



SEMIPACK® 1

Fast Diode Modules

SKKD 115F

Features

- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- 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_{RRM}	$I_{FRMS} = 200 \text{ A}$ (maximum value for continuous operation)	
V	V	$I_{FAV} = 115 \text{ A}$ (sin. 180; $T_c = 83 \text{ °C}$)	
1200	1200	SKKD 115F12	
1400	1400	SKKD 115F14	
Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	113 (83)	A
I_{FSM}	$T_{vj} = 25 \text{ °C}$; 10 ms	2500	A
	$T_{vj} = 130 \text{ °C}$; 10 ms	2100	A
i^2t	$T_{vj} = 25 \text{ °C}$; 8,3 ... 10 ms	31250	A^2s
	$T_{vj} = 130 \text{ °C}$; 8,3 ... 10 ms	22000	A^2s
V_F	$T_{vj} = 25 \text{ °C}$; $I_F = 300 \text{ A}$	max. 1,8	V
$V_{(TO)}$	$T_{vj} = 130 \text{ °C}$	1,1	V
r_T	$T_{vj} = 130 \text{ °C}$	2	$\text{m}\Omega$
I_{RD}	$T_{vj} = 25 \text{ °C}$; $V_{RD} = V_{RRM}$	max. 1	mA
I_{RD}	$T_{vj} = 130 \text{ °C}$; $V_{RD} = V_{RRM}$	max. 30	mA
under following conditions			
Q_{rr}	$T_{vj} = 130 \text{ °C}$, $I_F = 100 \text{ A}$,	90	μC
I_{RM}	$-\text{di}/\text{dt} = 50 \text{ A}/\mu\text{s}$, $V_R = 30 \text{ V}$	90	A
t_{rr}		2000	ns
E_{rr}		1,35	mJ
$R_{th(j-c)}$	per diode / per module	0,24 / 0,12	K/W
$R_{th(c-s)}$	per diode / per module	0,2 / 0,1	K/W
T_{vj}		- 40 ... + 130	$^{\circ}\text{C}$
T_{stg}		- 40 ... + 125	$^{\circ}\text{C}$
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	to heatsink	5 \pm 15 %	Nm
M_t	to terminals	3 \pm 15 %	Nm
a		5 * 9,81	m/s^2
m	approx.	120	g
Case		A 10	



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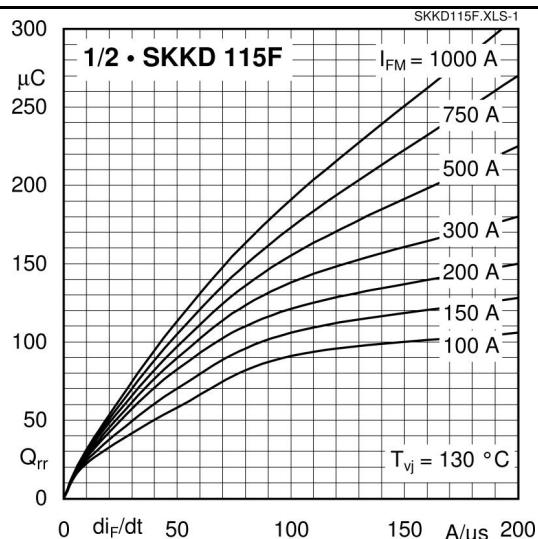


