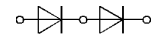
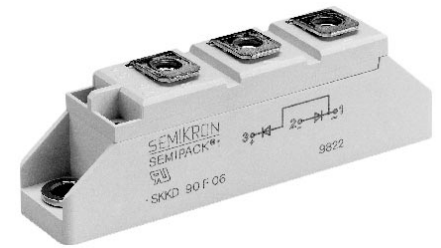


SEMIPACK® 1 Fast Diode¹⁾ Modules

SKKD 90 F

Preliminary Data

V_{RSM} V_{RRM}	I_{FRMS} (maximum values for continuous operation) 150 A
V	I_{FAV} (sin. 180; $T_{case} = 85\text{ °C}$; 50 Hz) 90 A
400	SKKD 90 F 04
600	SKKD 90 F 06



SKKD

Features

- Very soft recovery over the whole current range
- Very short recovery times
- Low switching losses
- Heat transfer through ceramic isolated metal baseplate
- 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

Symbol	Conditions	SKKD 90 F	Units	
I_{FAV}	$T_{case} = 85\text{ °C}$; sin. 180	90	A	
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms	1 500	A	
	$T_{vj} = 150\text{ °C}$; 10 ms	1 350	A	
i^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms	11 250	$A^2\text{ s}$	
	$T_{vj} = 150\text{ °C}$; 8,3 ... 10 ms	9 100	$A^2\text{ s}$	
I_{RM}	$T_{vj} = 25\text{ °C}$ $\left\{ \begin{array}{l} I_F = 90\text{ A} \\ di_F/dt = 500\text{ A}/\mu\text{s} \\ V_R = 300\text{ V} \end{array} \right.$	25	A	
		45	A	
t_{rr}	$T_{vj} = 25\text{ °C}$	typ. 100	ns	
Q_{rr}	$T_{vj} = 150\text{ °C}$	typ. 5,5	μC	
I_R	$T_{vj} = 25\text{ °C}$; $V_R = V_{RRM}$	0,2	mA	
	$T_{vj} = 125\text{ °C}$; $V_R = V_{RRM}$	15	mA	
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 90\text{ A}$	1,5	V	
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,9	V	
r_T	$T_{vj} = 150\text{ °C}$	5	$\text{m}\Omega$	
R_{thjc}	per diode	0,35	$^{\circ}\text{C}/\text{W}$	
	per module	0,175	$^{\circ}\text{C}/\text{W}$	
R_{thch}	per module	0,1	$^{\circ}\text{C}/\text{W}$	
T_{vj}		- 40 ... +150	$^{\circ}\text{C}$	
T_{stg}		- 40 ... +125	$^{\circ}\text{C}$	
V_{isol}	a. c. 50 Hz; r.m.s.; 1 min	3000	V~	
M_1	to heatsink	SI units	$5 \pm 15\%$	Nm
		US units	$44 \pm 15\%$	lb. in
M_2	for terminals	SI units	$3 \pm 15\%$	Nm
		US units	$26 \pm 15\%$	lb. in
w	approx.	120	g	
Case	→ page B 2 – 20	A 20		

