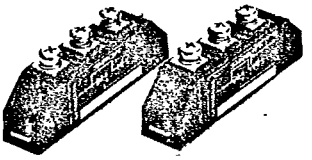
V_{RSM}	V_{RRM} V_{DRM}	$(dv/dt)_{cr}$	I_{TRMS} (maximum values for continuous operation) 125 A	150 A	125 A	150 A
			I_{TAV} (sin. 180; T_{case} = ...)			
V	V	V/µs	80 A (78 °C)	95 A (85 °C)	80 A (78 °C)	95 A (85 °C)
500	400	500	–	**SKKT 91/04 D**	**SKKH 71/04 D**	**SKKH 91/04 D**
700	600	500	**SKKT 71/06 D**	**SKKT 91/06 D**	**SKKH 71/06 D**	**SKKH 91/06 D**
900	800	500	**SKKT 71/08 D**	**SKKT 91/08 D**	**SKKH 71/08 D**	**SKKH 91/08 D**
1300	1200	500	**SKKT 71/12 D**	**SKKT 91/12 D**	**SKKH 71/12 D**	**SKKH 91/12 D**
		1000	**SKKT 71/12 E**	**SKKT 91/12 E**	–	–
1500	1400	1000	**SKKT 71/14 E**	**SKKT 91/14 E**	**SKKH 71/14 E**	**SKKH 91/14 E**
1700	1600	1000	**SKKT 71/16 E**	**SKKT 91/16 E**	**SKKH 71/16 E**	**SKKH 91/16 E**
1900	1800	1000	**SKKT 71/18 E**	–	**SKKH 71/18 E**	–
2100	2000	1000	**SKKT 71/20 E**	–	**SKKH 71/20 E**	–

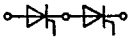
Symbol	Conditions		**SKKT 71 SKKH 71**	**SKKT 91 SKKH 91**
I_{TAV}	sin. 180; (T_{case} = ...)		80 A (78 °C) 70 A (85 °C)	95 A (85 °C) –
I_D	B2/B6	T_{amb} = 35 °C; P 3/180 F	115 A/150 A	140 A/175 A
I_{RMS}	W1/W3	T_{amb} = 35 °C; P 3/180 F	155 A/3 x 115 A	195 A/3x140 A
I_{TSM}	T_{vj} = 25 °C		1600 A	2000 A
	T_{vj} = 125 °C		1450 A	1750 A
i^2t	T_{vj} = 25 °C		13000 A^2s	20000 A^2s
	T_{vj} = 125 °C		10500 A^2s	15000 A^2s
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		typ. 100 A/µs	typ. 100 A/µs
t_q	T_{vj} = 125 °C		typ. 80 µs	typ. 100 µs
I_H	T_{vj} = 25 °C		typ. 150 mA; max. 250 mA	
I_L	T_{vj} = 25 °C; R_G = 33 Ω		typ. 300 mA; max. 600 mA	
V_T	T_{vj} = 25 °C; I_T = 300A		max. 1,9 V	max. 1,65 V
$V_{T(TO)}$	T_{vj} = 125 °C		0,9 V	0,9 V
r_T	T_{vj} = 125 °C		3,5 mΩ	2 mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}		max. 20 mA	max. 20 mA
V_{GT}	T_{vj} = 25 °C; d. c.		3 V	
I_{GT}	T_{vj} = 25 °C; d. c.		150 mA	
V_{GD}	T_{vj} = 125 °C; d. c.		0,25 V	
I_{GD}	T_{vj} = 125 °C; d. c.		6 mA	
R_{thjc}	cont.	per thyristor/per module (°C/W)	0,35/0,18	0,28/0,14
	sin. 180		0,37/0,19	0,30/0,15
	rec. 120		0,39/0,20	0,32/0,16
R_{thch}			0,2/0,1 °C/W	
T_{vj}			−40 ... +125 °C	
T_{stg}			−40 ... +125 °C	
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min		3000 V~/2500 V~ [1]	
M_1	Case to heatsink	SI units/ US units	5 Nm/44 lb. in. ± 15 % [2]	
M_2	Busbars to terminals		3 Nm/26 lb. in. ± 15 %	
a			5 · 9,81 m/s^2	
w	approx.		120 g	
Case	→ page B 1 – 85		A 5 (SKKT 71) A 6 (SKKH 71)	A 5 (SKKT 91) A 6 (SKKH 91)

