

SKKD 205F, SKND 205F



SEMIPACK[®] 2

Fast Diode Modules

SKKD 205F

SKND 205F

Preliminary Data

Features

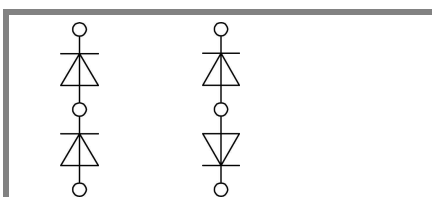
- Very soft recovery over the whole current range
- Very short recovery times
- Low switching losses
- Heat transfer through ceramic isolated metal baseplate
- Materials and distances according to UL

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	$I_{FRMS} = 455$ A (maximum value for continuous operation) $I_{FAV} = 205$ A (sin. 180; 50 Hz; $T_c = 87$ °C)	
600	600	SKKD 205F06	SKND 205F06

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 87$ °C	205	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms ms	3500	A
	$T_{vj} = 150$ °C; 10 ms ms	3000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	61250	A ² s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	45000	A ² s
V_F	$T_{vj} = 25$ °C; $I_F = 400$ A	max. 1,3	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 0,9	V
r_T	$T_{vj} = 150$ °C	max. 2	mΩ
I_{RD}	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 0,4	mA
I_{RD}	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	max. 30	mA
Q_{rr}	$T_{vj} = 150$ °C; $I_F = 300$ A,	25	μC
I_{RM}	-di/dt = 800 A/μs, $V_R = 300$ V	120	A
t_{rr}		130	ns
E_{rr}		-	mJ
$R_{th(j-c)}$	per diode / per module	0,16 / 0,08	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.	3600 / 3000	V~
M_s	to heatsink	5 ± 15 %	
M_t	for terminals	5 ± 15 %	
a		5 * 9,81	m/s ²
m	approx.	250	g
Case	SKND	A 52	
	SKKD	A 53	



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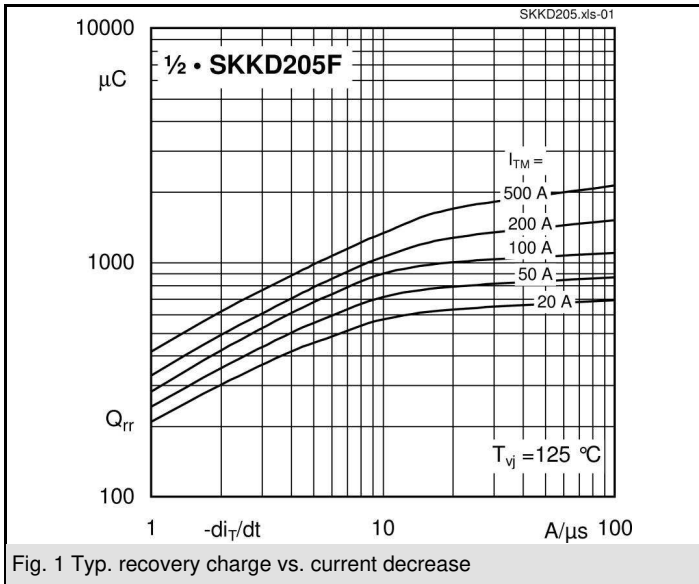


