

SKKD 150F, SKMD 150F, SKND 150F



SEMIPACK® 2

Fast Diode Modules

SKKD 150F

SKMD 150F

SKND 150F

Features

- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses
- SKKD half bridge connection
- centre tap connections: SKMD common cathode SKND common anode
- UL recognized, file no. E 63 532

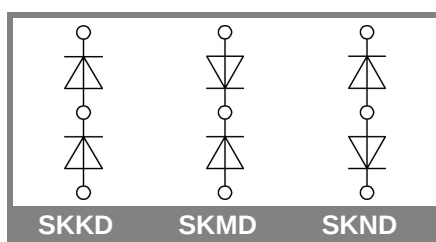
Typical Applications

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

V_{RSM} V	V_{RRM} V	$I_{FRMS} = 220$ A (maximum value for continuous operation) $I_{FAV} = 150$ A (sin. 180; 50 Hz; $T_c = 54$ °C)		
1200	1200	SKKD 150F12	SKMD 150F12	SKND 150F12

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	117 (99)	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms	2000	A
	$T_{vj} = 150$ °C; 10 ms	1800	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	20000	A²s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	16200	A²s
V_F	$T_{vj} = 25$ °C; $I_F = 150$ A	max. 2,2	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1,2	V
r_T	$T_{vj} = 150$ °C	max. 5,5	mΩ
I_{RD}	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 1	mA
I_{RD}	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	max. 40	mA
Q_{rr}	$T_{vj} = 125$ °C, $I_F = 150$ A, -di/dt = 1000 A/μs, $V_R = 600$ V	21	μC
I_{RM}		80	A
t_{rr}		710	ns
E_{rr}		4,5	mJ
$R_{th(j-c)}$	per diode / per module	0,2 / 0,1	K/W
$R_{th(c-s)}$	per diode / per module	0,1 / 0,05	K/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a.c. 50 Hz; r.m.s.; 1 s / 1 min.	4800 / 4000	V~
M_s	to heatsink	5 ± 15%	Nm
M_t	to terminals	5 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	160	g
Case	SKKD	A 53	
	SKMD	A 51	
	SKND	A 52	