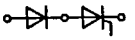
[1] Internal insulation: beryllium oxide . Observe the warning on page B 1 – 2.
[2] See the assembly instructions

SEMIPACK® 1
Thyristor/ Diode Modules

SKKT 71 SKKH 71
SKKT 91 SKKH 91




SKKT


SKKH

Features
- Heat transfer through 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)

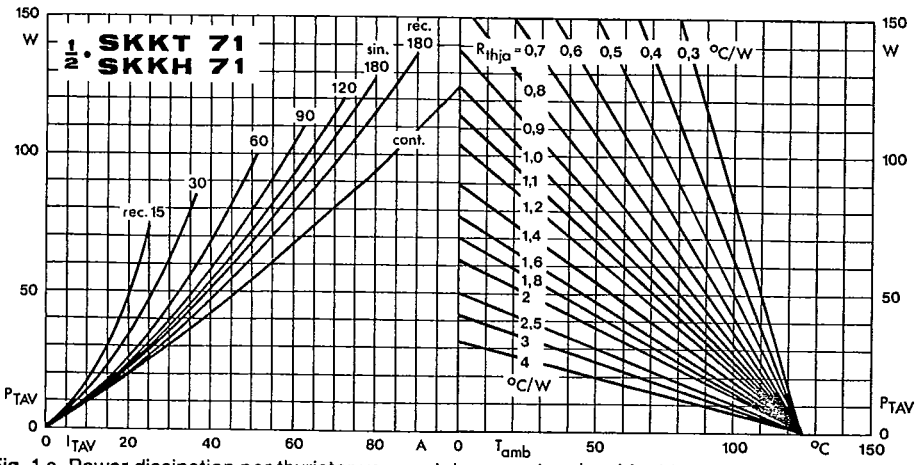


Fig. 1 a Power dissipation per thyristor vs. on-state current and ambient temperature

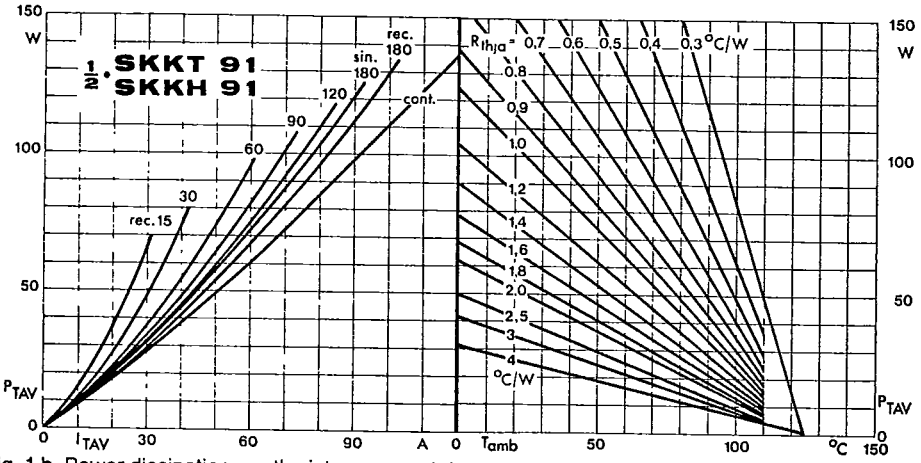


Fig. 1 b Power dissipation per thyristor vs. on-state current and ambient temperature

