

SKKT 213, SKKH 213



SEMIPACK[®] 3

Thyristor / Diode Modules

SKKH 213

SKKT 213

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Chip soldered on direct copper bonded Al₂O₃ ceramic
- Thyristor with amplifying gate
- UL recognized, file no. E 63 532

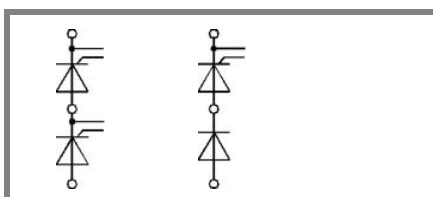
Typical Applications

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

- 1) See the assembly instructions
- 2) The screws must be lubricated
- 3) $V_{isol} 1 \text{ s} / 1 \text{ min} = 4800 / 4000 \text{ V}$

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 370 \text{ A}$ (maximum value for continuous operation) $I_{TAV} = 213 \text{ A}$ (sin. 180; $T_c = 90 \text{ }^\circ\text{C}$)		
900	800	SKKT 213/08D		
1300	1200	SKKT 213/12E	SKKH 213/12E	
1500	1400	SKKT 213/14E	SKKH 213/14E	
1700	1600	SKKT 213/16E	SKKH 213/16E	
1900	1800	SKKT 213/18E	SKKH 213/18E	

