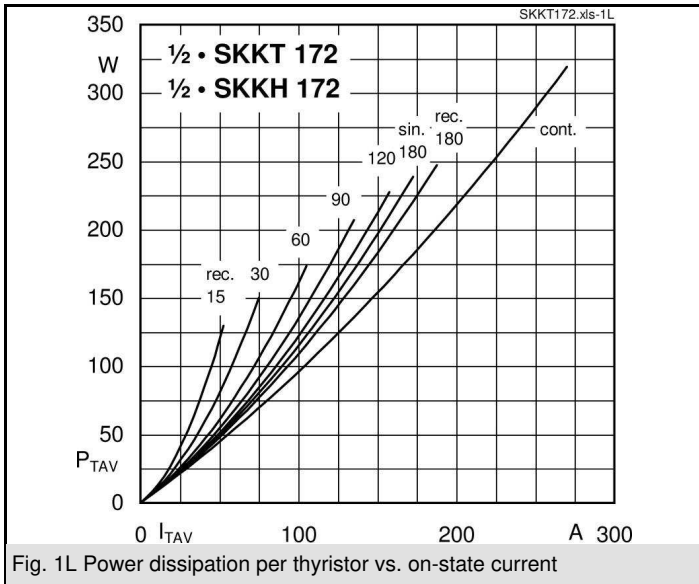
$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_{TRMS} = 275$ A (maximum value for continuous operation) $I_{TAV} = 172$ A (sin. 180; $T_c = 86$ °C)	
1500	1400	SKKT 172/14E	
1700	1600	SKKT 172/16E	SKKH 172/16E
1900	1800	SKKT 172/18E	SKKH 172/18E

Symbol	Conditions	Values	Units
$I_{TAV}$	sin. 180; $T_c = 85$ (100) °C;	175 (124)	A
$I_{TSM}$	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms	5400 5000	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3 ... 10 ms	145000 125000	A <sup>2</sup> s A <sup>2</sup> s
$V_T$	$T_{vj} = 25$ °C; $I_T = 500$ A	max. 1,41	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 0,83	V
$r_T$	$T_{vj} = 125$ °C	max. 1,3	mΩ
$V_{T(TO)(typ.)}^{1)}$	$T_{vj} = 125$ °C	0,8	V
$r_{T(typ.)}^{1)}$	$T_{vj} = 125$ °C	1,2	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	typ. 175	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	0,155 / 0,078	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	0,164 / 0,082	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	0,18 / 0,09	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	$5 \pm 15$ % <sup>2)</sup>	Nm
$M_t$	to terminal	$5 \pm 15$ %	Nm
$a$		$5 * 9,81$	m/s <sup>2</sup>
$m$	approx.	165	g
Case	SKKT SKKH	A 21 A 22	

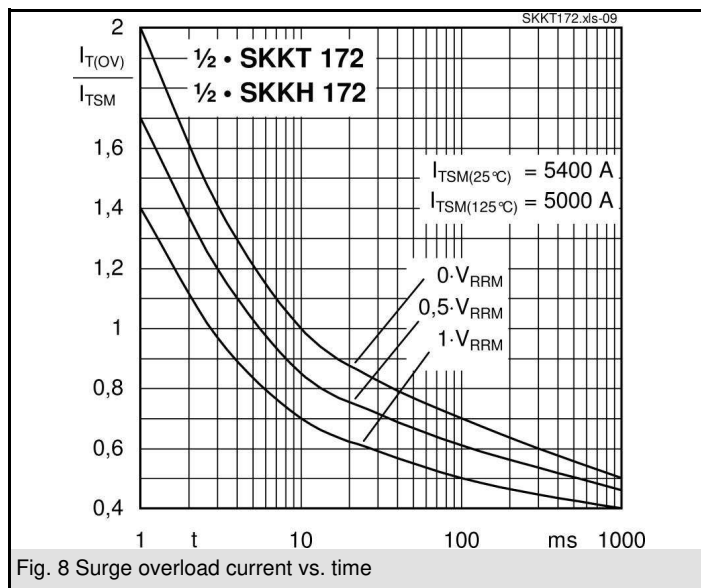
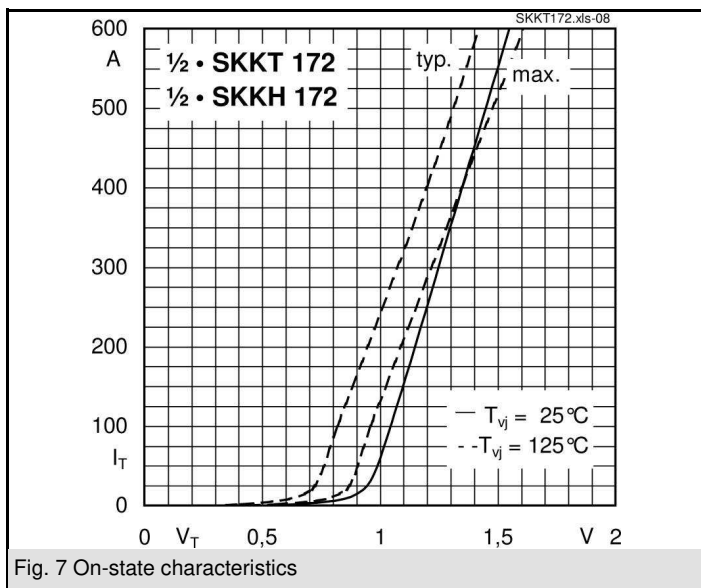