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



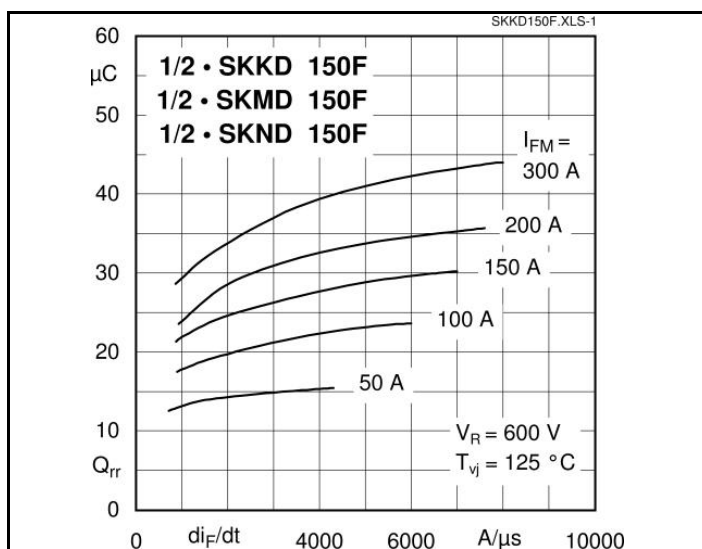


Fig. 1 Typ. recovery charge vs. current decrease

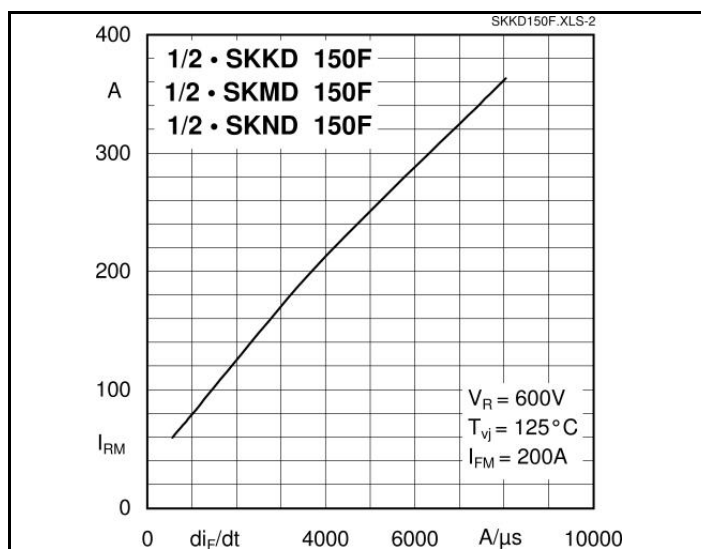


Fig. 2 Peak recovery current vs. current decrease

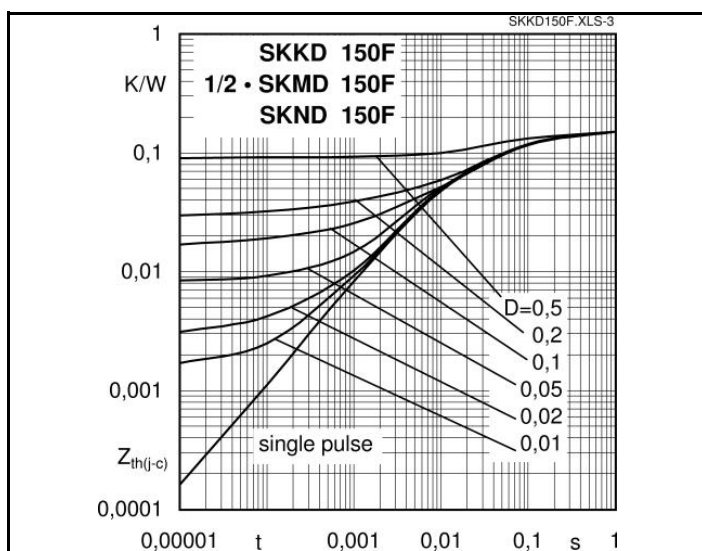


Fig. 3 Transient thermal impedance vs. time

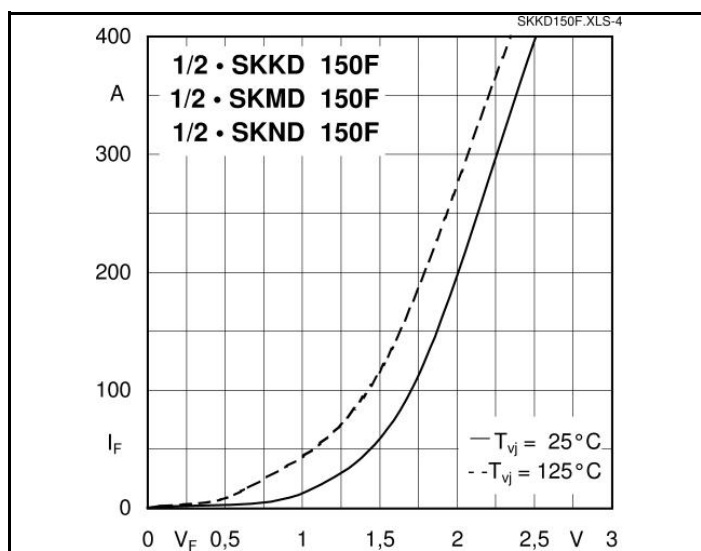


Fig. 4 Typ. forward characteristics

