V_{DRM} V_{RRM} V	t_q (T_{vj} = 125 °C) µs	I_{TRMS} (maximum values for continuous operation) 350 A I_{TAV} (sin. 180; T_{case} = 76 °C; 50 Hz) 150 A	
800	15 20	**SKFT 150/08 DS** **SKFT 150/08 DT**	**SKFH 150/08 DS** **SKFH 150/08 DT**
1000	15	**SKFT 150/10 DS** [1]	–

SEMIPACK® 3
Fast Thyristor/ Diode Modules

SKFT 150
SKFH 150

SKFT SKFH

Features
- Heat transfer through ceramic isolated metal baseplate
- Interdigitated amplifying gates
- Precious metal pressure contacts
- UL recognition, file no. E63 532

Typical Applications
- Self-commutated inverters
- DC choppers
- AC motor speed control
- Inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications

Thyristor data

Symbol	Conditions	SKFT 150 SKFH 150	Units
I_{TM}	sin. 180; T_{case} = 60 °C; 500 Hz	610	A
I_{TSM}	T_{vj} = 25 °C; 10 ms T_{vj} = 125 °C; 10 ms	6 500 5 500	A A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms T_{vj} = 125 °C; 8,3 ... 10 ms	211 000 151 000	A^2s 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}	1	µs
$(di/dt)_{cr}$	non-repetitive/f = 50 . . . 60 Hz	1000 / 400	A/µs
$(dv/dt)_{cr}$	T_{vj} = 125 °C	500	V/µs
I_H I_L	T_{vj} = 25 °C; typ./max. T_{vj} = 25 °C; R_G = 33 Ω; typ./max.	200 / 400 1 / 2	mA A
V_T	T_{vj} = 125 °C; I_T = 1200 A; max.	2,45	V
$V_{T(TO)}$	T_{vj} = 125 °C	1,9	V
r_T	T_{vj} = 125 °C	0,4	mΩ
I_D; I_R	T_{vj} = 125 °C; V_{DRM}; V_{RRM}	80	mA
V_{GT}	T_{vj} = 25 °C	4	V
I_{GT}	T_{vj} = 25 °C	250	mA
V_{GD}	T_{vj} = 125 °C	0,25	V
I_{GD}	T_{vj} = 125 °C	10	mA

Fast rectifier diode data

t_{rr}	T_{vj} = 25 °C; I_F = 1 A; – di_F/dt = 15 A/µs; V_R = 30 V	2	µs
Q_{rr} I_{RM}	T_{vj} = 125 °C; I_F = 150 A; – di_F/dt = 100 A/µs; V_R = 100 V	250 175	µC A
I_R	T_{vj} = 125 °C; V_R = V_{RRM}	80	mA
V_F	T_{vj} = 25 °C; I_F = 1200 A; max.	1,85	V
$V_{(TO)}$	T_{vj} = 125 °C	1,25	V
r_T	T_{vj} = 125 °C	0,5	mΩ

[1] Available in limited quantities

Common data

Symbol	Conditions	SKFT 150 SKFH 150
R_{thjc} R_{thch} T_{vj} T_{stg}	cont. } per thyristor/per module	0,16/0,08 °C/W 0,04/0,02 °C/W −40 ... + 125 °C −40 ... + 125 °C
V_{isol} M_1 M_2 w	a. c. 50 Hz; r.m.s.; 1 s/1 min. Case to heatsink } SI units/ Busbars to terminals } US units approx.	300 V ~ /2500 V ~ 5 Nm/44 lb. in. ± 15 % 9 Nm/80 lb. in. ± 15 % 940 g
Case	→ page B 2–59 SKFT SKFH	A 25 A 32

