

# SKKD 75F



**SEMIPACK<sup>®</sup> 2**

## Fast Diode Modules

### SKKD 75F

#### 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
- 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	$I_{FRMS} = 110$ A (maximum value for continuous operation) $I_{FAV} = 75$ A (sin. 180; 50 Hz; $T_c = 55$ °C)	
1200	1200	SKKD 75F12	

Symbol	Conditions	Values	Units
$I_{FAV}$	sin. 180; $T_c = 85$ (100) °C	58 (49)	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 150$ °C; 10 ms	1000 900	A A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 150$ °C; 8,3 ... 10 ms	5000 4000	A <sup>2</sup> s A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 75$ A	max. 2,2	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1,2	V
$r_T$	$T_{vj} = 150$ °C	max. 11	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. 20	mA
$Q_{rr}$	$T_{vj} = 125$ °C; $I_F = 75$ A,	10	μC
$I_{RM}$	$-di/dt = 500$ A/μs, $V_R = 600$ V	30	A
$t_{rr}$		920	ns
$E_{rr}$		2,1	mJ
$R_{th(j-c)}$	per diode / per module	0,4 / 0,2	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 terminal	5 ± 15 %	Nm
$a_m$	approx.	5 * 9,81	m/s <sup>2</sup>
Case		A 23	



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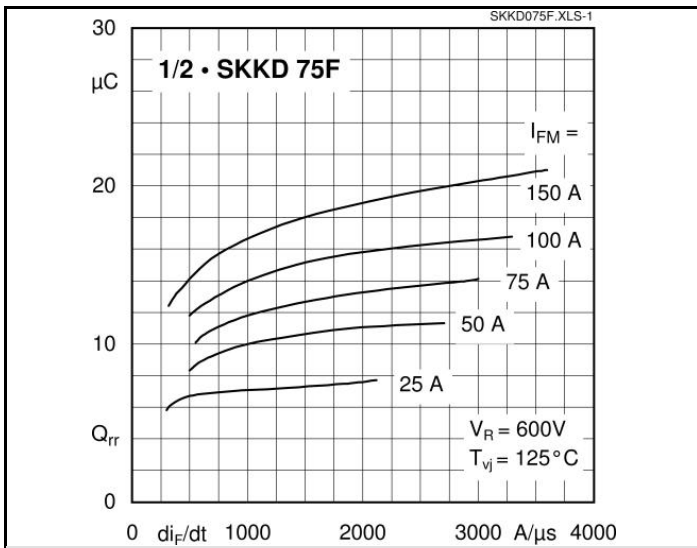


