



SEMIPACK® 2

Fast Diode Modules

SKKD 150F

SKMD 150F

SKND 150F

Features

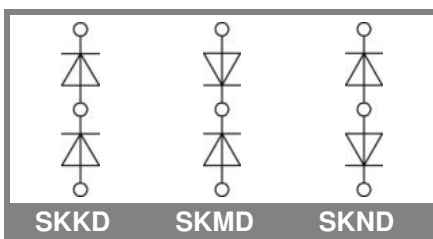
- CAL (controlled axial lifetime) technology, patent No. DE 43 10 44
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses
- SKKD half bridge connection
- centre tap connections:
SKMD common cathode
SKND common anode
- UL recognized,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



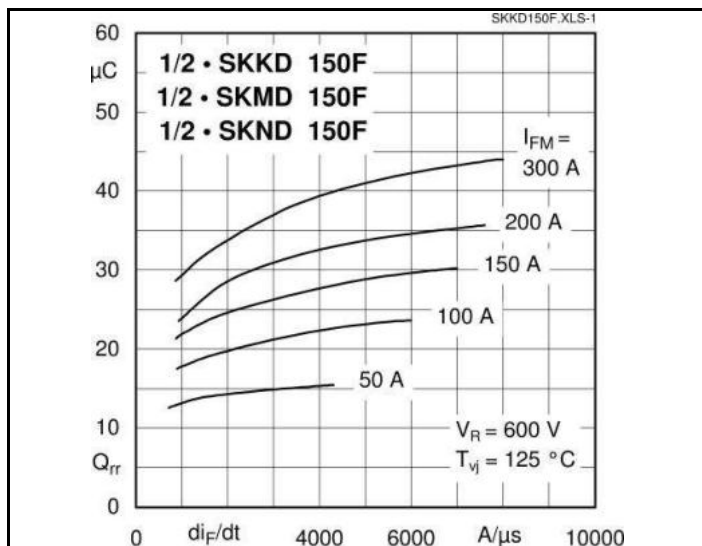


Fig. 1 Typ. recovery charge vs. current decrease

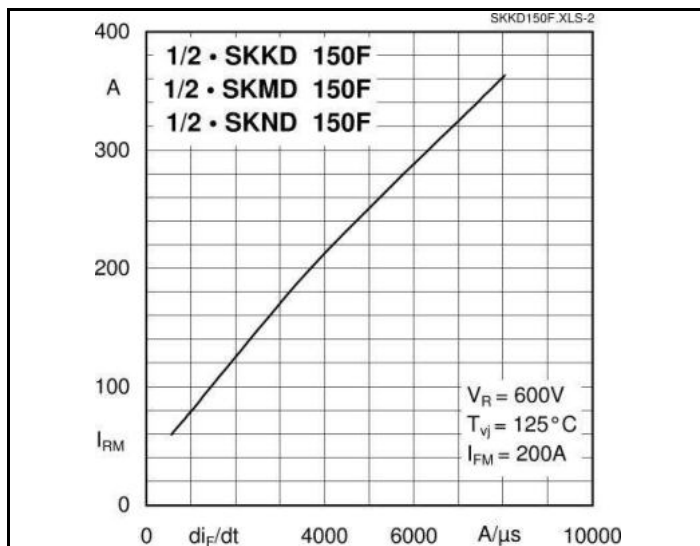


Fig. 2 Peak recovery current vs. current decrease

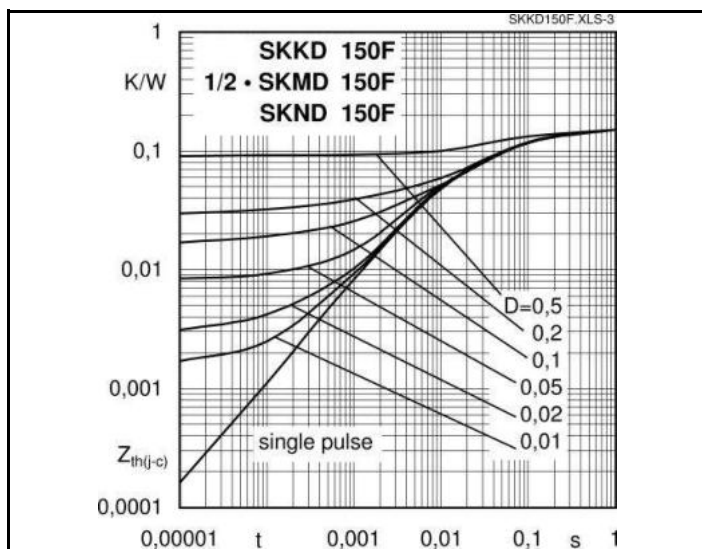


Fig. 3 Transient thermal impedance vs. time

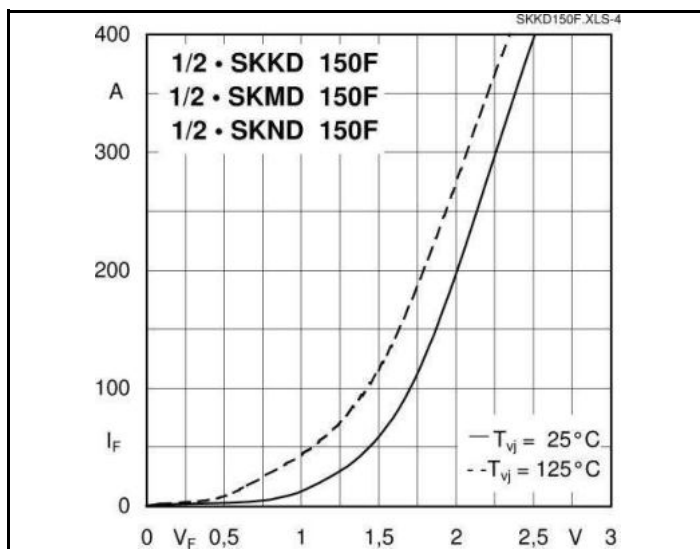


Fig. 4 Typ. forward characteristics