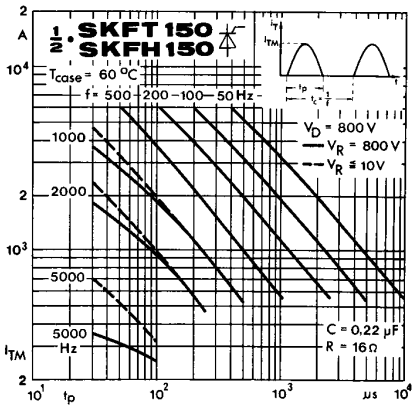


Fig. 1 a Rated peak on-state current vs. pulse duration

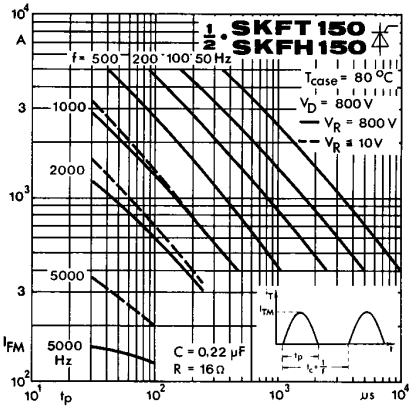


Fig. 1 b Rated peak on-state current vs. pulse duration

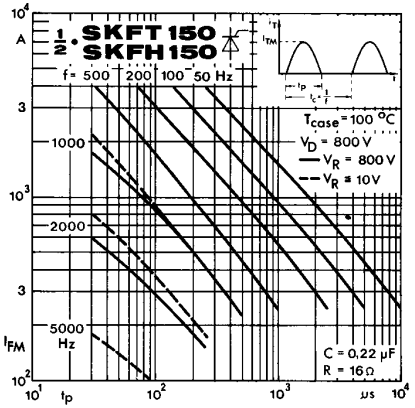


Fig. 1 c Rated peak on-state current vs. pulse duration

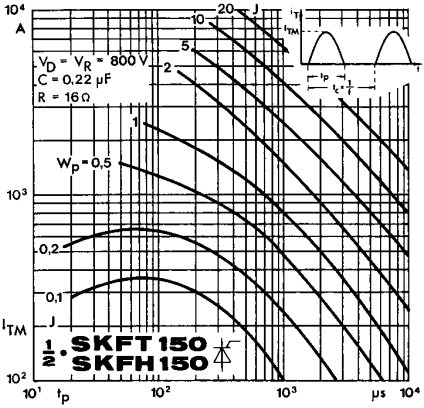


Fig. 2 Energy dissipation per pulse

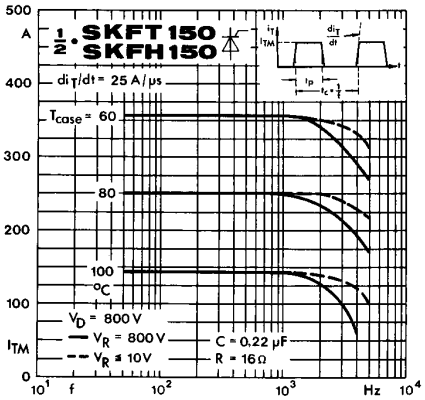


Fig. 3 a Rated peak on-state current vs. pulse duration

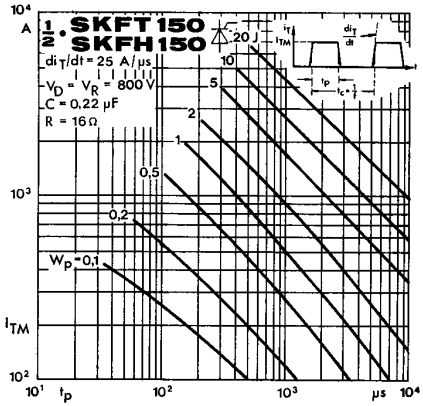