Fig. 1 Typ. recovery charge vs. current decrease

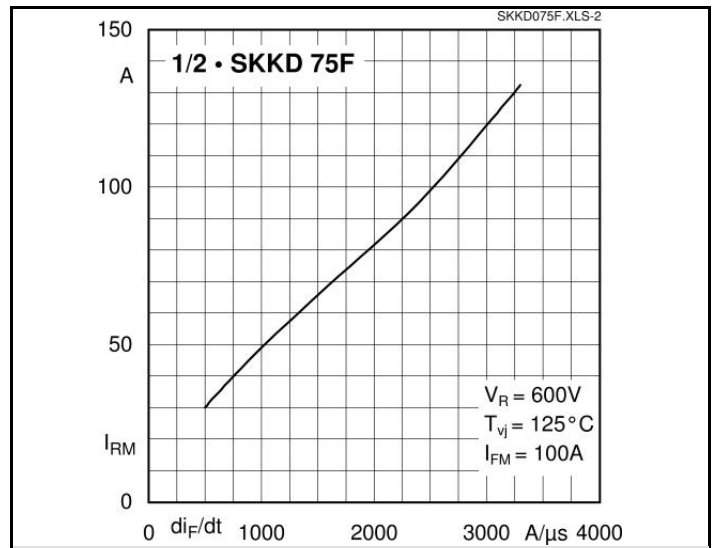


Fig. 2 Peak recovery current vs. current decrease

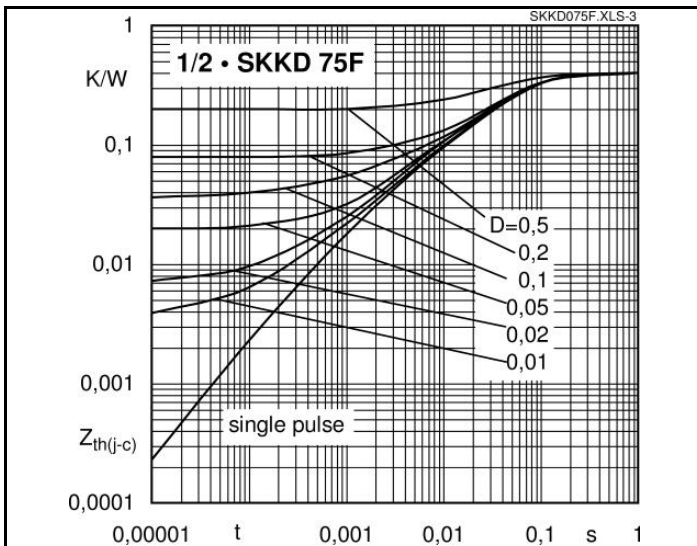


Fig. 3 Transient thermal impedance vs. time

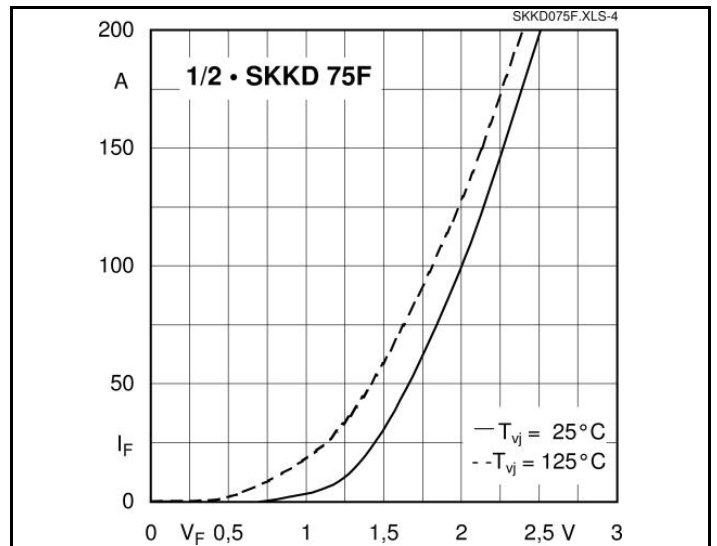


Fig. 4 Typ. forward characteristics

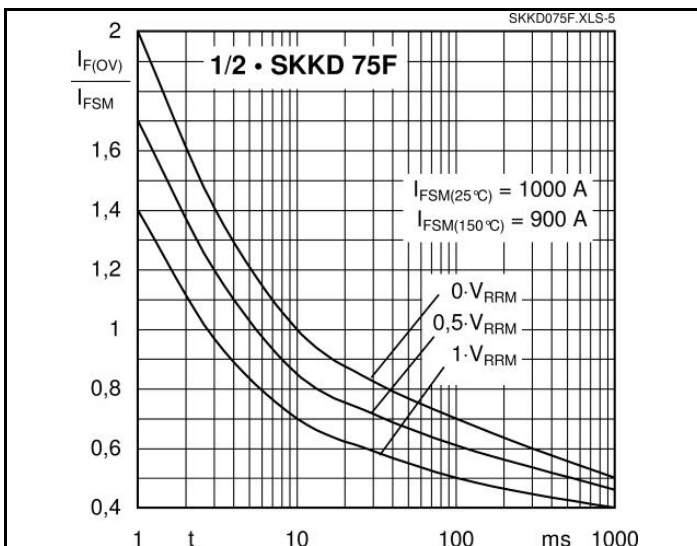
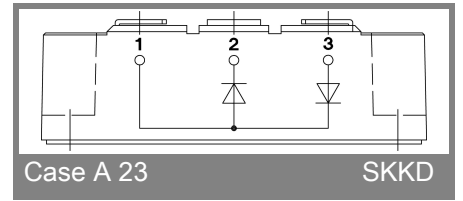
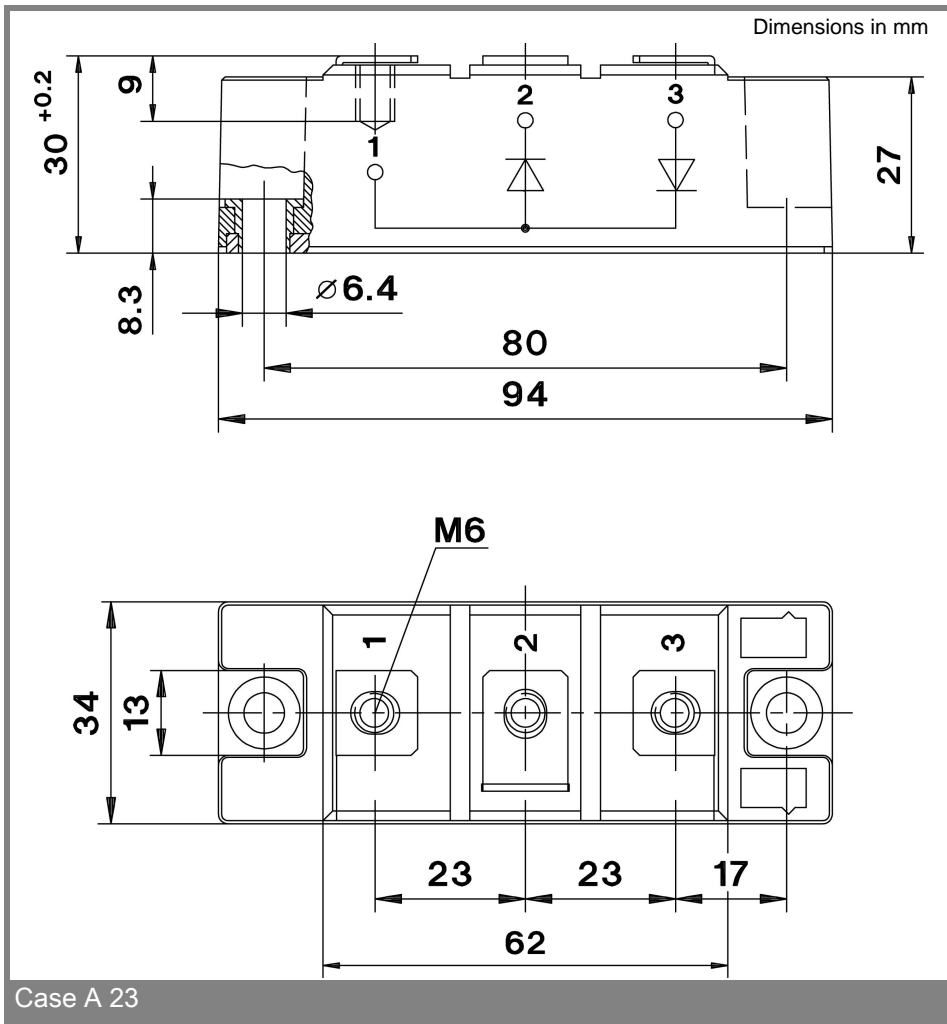


Fig. 5 Surge overload current vs. time

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