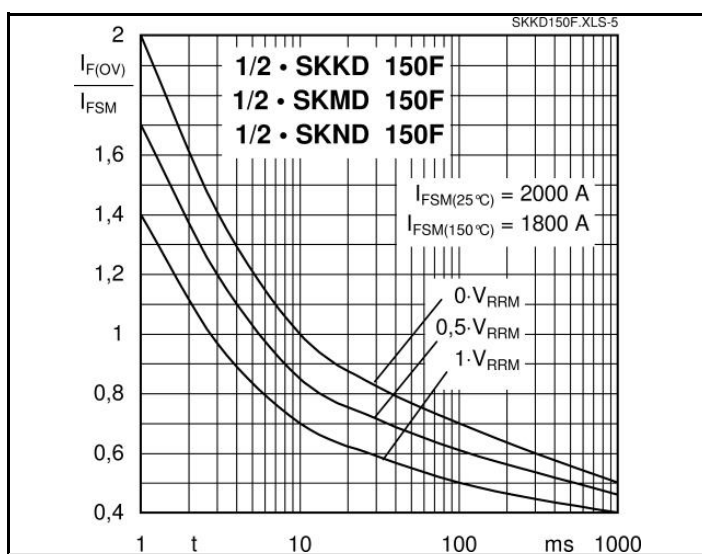


Fig. 5 Surge overload current vs. time

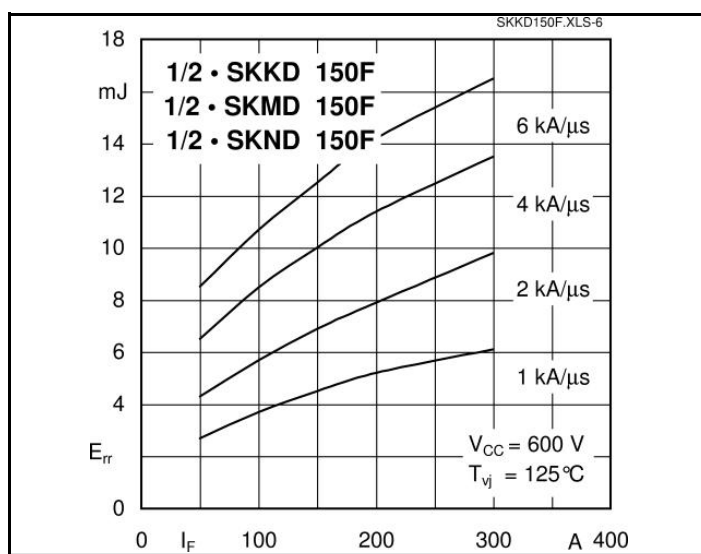
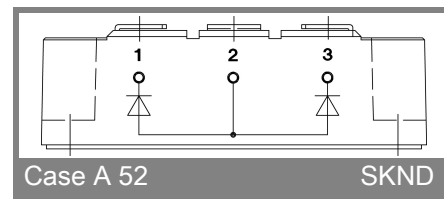
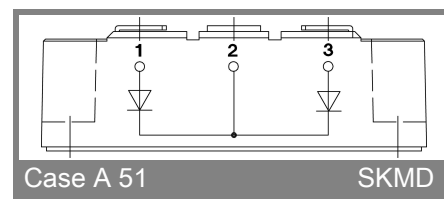
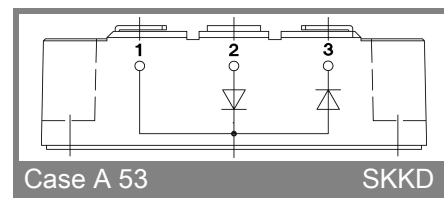
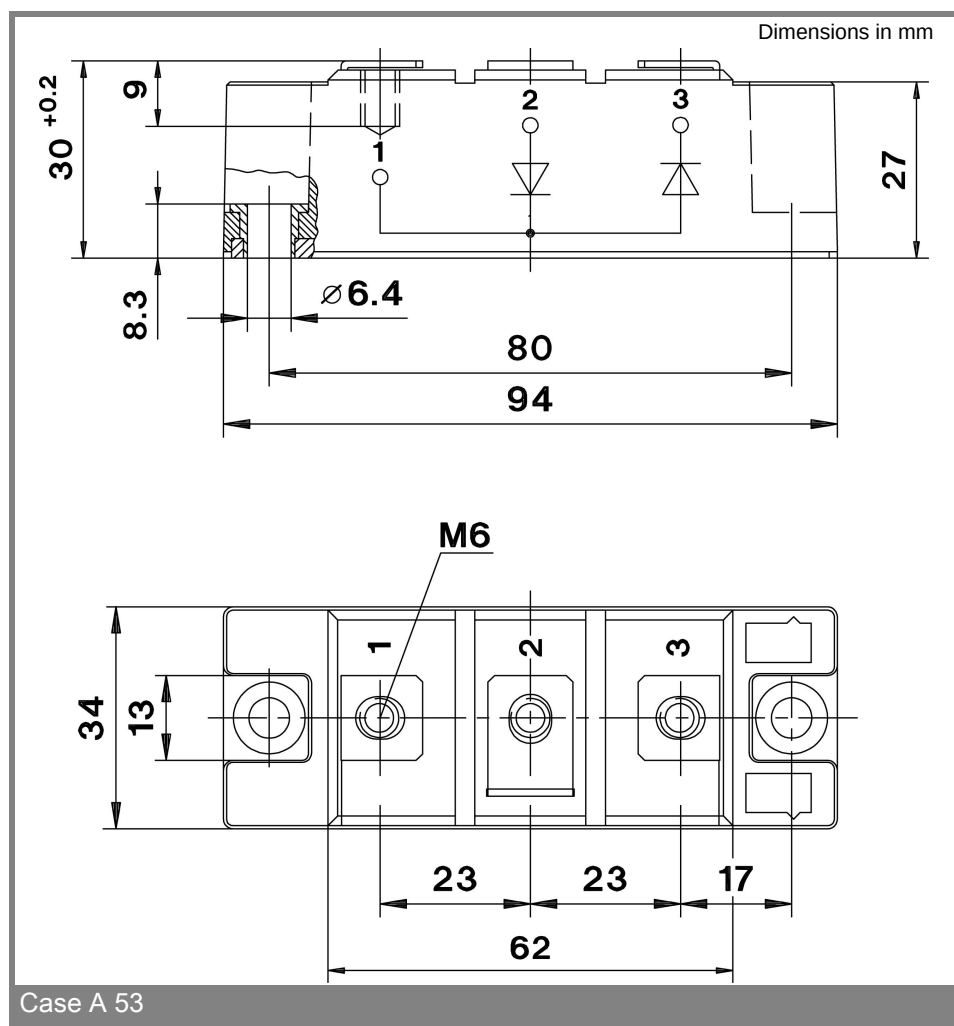


Fig. 6 Typ. turn-off energy dissipation per pulse



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