

# SKKD 60F



**SEMIPACK<sup>®</sup> 2**

## Fast Diode Modules

### SKKD 60F

#### Features

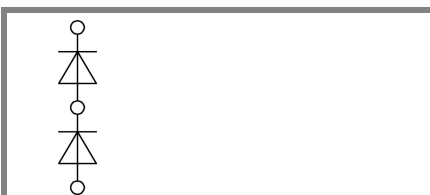
- Heat transfer through ceramic isolated metal baseplate
- Very short recovery times
- Soft recovery
- Low switching losses
- Up to 1600 V peak inverse voltage
- UL recognized, file no. E 63 532

#### 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) $I_{FAV} = 60$ A (sin. 180; 50 Hz; $T_c = 83$ °C)	
1700	1700	SKKD 60F17	

Symbol	Conditions	Values	Units
$I_{FAV}$	sin. 180; $T_c = 85$ (100) °C	58 (49)	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	1000	A
	$T_{vj} = 150$ °C; 10 ms	900	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	5000	A <sup>2</sup> s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	4000	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 100$ A	max. 2,7	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1,5	V
$r_T$	$T_{vj} = 150$ °C	max. 9	mΩ
$I_{RD}$	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 0,4	mA
$I_{RD}$	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}$	max. 25	mA
$Q_{rr}$	$T_{vj} = 125$ °C, $I_F = 60$ A,	18	μC
$I_{RM}$	-di/dt = 500 A/μs, $V_R = 1200$ V	60	A
$t_{rr}$		800	ns
$E_{rr}$		5	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 terminals	5 ± 15 %	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	160	g
Case		A 23	