Fig. 4 a Energy dissipation per pulse

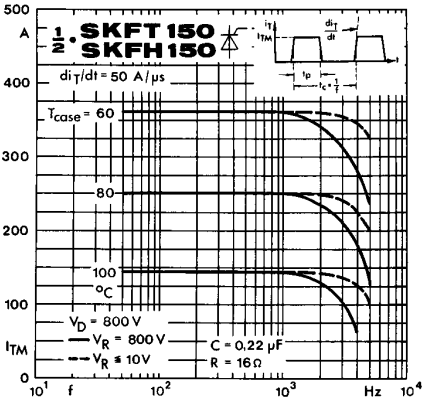


Fig. 3 b Rated peak on-state current vs. pulse duration

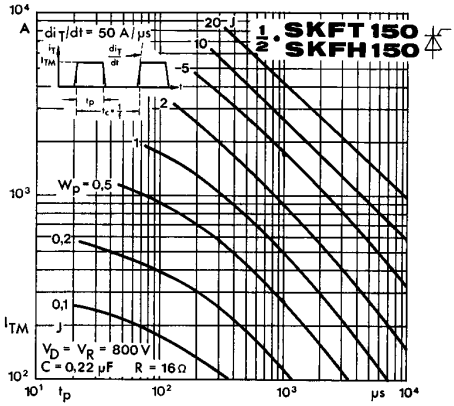


Fig. 4 b Energy dissipation per pulse

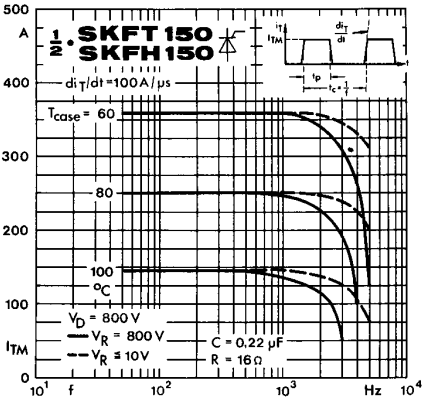


Fig. 3 c Rated peak on-state current vs. pulse duration

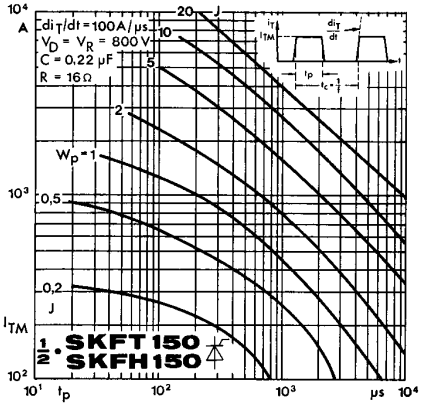


Fig. 4 c Energy dissipation per pulse

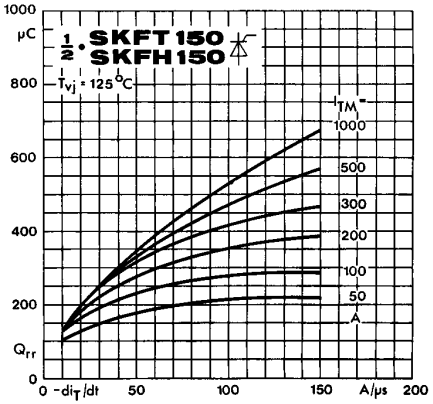


Fig. 5 Recovered charge vs. current decrease

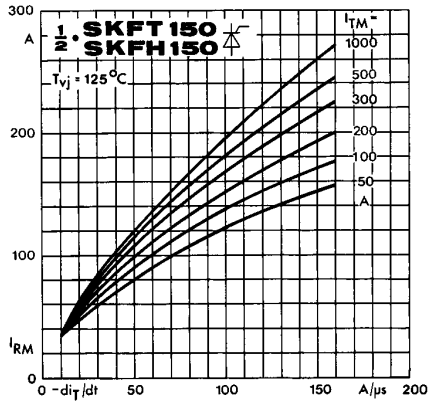