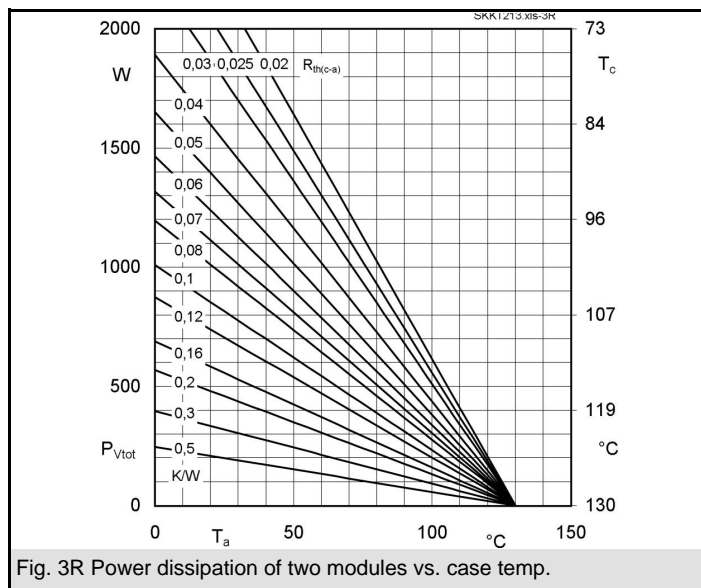
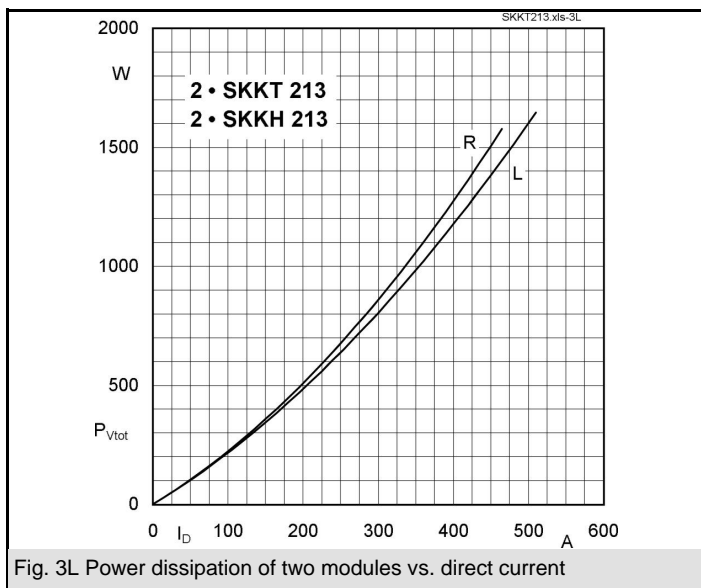
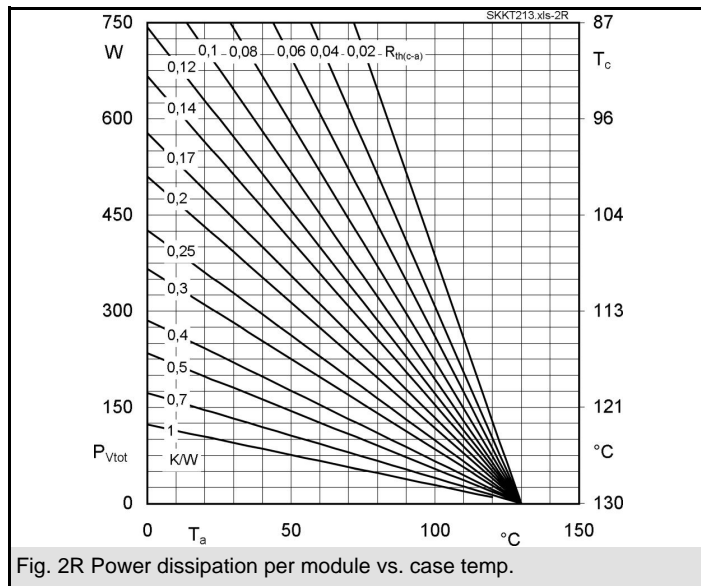
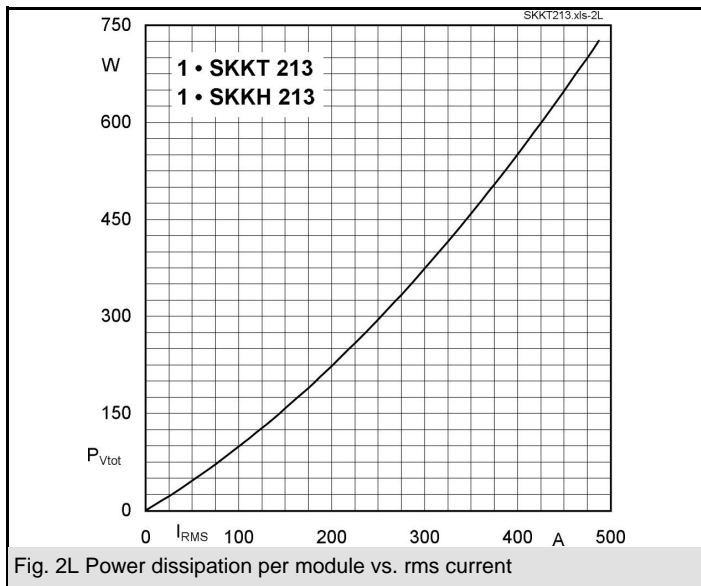
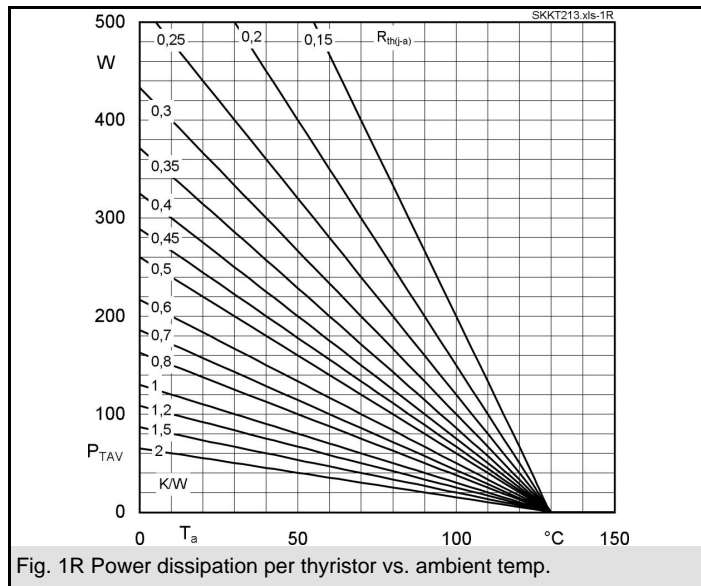
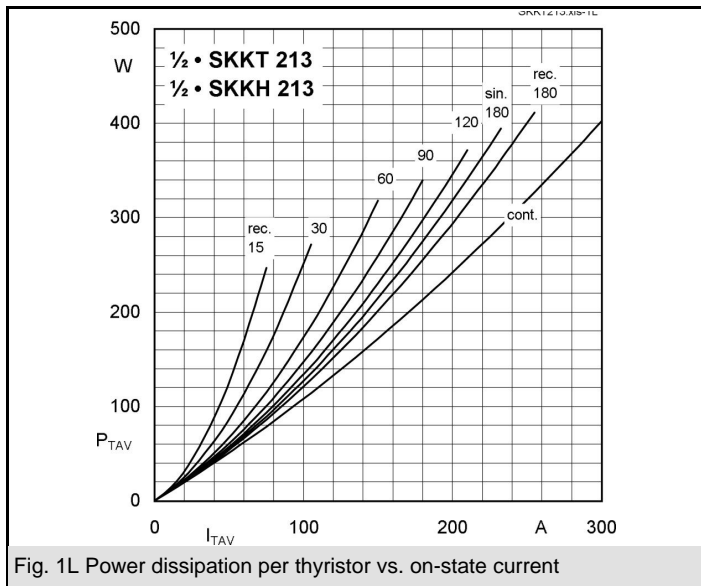
Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85 (100) \text{ }^\circ\text{C}$	230 (173)	A
I_D	P16/200F; $T_a = 35 \text{ }^\circ\text{C}$; B2 / B6	354 / 456	A
I_{RMS}	P16/200F; $T_a = 35 \text{ }^\circ\text{C}$; W1 / W3	425 / 3 * 360	A
I_{TSM}	$T_{vj} = 25 \text{ }^\circ\text{C}$; 10 ms	8500	A
	$T_{vj} = 130 \text{ }^\circ\text{C}$; 10 ms	7500	A
i^2t	$T_{vj} = 25 \text{ }^\circ\text{C}$; 8,3 ... 10 ms	361000	A ² s
	$T_{vj} = 130 \text{ }^\circ\text{C}$; 8,3 ... 10 ms	281000	A ² s
V_T	$T_{vj} = 25 \text{ }^\circ\text{C}$; $I_T = 750 \text{ A}$	max. 1,9	V
$V_{T(TO)}$	$T_{vj} = 130 \text{ }^\circ\text{C}$	0,95	V
r_T	$T_{vj} = 130 \text{ }^\circ\text{C}$	1,3	m Ω
I_{DD}, I_{RD}	$T_{vj} = 130 \text{ }^\circ\text{C}$; $V_{RD} = V_{RRM}$; $V_{DD} = V_{DRM}$	max. 50	mA
t_{gd}	$T_{vj} = 25 \text{ }^\circ\text{C}$; $I_G = 1 \text{ A}$; $di_G/dt = 1 \text{ A}/\mu\text{s}$	1	μs
t_{gr}	$V_D = 0,67 * V_{DRM}$	2	μs