**SKKD**

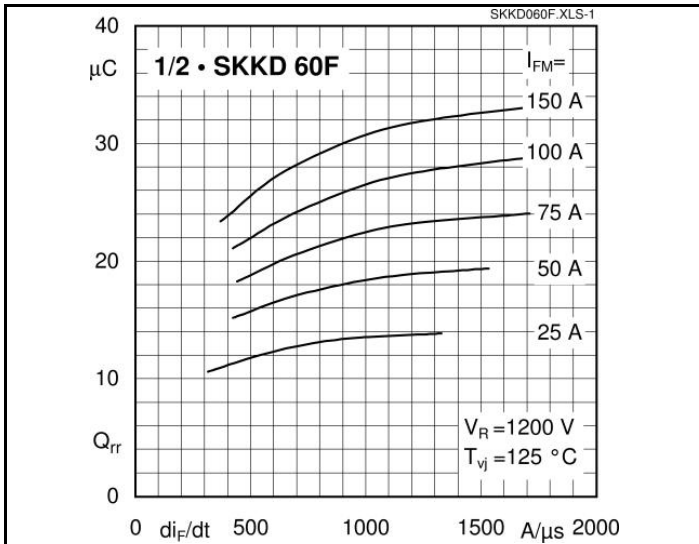


Fig. 1 Typ. recovery charge vs. current decrease

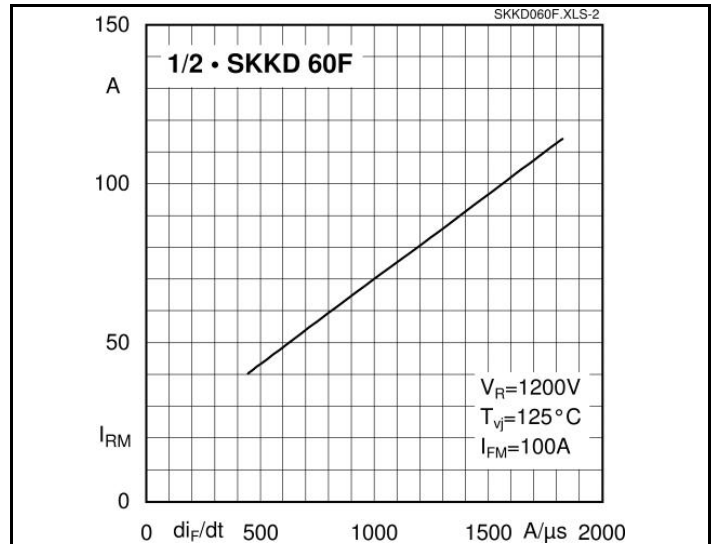


Fig. 2 Peak recovery current vs. current decrease

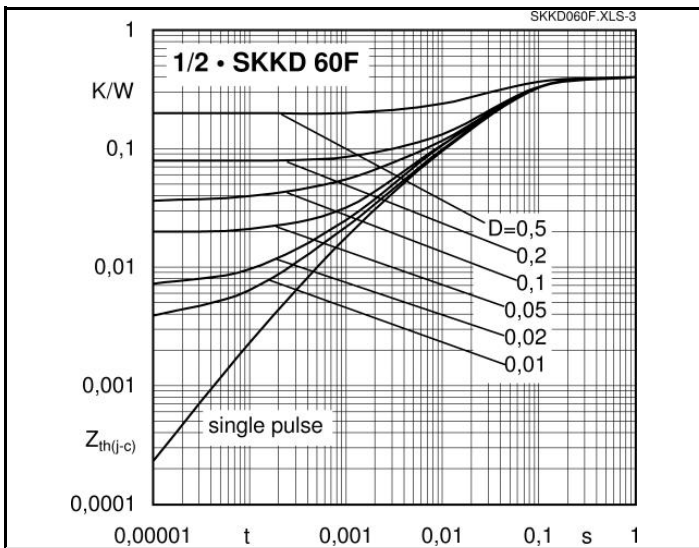


Fig. 3 Transient thermal impedance vs. time