Fig. 6 Peak recovery current vs. current decrease

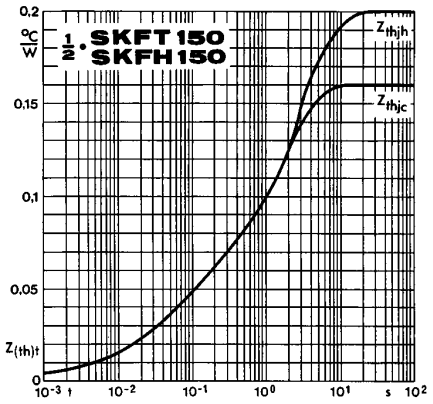


Fig. 7 Transient thermal impedance vs. time

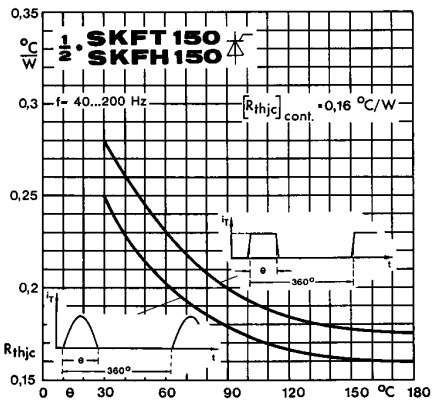


Fig. 8 Thermal resistance vs. conduction angle, 40 . . . 200 Hz

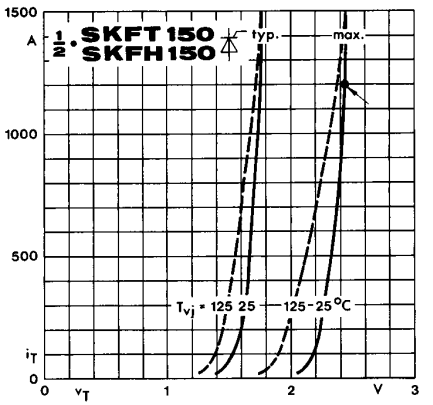


Fig. 9 On-state characteristics

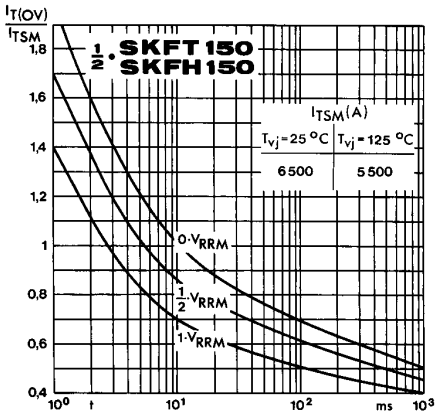


Fig. 10 Surge overload current vs. time

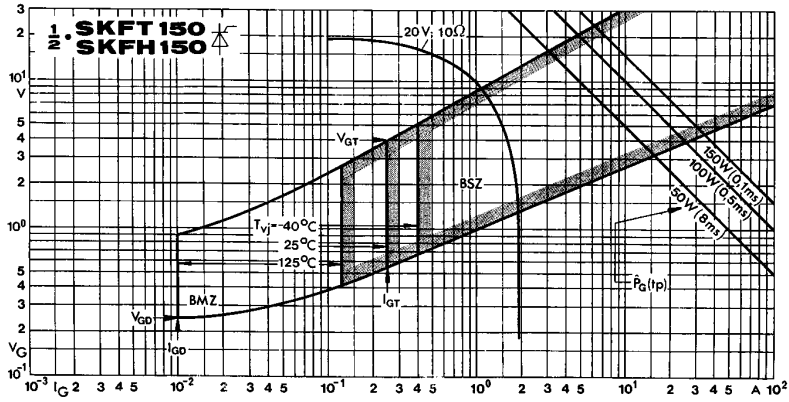


Fig. 11 Gate trigger characteristics

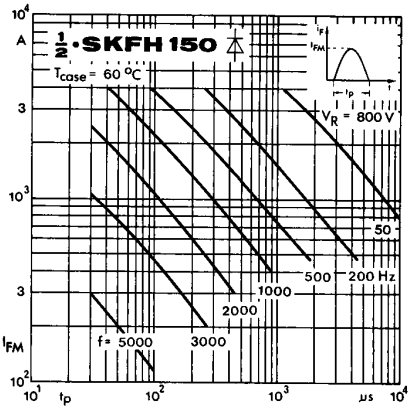