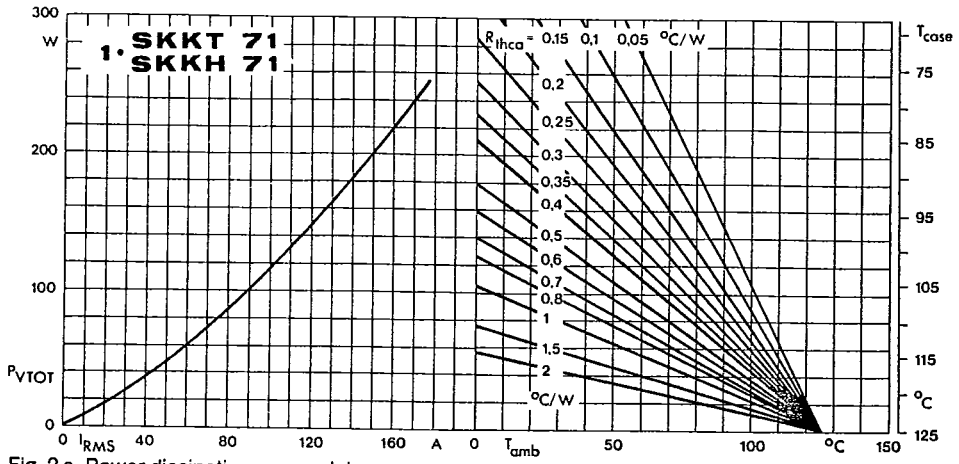


Fig. 2 a Power dissipation per module vs. rms current and case temperature

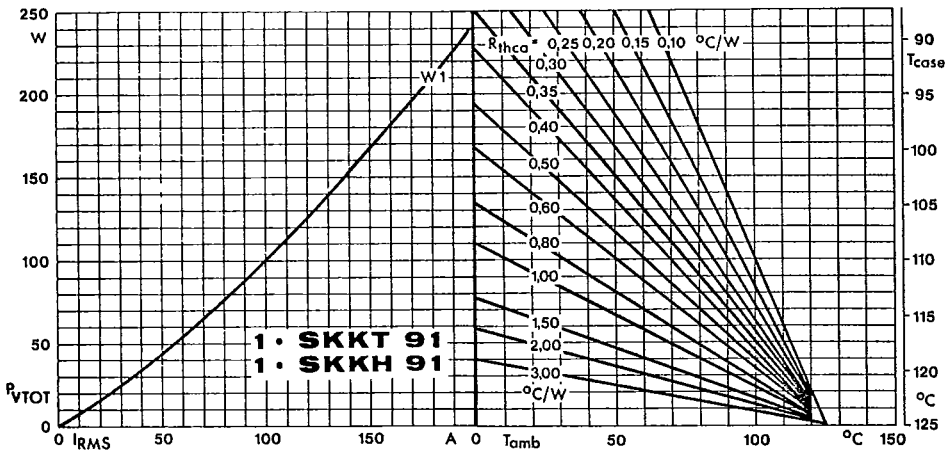


Fig. 2 b Power dissipation per module vs. rms current and case temperature

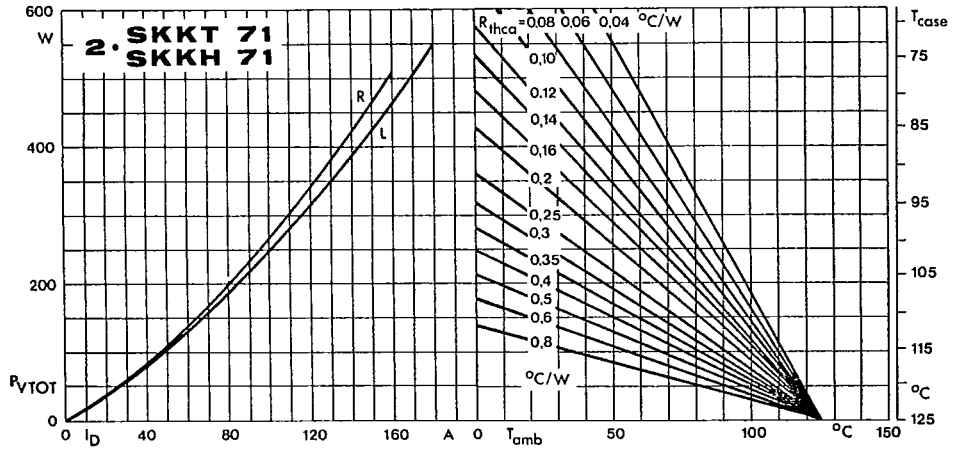


Fig. 3 a Power dissipation of two modules vs. direct current and case temperature

