

SKKE 290F



SEMIPACK[®] 2

Fast Diode Modules

SKKE 290F

Preliminary Data

Features

- CAL (controlled axial lifetime) chip technology, patent No. DE 43 10 44
- 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)	
600	600	$I_{FAV} = 290$ A (sin. 180; 50 Hz; $T_c = 109$ °C)	
		SKKE 290F06	

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	390 (330)	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms	7000	A
	$T_{vj} = 150$ °C; 10 ms	6000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	245000	A ² s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	180000	A ² s
V_F	$T_{vj} = 25$ °C; $I_F = 400$ A	max. 1,45	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 0,9	V
r_T	$T_{vj} = 150$ °C	max. 1,2	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. 60	mA
Q_{rr}	$T_{vj} = 125$ °C; $I_F = 300$ A,	33,5	μC
I_{RM}	-di/dt = 1600 A/μs, $V_R = 300$ V	160	A
t_{rr}		580	ns
E_{rr}		3,6	mJ
$R_{th(j-c)}$		0,08	K/W
$R_{th(c-s)}$		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 %	Nm
M_t	to terminals	5 ± 15 %	Nm
a		5 * 9,81	m/s ²
m	approx.	160	g
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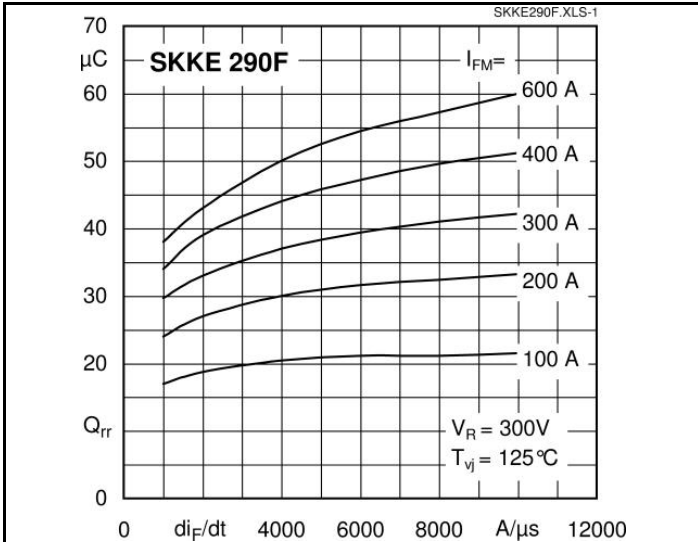