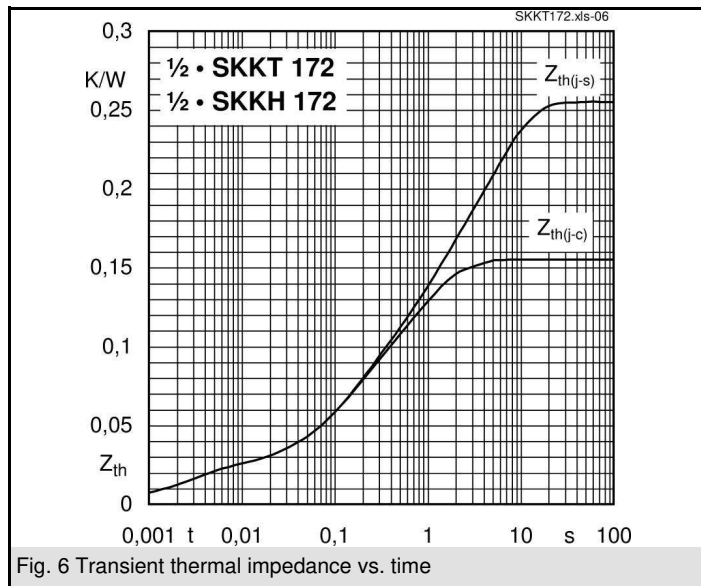
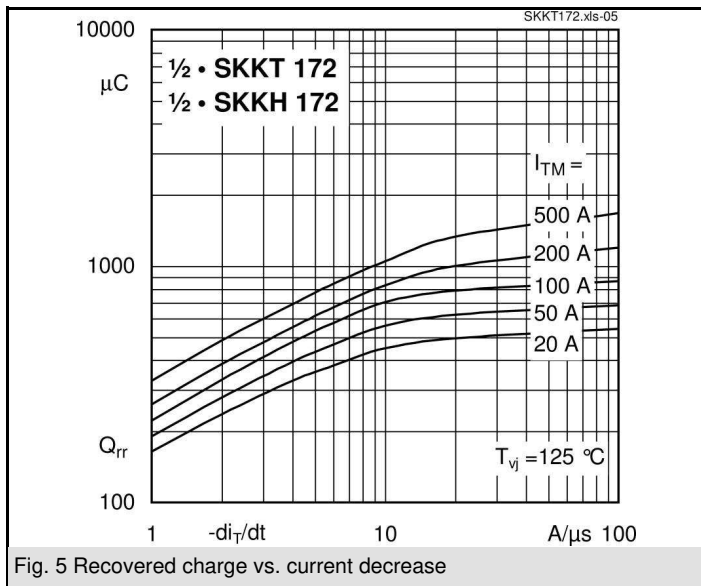
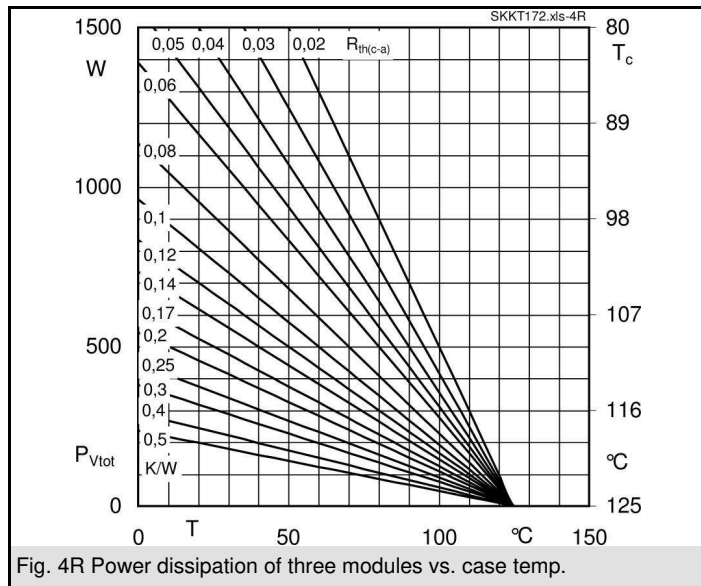
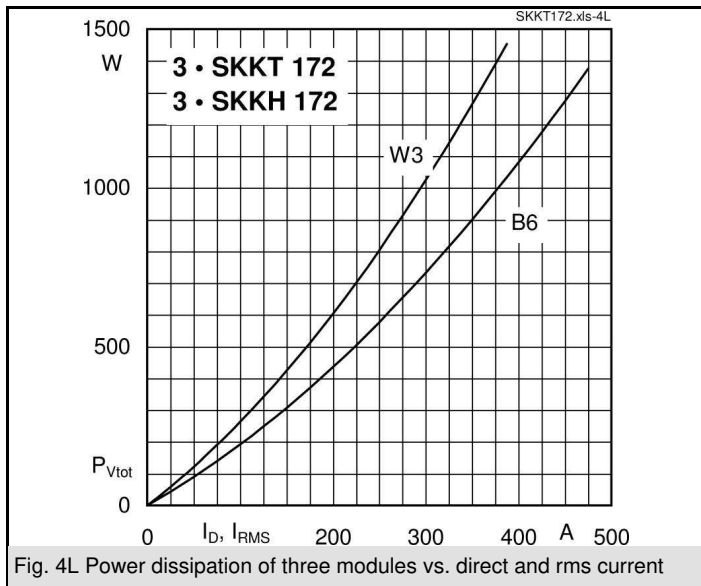


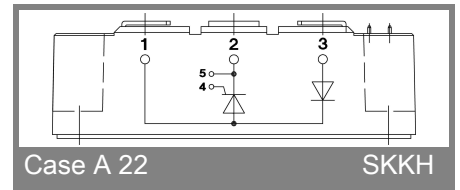
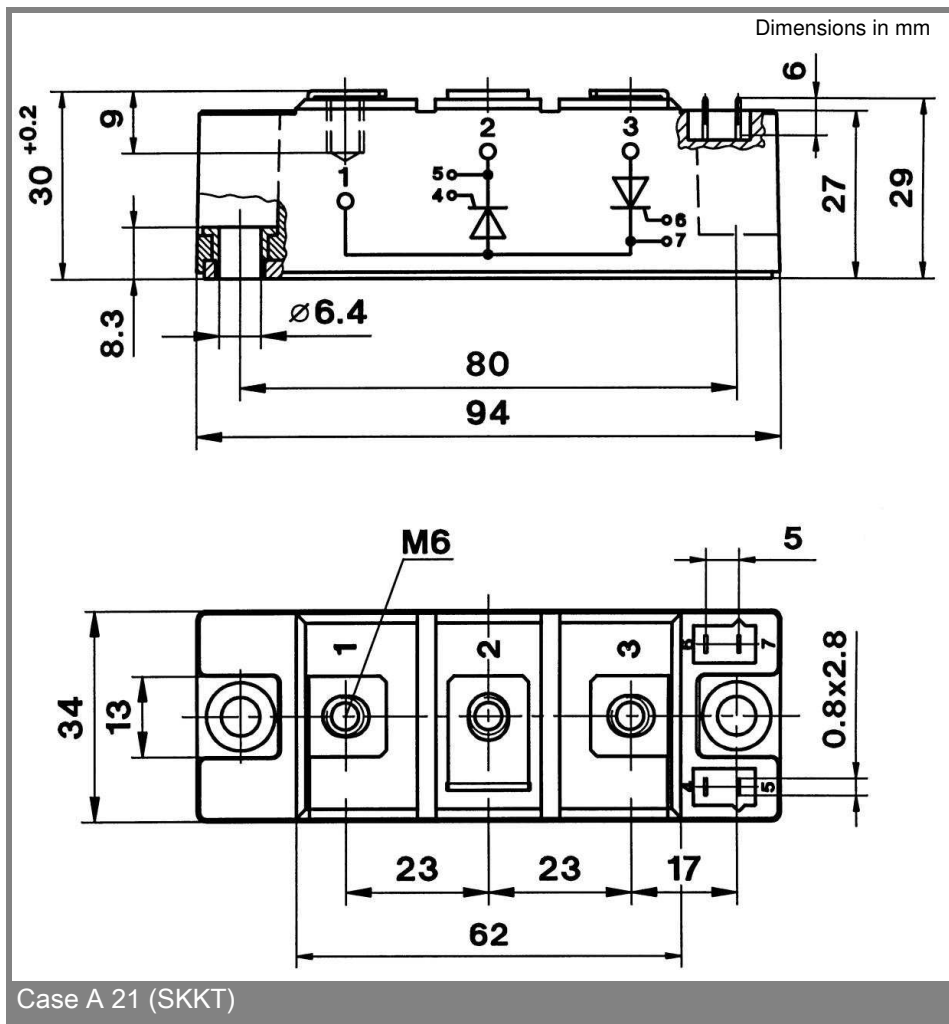
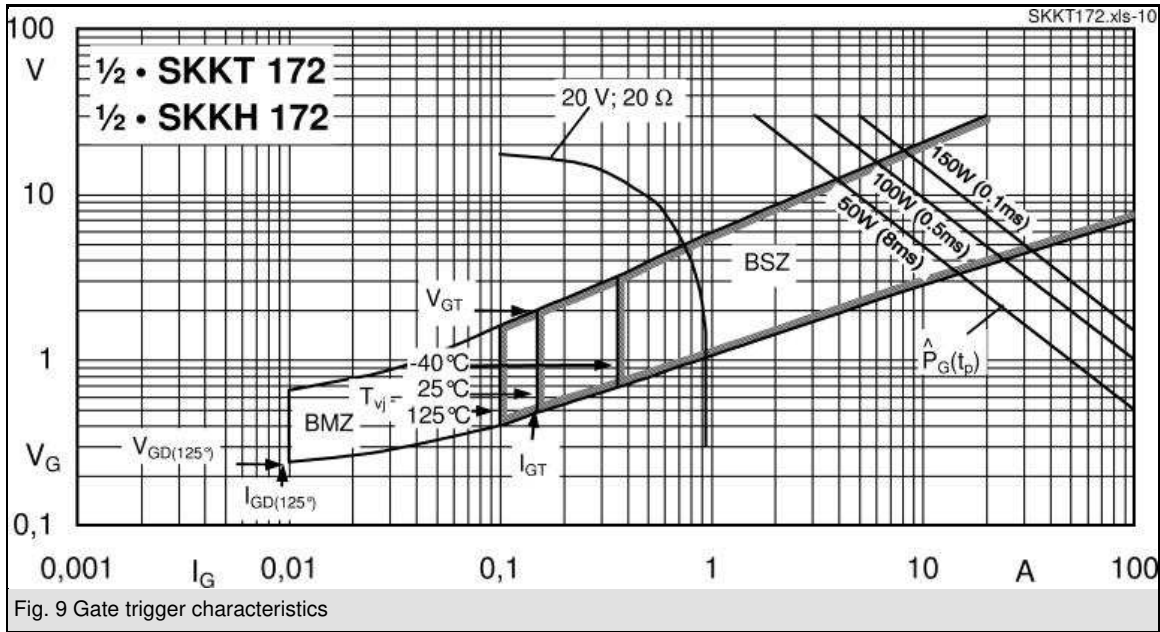
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## **\*IMPORTANT INFORMATION AND WARNINGS**

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