$(di/dt)_{cr}$	$T_{vj} = 130 \text{ }^\circ\text{C}$	max. 250	A/ μs
$(dv/dt)_{cr}$	$T_{vj} = 130 \text{ }^\circ\text{C}$; SKK ...D / SKK ...E	max. 500 / 1000	V/ μs
t_q	$T_{vj} = 130 \text{ }^\circ\text{C}$	50 ... 150	μs
I_H	$T_{vj} = 25 \text{ }^\circ\text{C}$; typ. / max.	150 / 500	mA
I_L	$T_{vj} = 25 \text{ }^\circ\text{C}$ $R_G = 33 \Omega$; typ. / max.	300 / 2000	mA
V_{GT}	$T_{vj} = 25 \text{ }^\circ\text{C}$; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25 \text{ }^\circ\text{C}$; d.c.	min. 200	mA
V_{GD}	$T_{vj} = 130 \text{ }^\circ\text{C}$; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 130 \text{ }^\circ\text{C}$; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.; per thyristor / per module	0,11 / 0,055	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	0,115 / 0,057	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	0,125 / 0,0625	K/W
$R_{th(c-s)}$	per thyristor / per module	0,08 / 0,04	K/W
T_{vj}		- 40 ... + 130	$^\circ\text{C}$
T_{stg}		- 40 ... + 130	$^\circ\text{C}$
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	to heatsink	$5 \pm 15 \text{ } \%$ ¹⁾	Nm
M_t	to terminals	$9 \pm 15 \text{ } \%$ ²⁾	Nm
a		$5 * 9,81$	m/s ²
m	approx.	400	g
Case	SKKT	A 43	
	SKKH	A 56	