Fig. 12 a Rated sinusoidal peak forward current

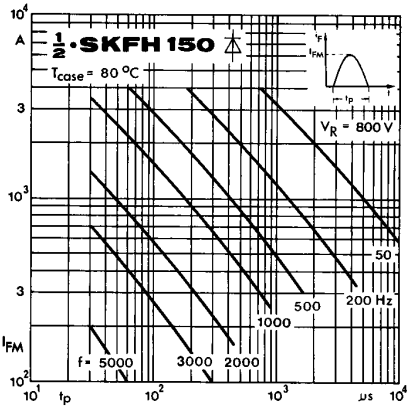


Fig. 12 b Rated sinusoidal peak forward current

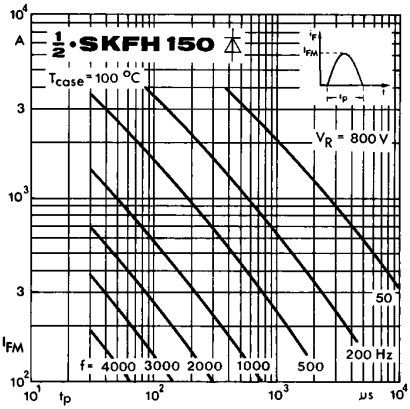


Fig. 12 c Rated sinusoidal peak forward current

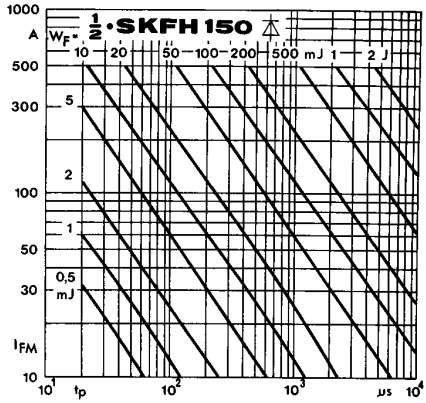


Fig. 13 Forward energy dissipation, sinusoidal

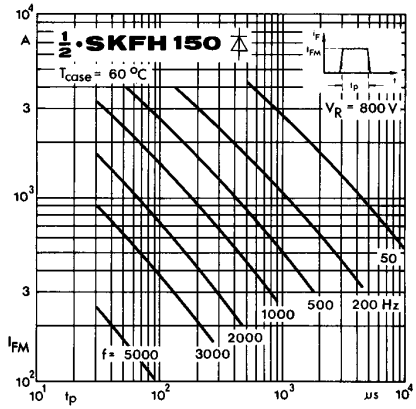


Fig. 14 a Rated rectangular peak forward current

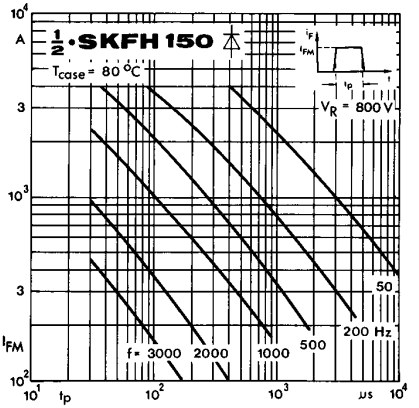


Fig. 14 b Rated rectangular peak forward current

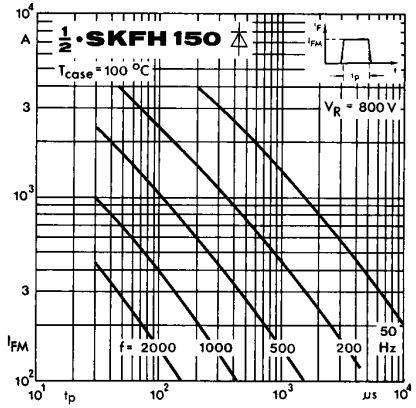