Fig. 1 Typ. recovery charge vs. current decrease

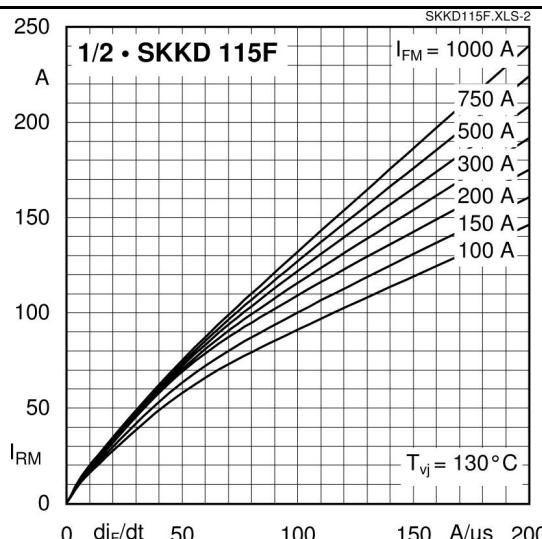


Fig. 2 Peak recovery current vs. current decrease

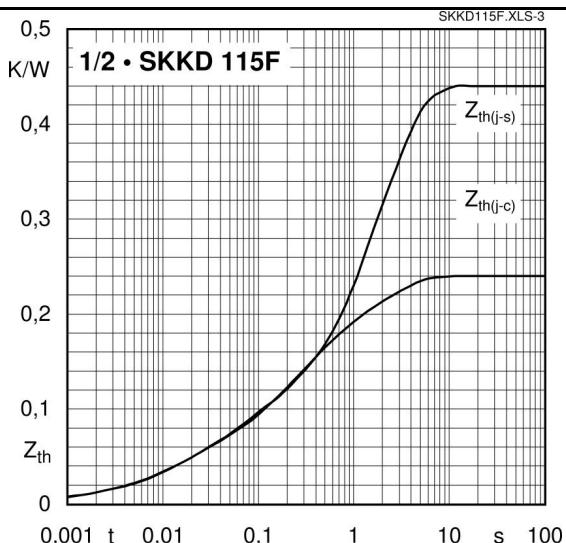


Fig. 3 Transient thermal impedance vs. time

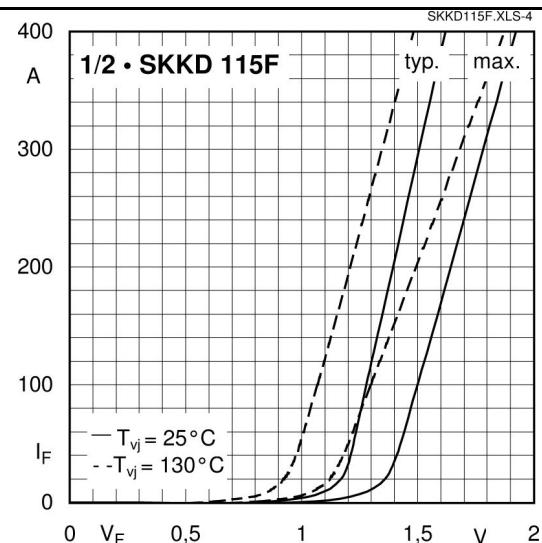


Fig. 4 Forward characteristics

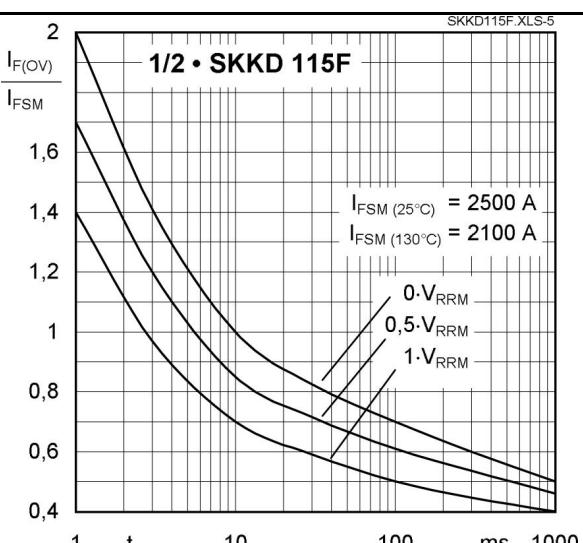
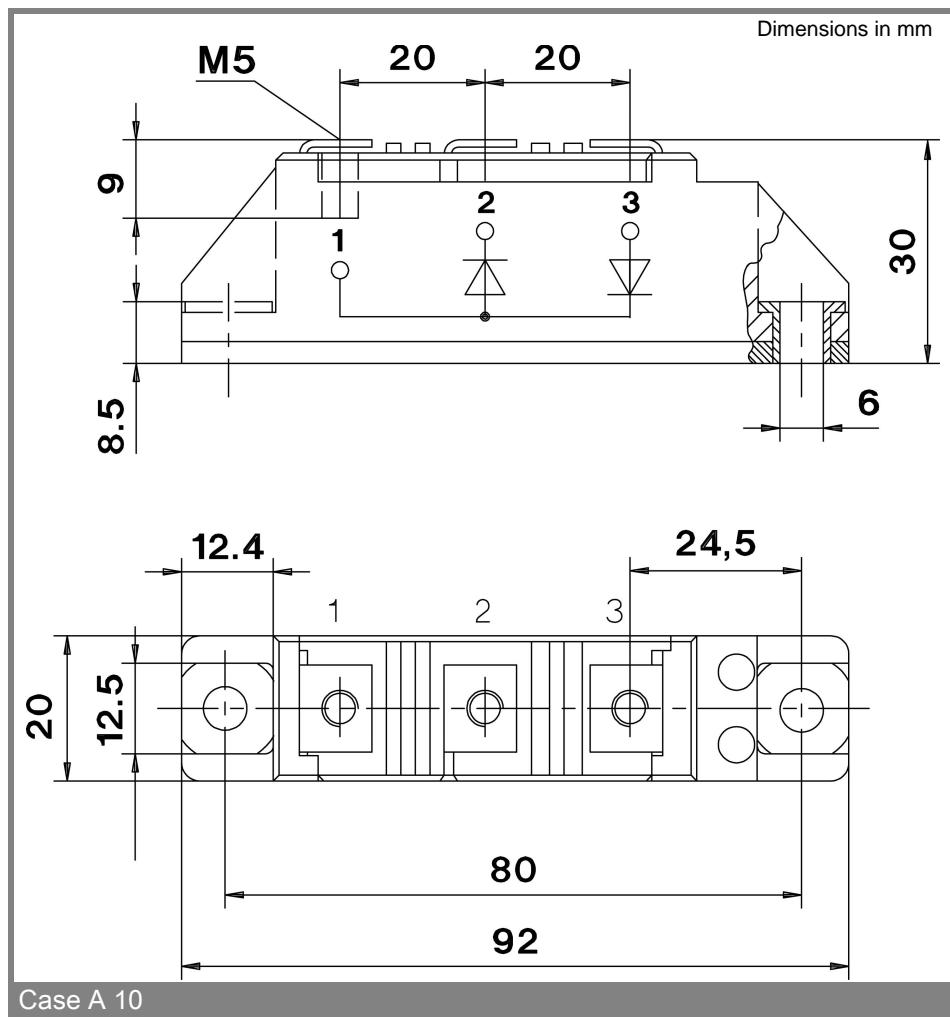


Fig. 5 Surge overload current vs. time



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