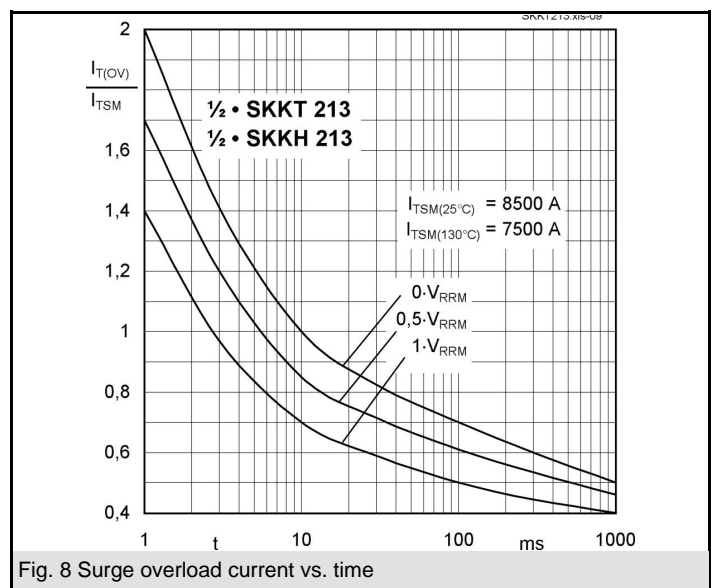
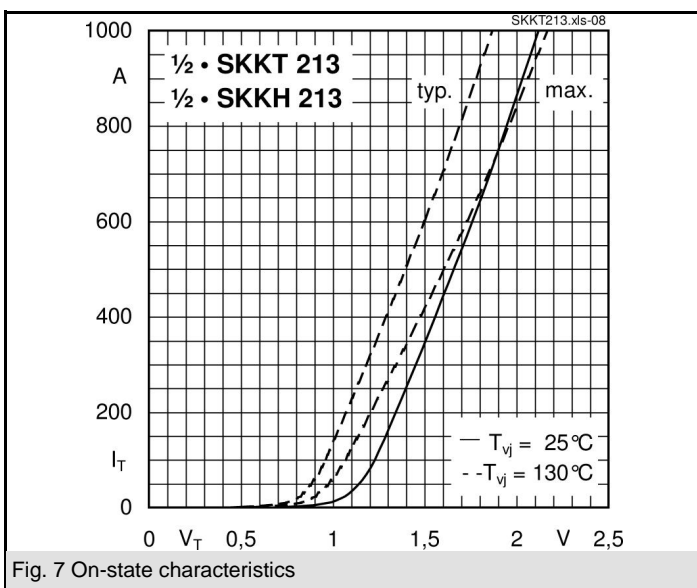
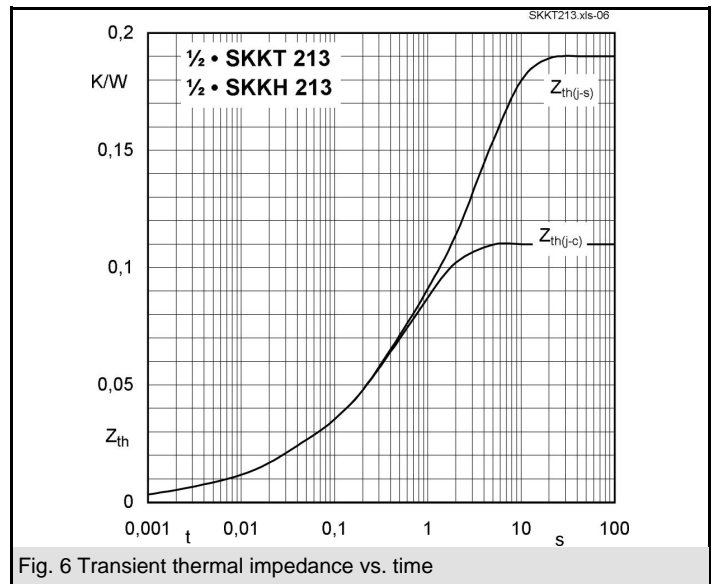
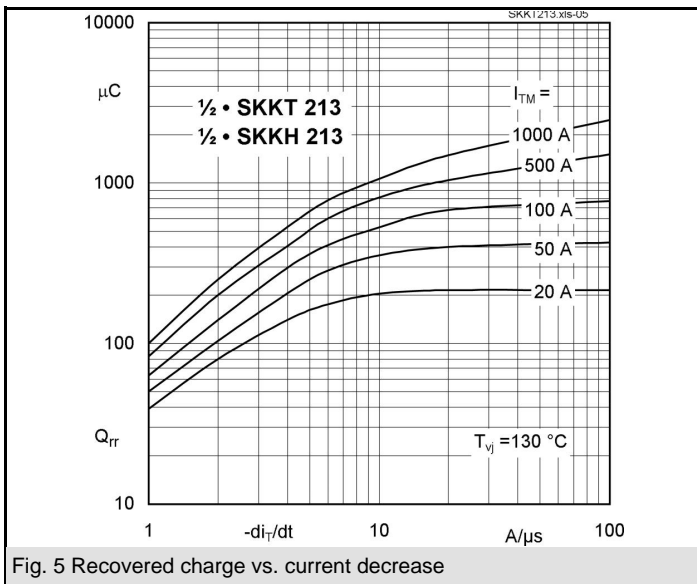