Fig. 1 Typ. recovery charge vs. current decrease

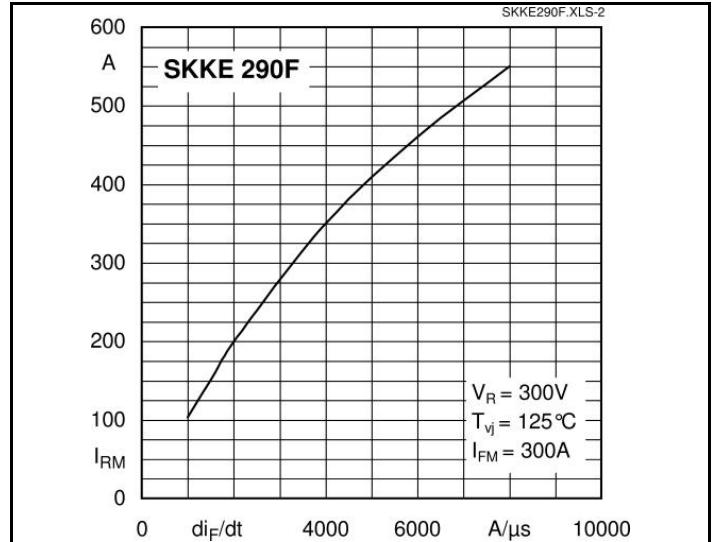


Fig. 2 Peak recovery current vs. current decrease

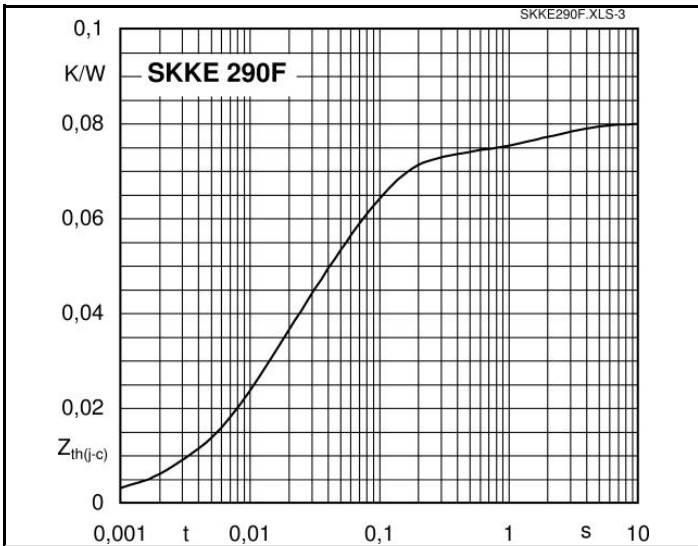


Fig. 3 Transient thermal impedance vs. time

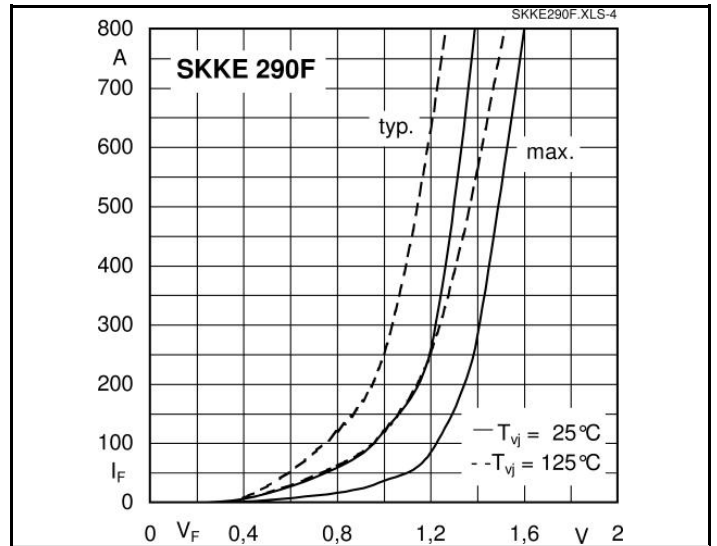


Fig. 4 Forward characteristics

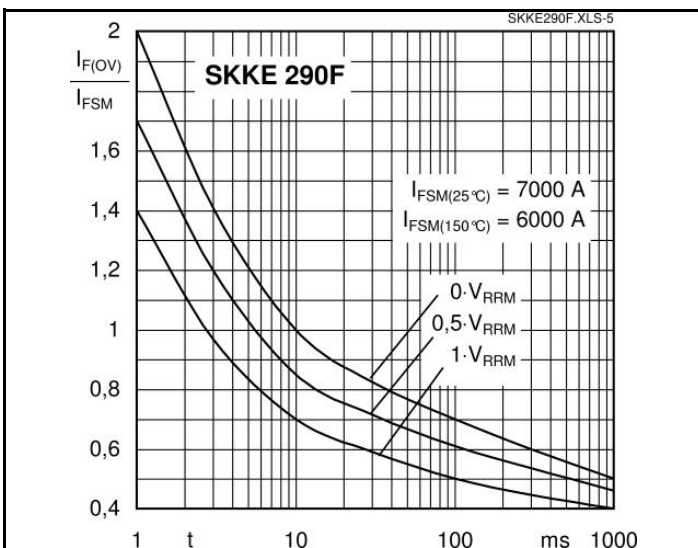
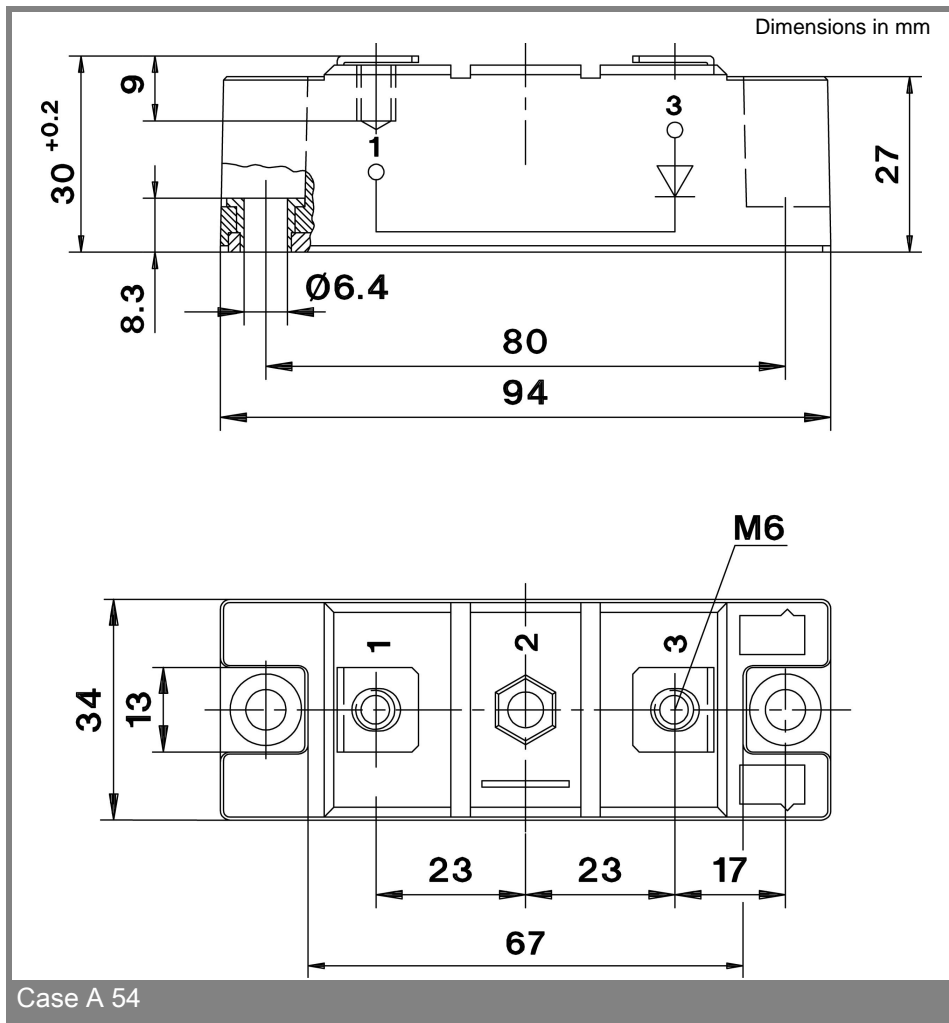


Fig. 5 Surge overload current vs. time



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