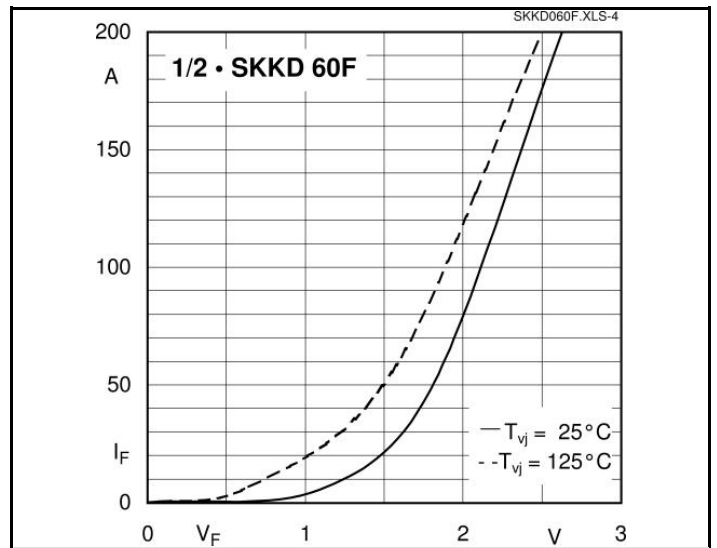


Fig. 4 Typ. forward characteristics

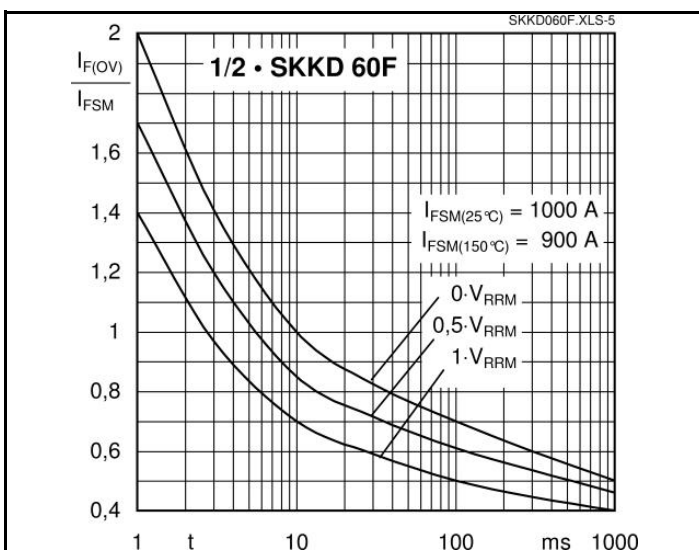
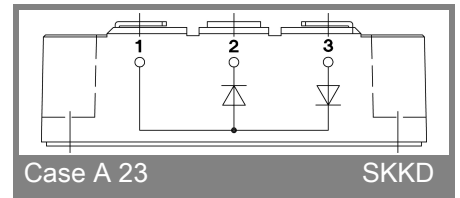
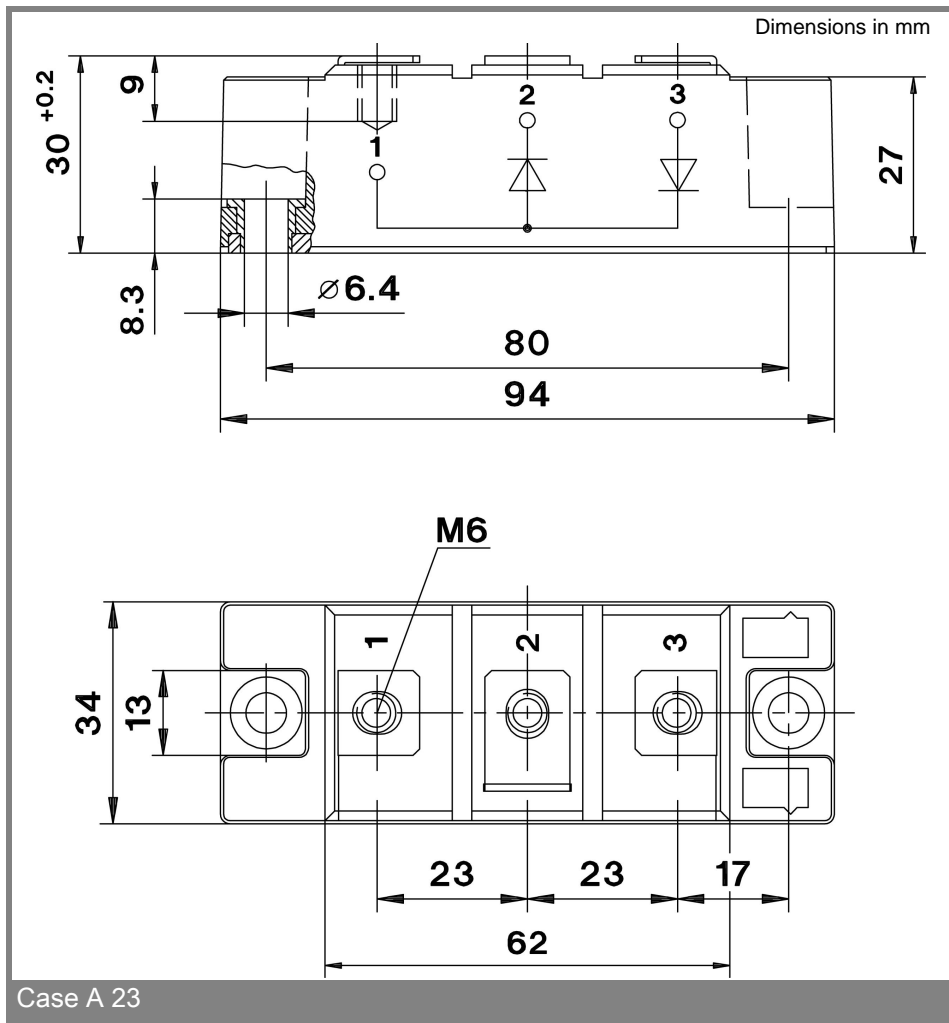


Fig. 5 Surge overload current vs. time

# SKKD 60F



\* 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.