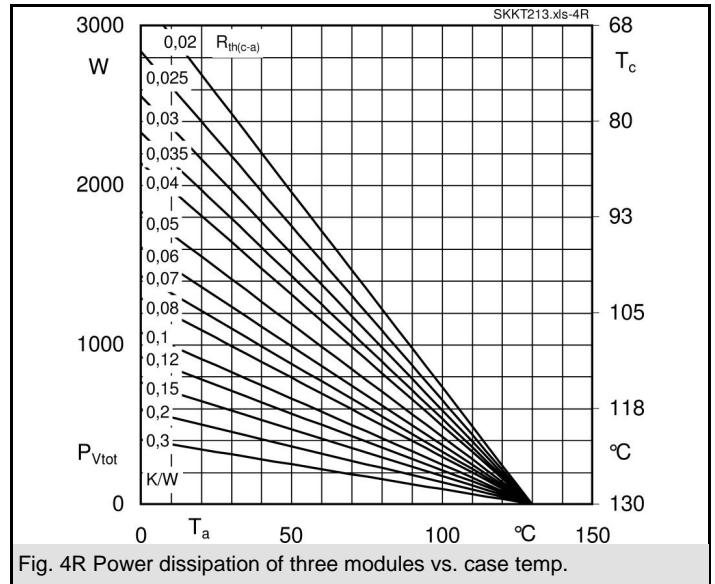
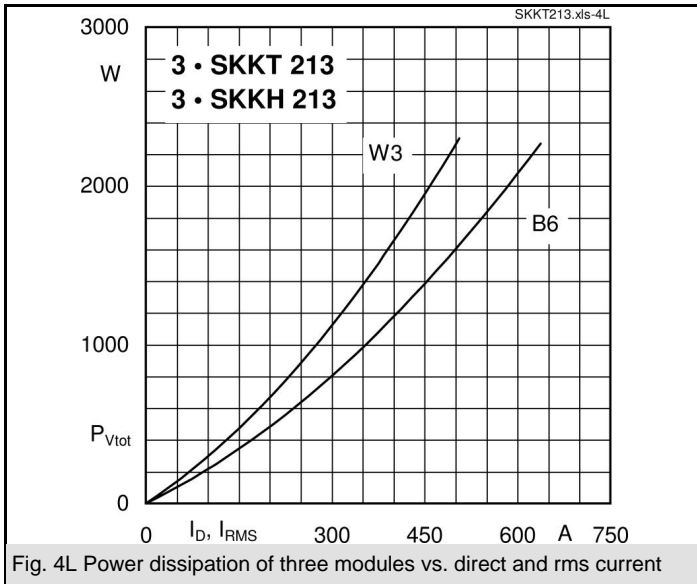
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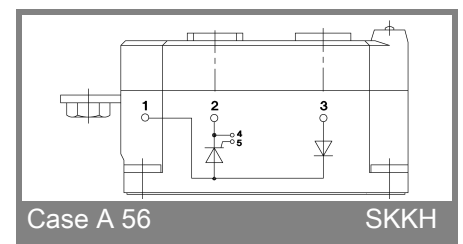