Fig. 14 c Rated rectangular peak forward current

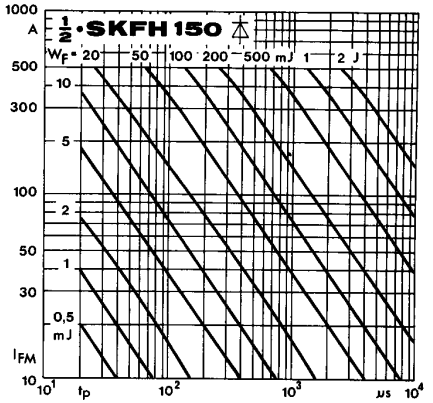


Fig. 15 Forward energy dissipation, rectangular

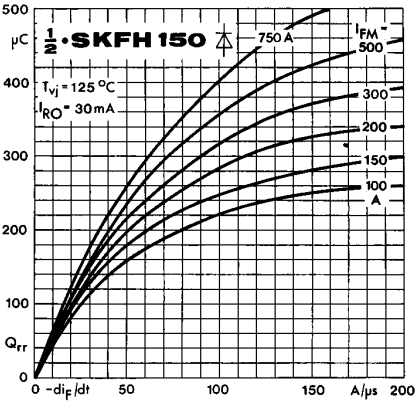


Fig. 16 Recovered charge vs. current decrease

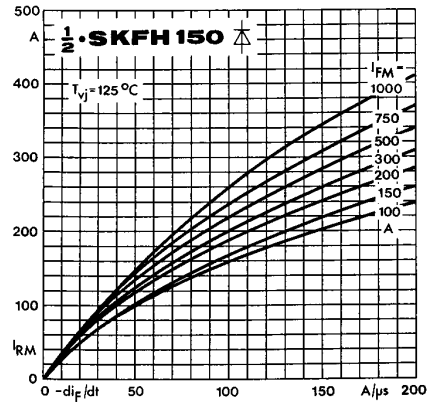


Fig. 17 Peak recovery current vs. current decrease

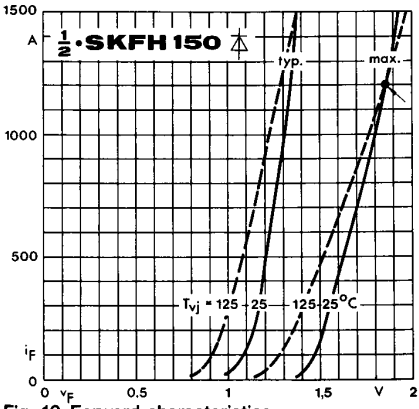
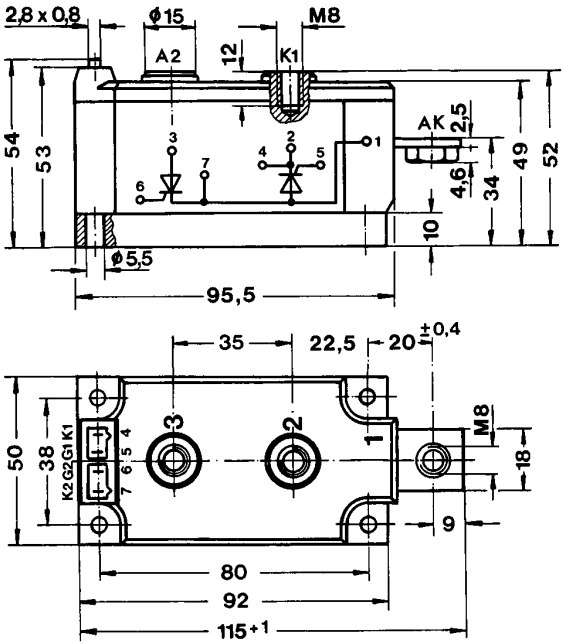


Fig. 19 Forward characteristics

SKFT 150
Case A 25
SEMIPACK® 3



Dimensions in mm

SKFH 150
Case A 32