Fig. 1 Typ. recovery charge vs. current decrease

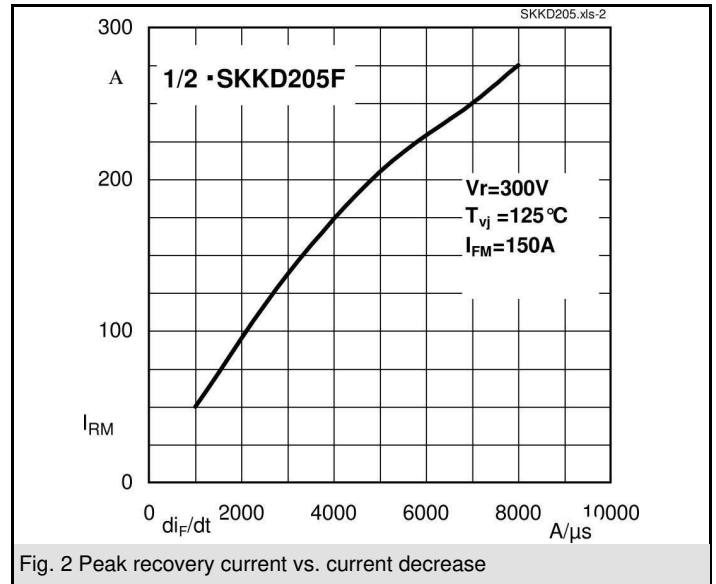


Fig. 2 Peak recovery current vs. current decrease

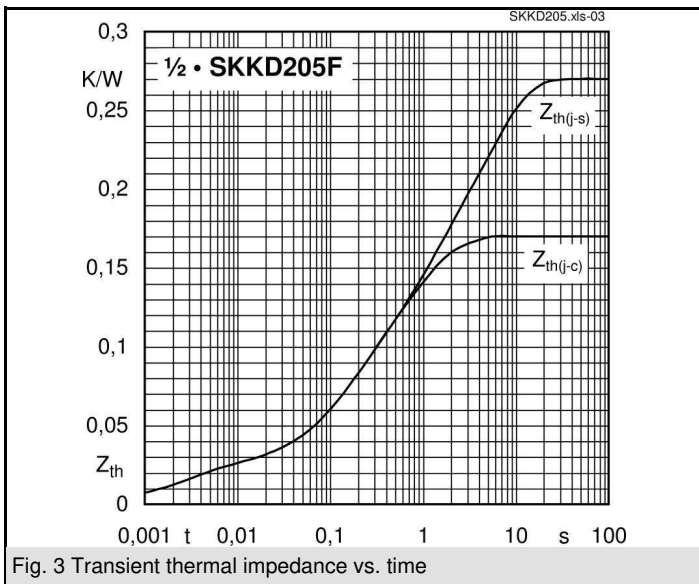


Fig. 3 Transient thermal impedance vs. time

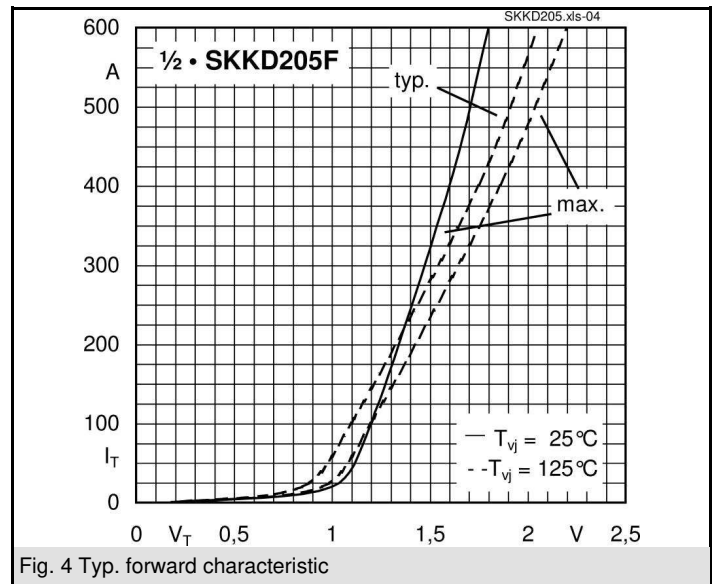