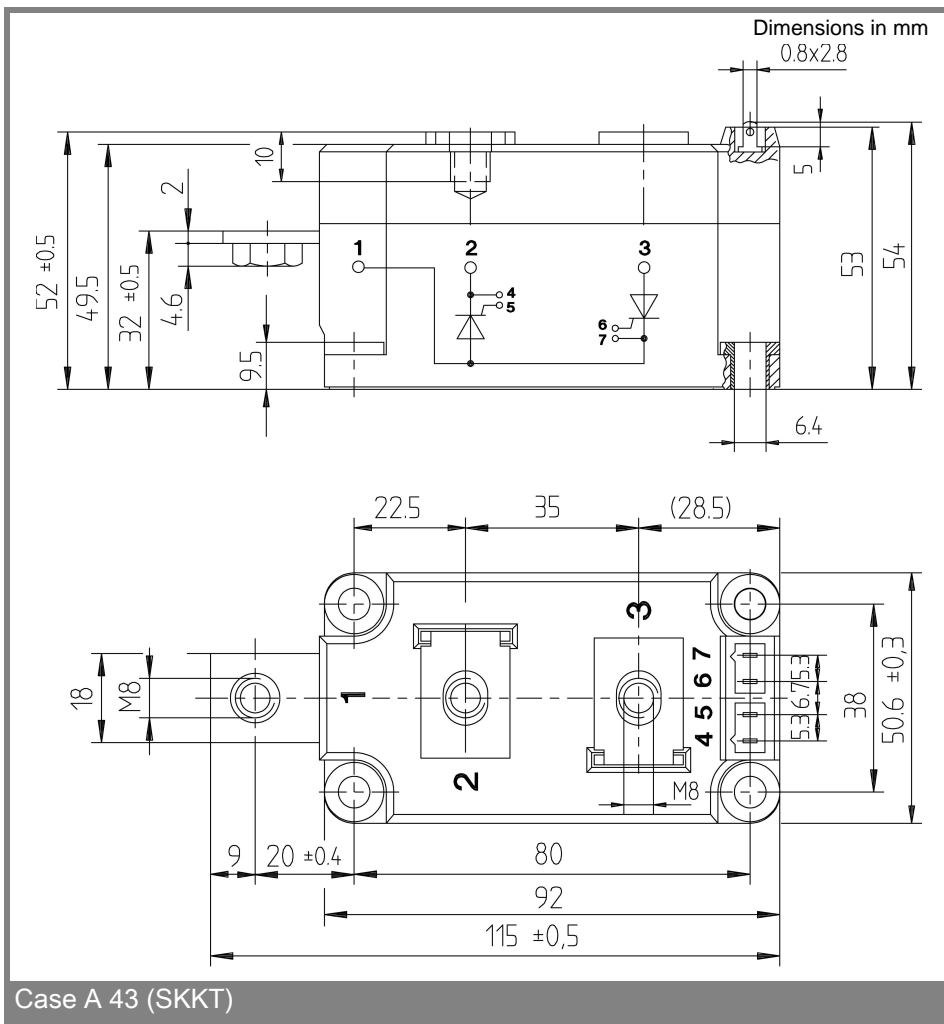
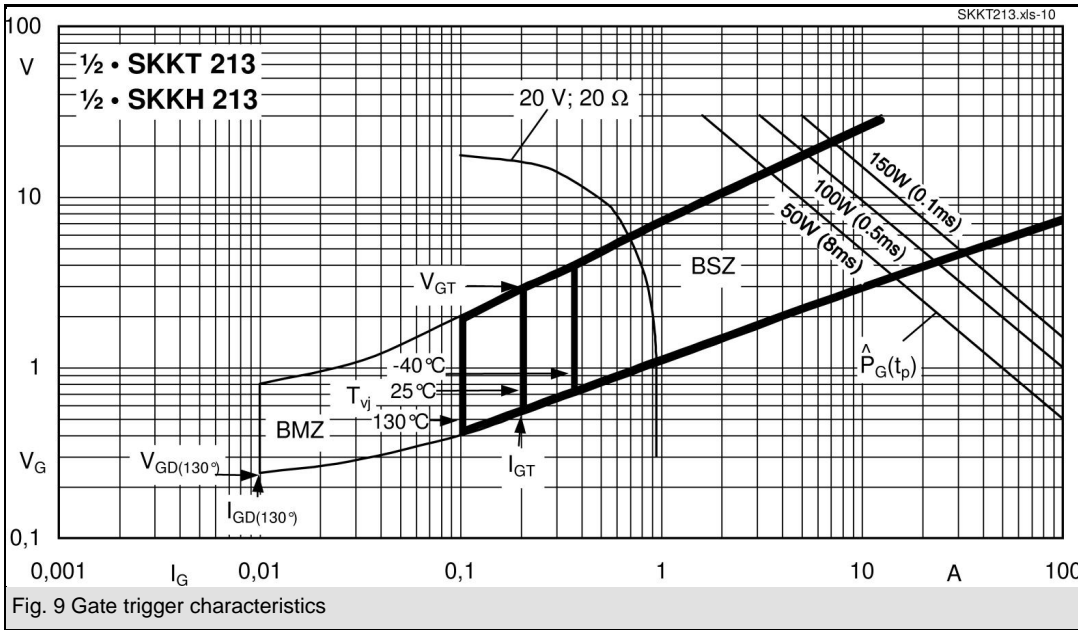
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