¹⁾ CAL (controlled axial lifetime) technology, patent No. DE 43 10 44

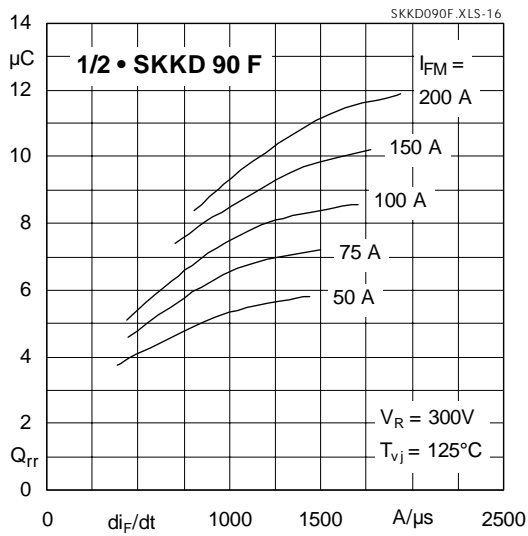


Fig. 16 Typ. recovered charge vs. current decrease

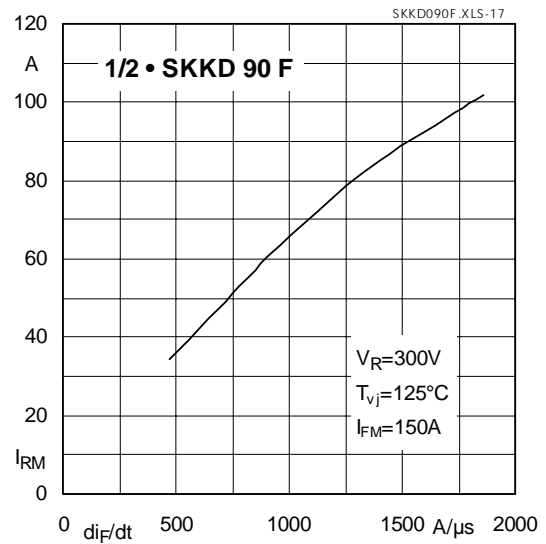


Fig. 17 Typ. peak recovery current vs. current decrease

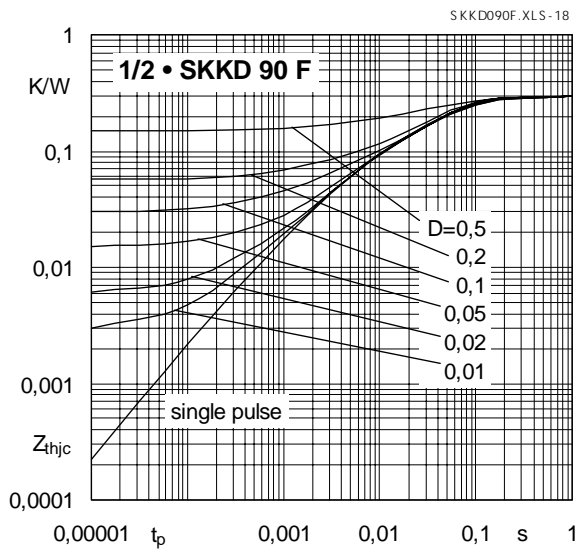


Fig. 18 Transient thermal impedance vs. time

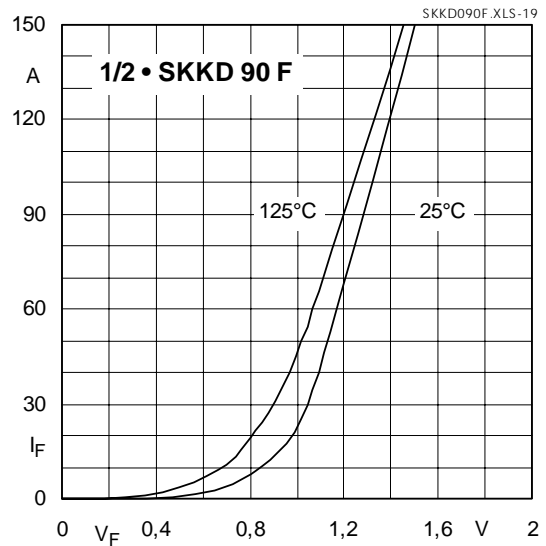


Fig. 19 Typ. forward characteristics

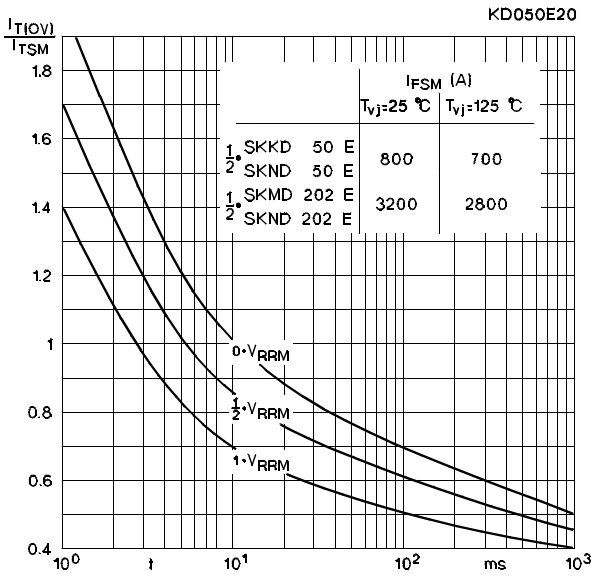


Fig. 20 Surge overload current vs. time