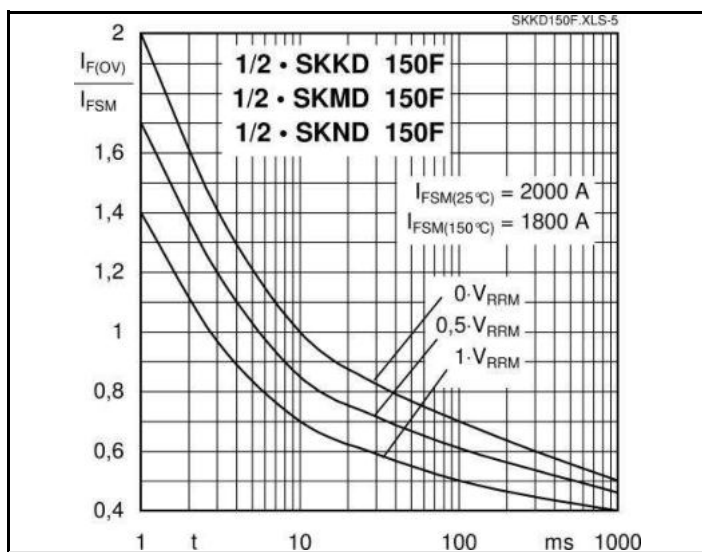


Fig. 5 Surge overload current vs. time

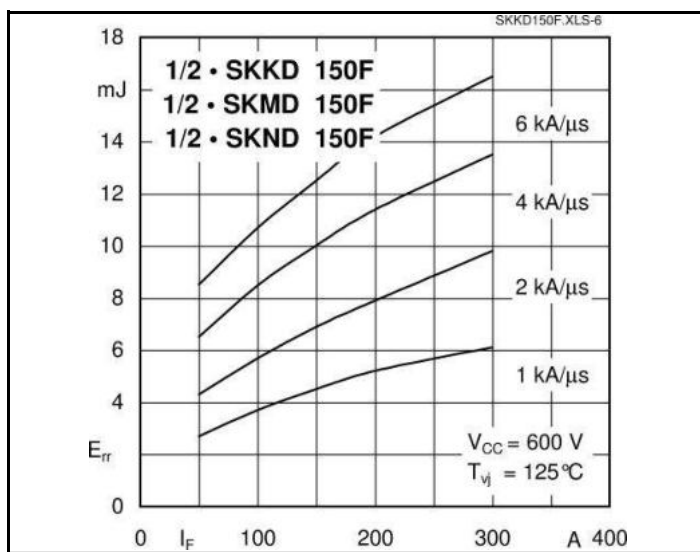
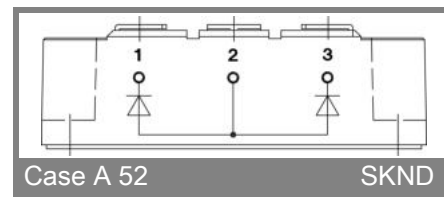
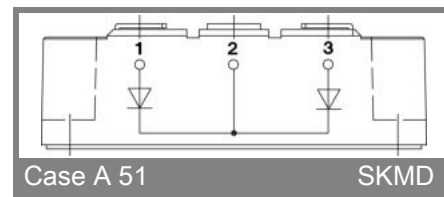
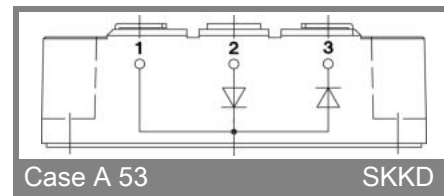
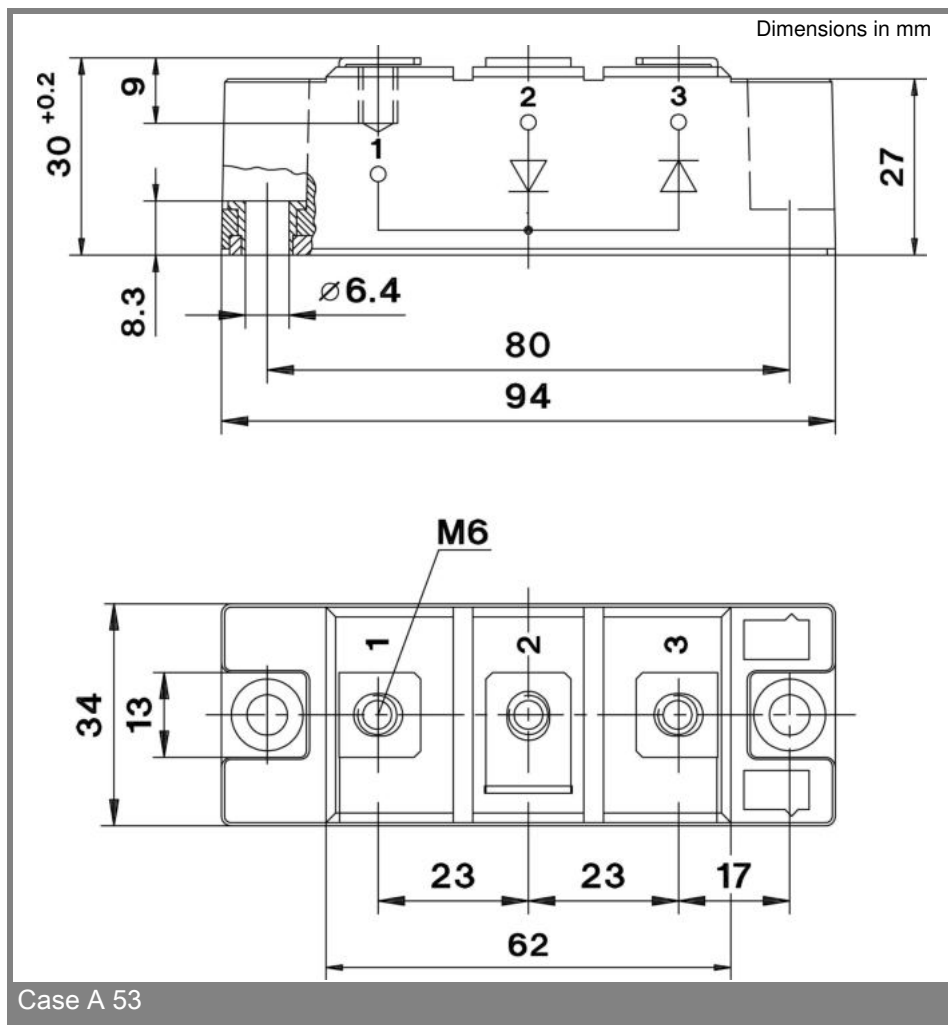


Fig. 6 Typ. turn-off energy dissipation per pulse



* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.