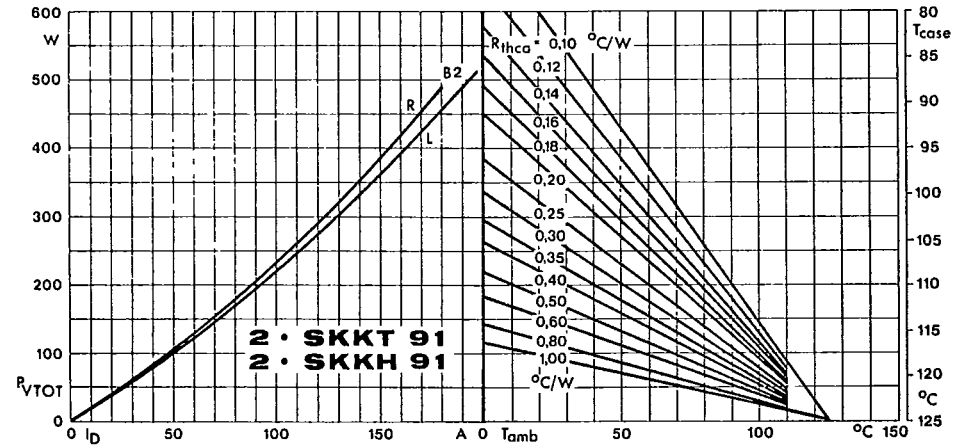


Fig. 3 b Power dissipation of two modules vs. direct current and case temperature

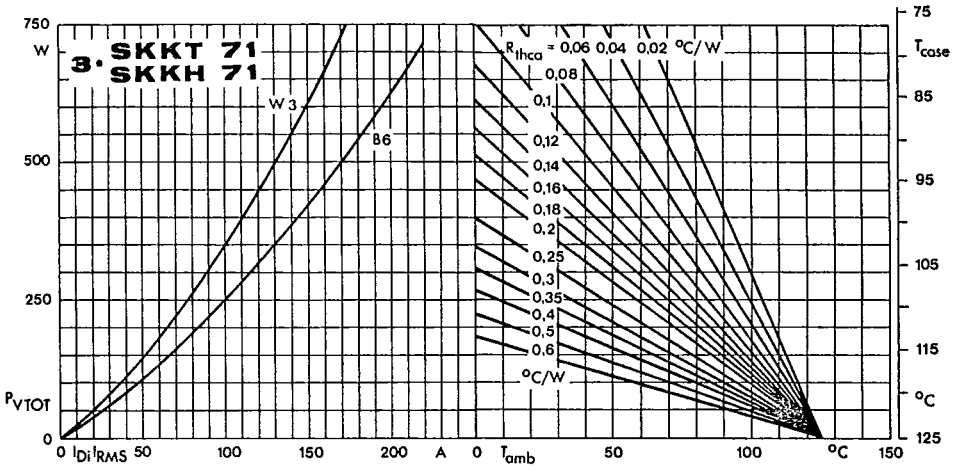


Fig. 4 a Power dissipation of three modules vs. direct and rms current and case temperature

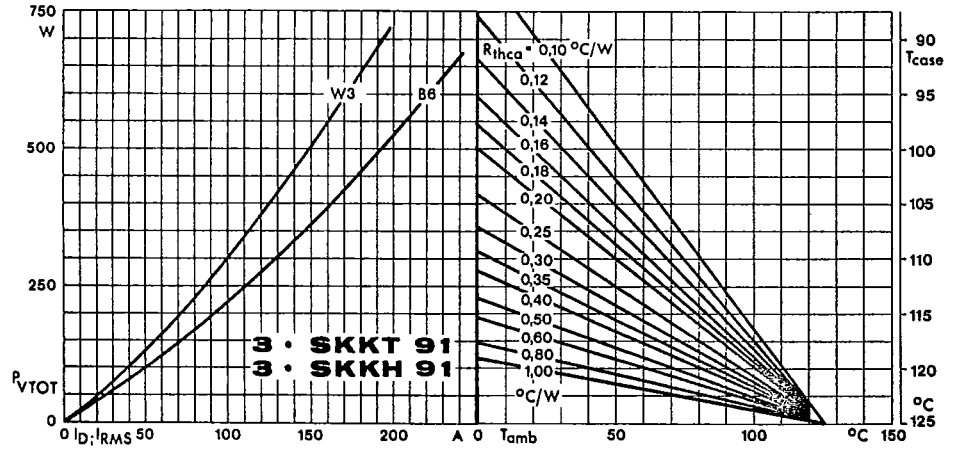


Fig. 4 b Power dissipation of three modules vs. direct and rms current and case temperature