Fig. 4 Typ. forward characteristic

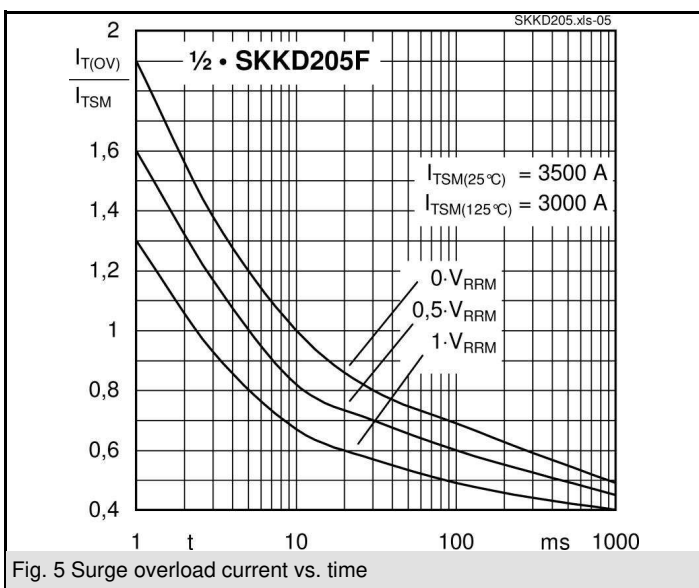
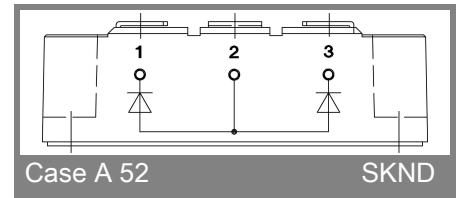
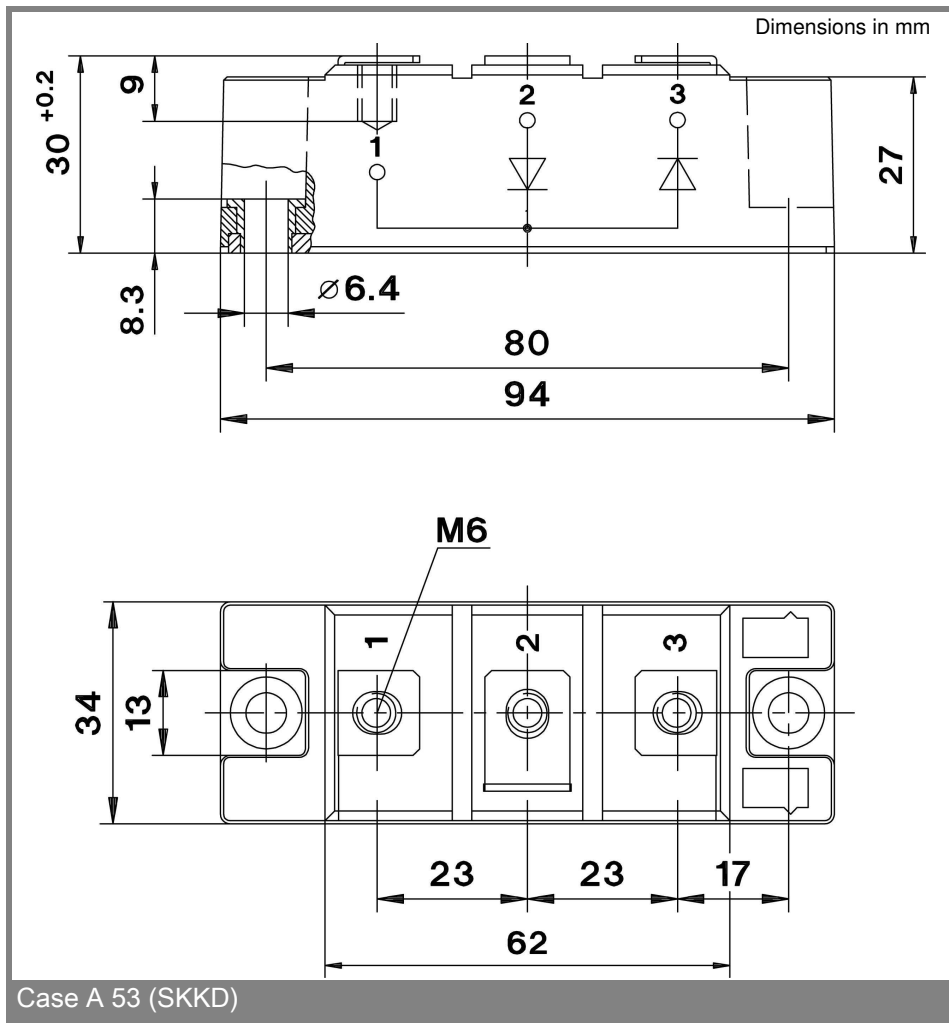


Fig. 5 Surge overload current vs. time

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* 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.