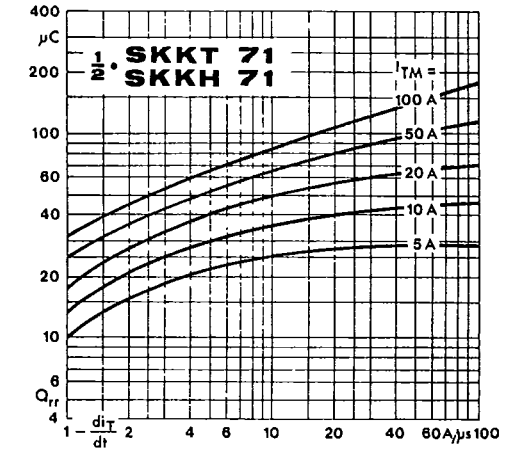


Fig. 5 a Recovered charge vs. current decrease

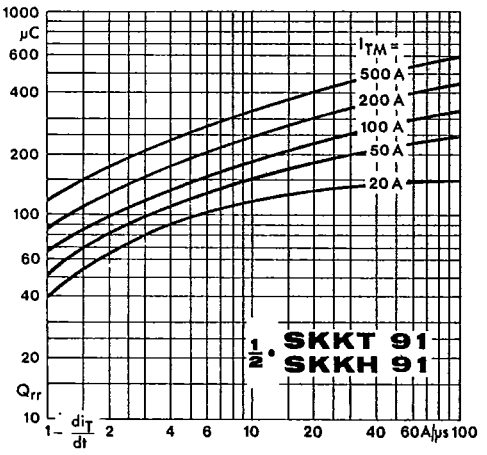


Fig. 5 b Recovered charge vs. current decrease

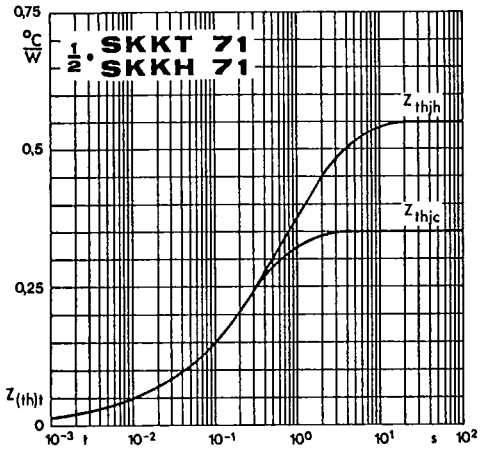


Fig. 6 a Transient thermal impedance vs. time

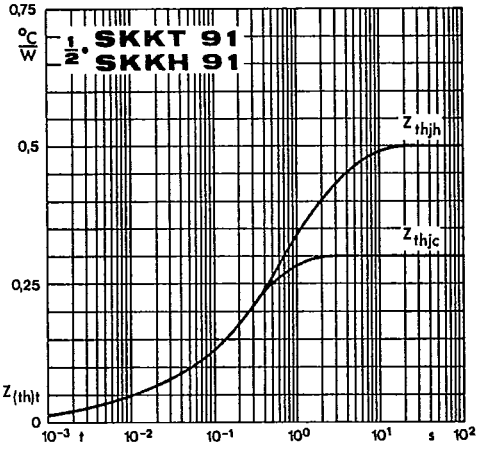


Fig. 6 b Transient thermal impedance vs. time

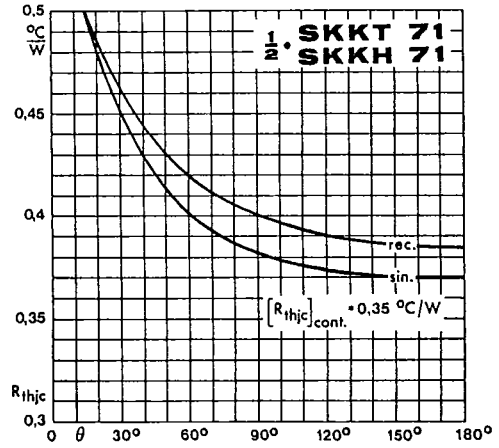


Fig. 7 a Thermal resistance vs. conduction angle

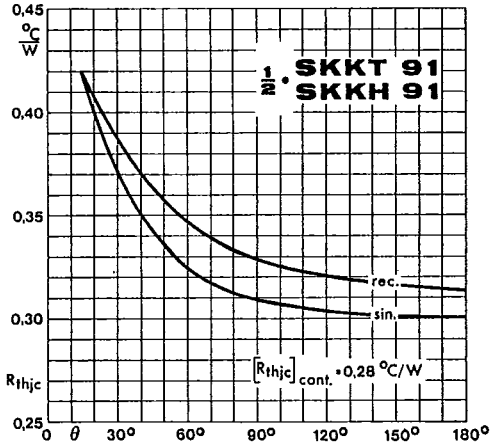


Fig. 7 b Thermal resistance vs. conduction angle

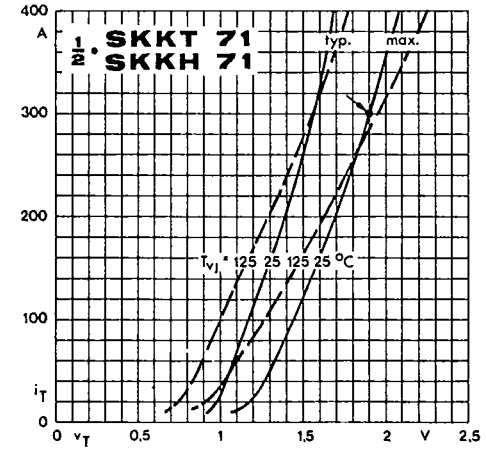


Fig. 8 a On-state characteristics

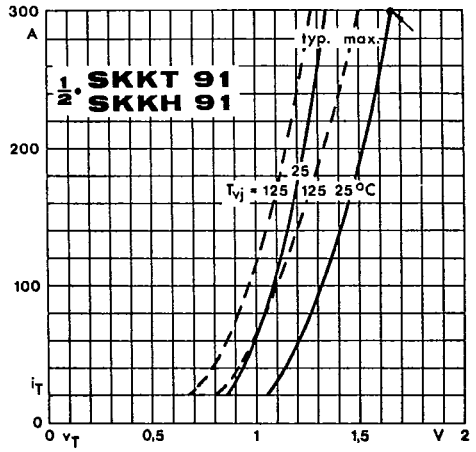


Fig. 8 b On-state characteristics

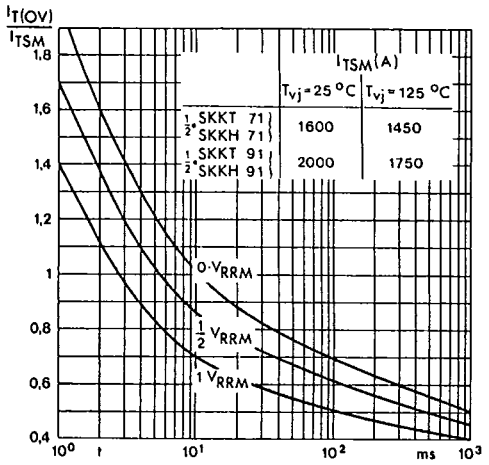


Fig. 9 Surge overload current vs. time

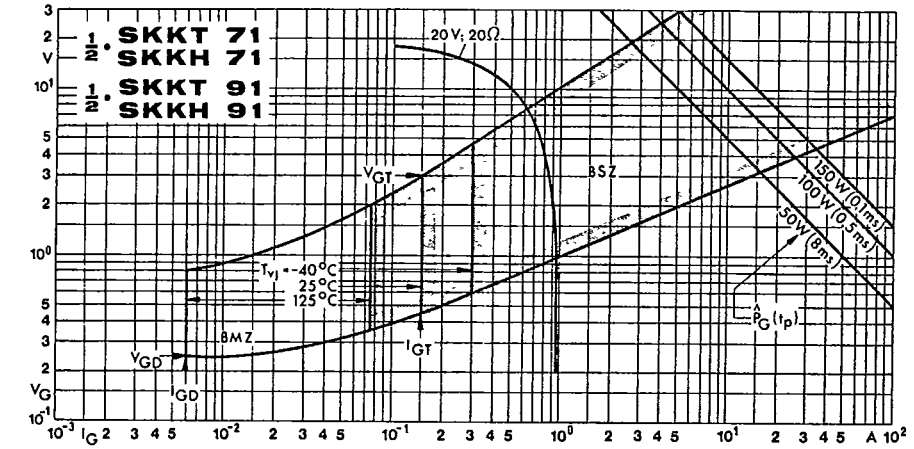


Fig. 10 Gate trigger characteristics