

# SKN 60F



**Stud diode**

## Fast Recovery Rectifier Diode

**SKN 60F**

**SKR 60F**

### Features

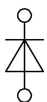
- Small recovered charge
- Soft recovery
- Up to 1500 V reverse voltage
- Hermetic metal case with glass insulator
- Threaded studs ISO M6 and M8
- SKN: anode to stud; SKR: cathode to stud

### Typical Applications\*

- Inverse diodes for power transistors, GTO thyristors, asymmetric thyristors
- SMPS, inverters, choppers
- A.C. motor control, uninterruptible power supplies (UPS)

$V_{RSM}$ V	$V_{RRM}$ V	$I_{FRMS} = 120$ A (maximum value for continuous operation) $I_{FAV} = 60$ A (sin. 180; 1000 Hz; $T_c = 100$ °C)	
1200	1200	SKN 60F12	SKR 60F12
1400	1400	SKN 60F14	SKR 60F14
1500	1500	SKN 60F15	SKR 60F15
1700	1700	SKN 60F17	SKR 60F17

Symbol	Conditions	Values	Units
$I_{FAV}$	sin. 180; $T_c = 85$ (100) °C	75 (60)	A
$I_{FAV}$	K3; $T_a = 45$ °C; sin. 180; 1000 Hz	21,5	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	1400	A
	$T_{vj} = 150$ °C; 10 ms	1200	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	9800	A <sup>2</sup> s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	7200	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 150$ A	max. 1,75	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1	V
$r_T$	$T_{vj} = 150$ °C	max. 4	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
$Q_{rr}$	$T_{vj} = 150$ °C; $I_F = 100$ A,	75	μC
$I_{RM}$	$-di/dt = 100$ A/μs, $V_R = 30$ V	70	A
$t_{rr}$		2100	ns
$E_{rr}$		-	mJ
$R_{th(j-c)}$		0,5	K/W
$R_{th(c-s)}$		0,25	K/W
$T_{vj}$		- 40 ... + 150	°C
$T_{stg}$		- 55 ... + 150	°C
$V_{isol}$		-	V~
$M_s$	to heatsink	2,5	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	20	g
Case		E 10	



**SKN**

**SKR**

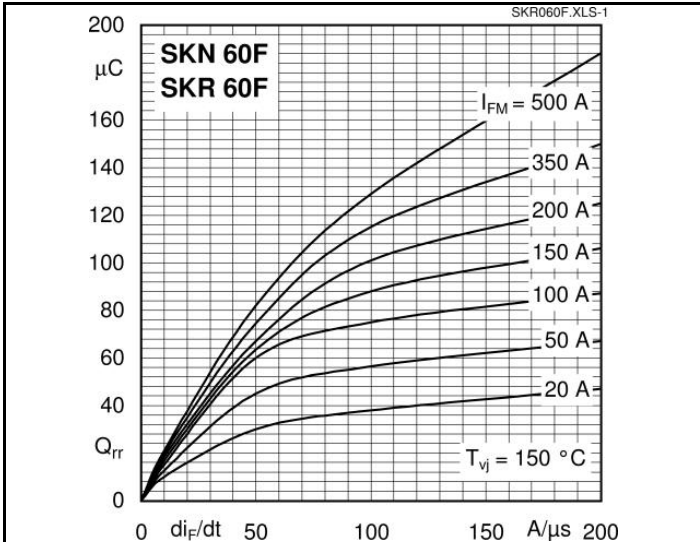


Fig. 1 Typ. recovery charge vs. current decrease

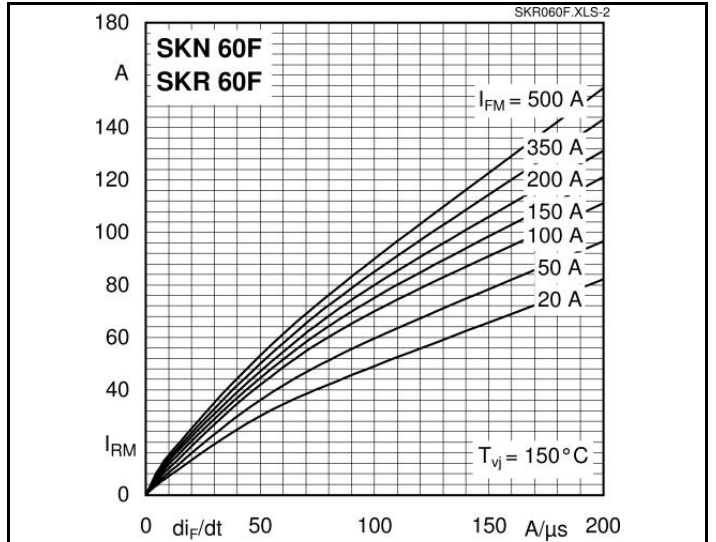


Fig. 2 Peak recovery current vs. current decrease

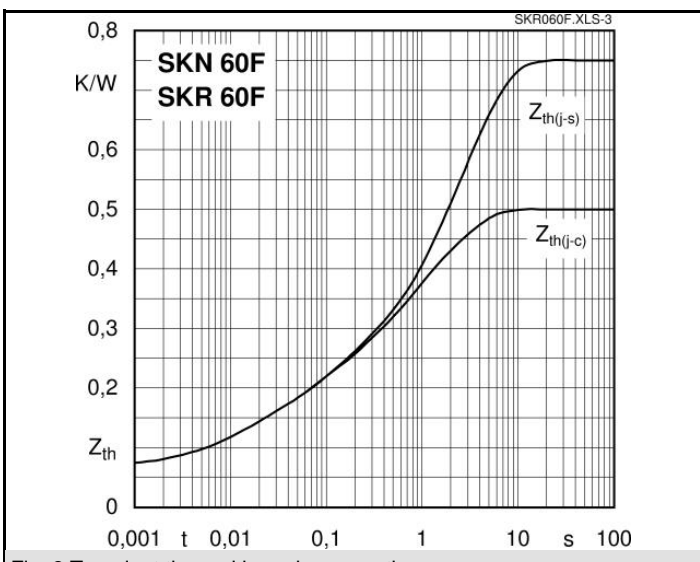


Fig. 3 Transient thermal impedance vs. time

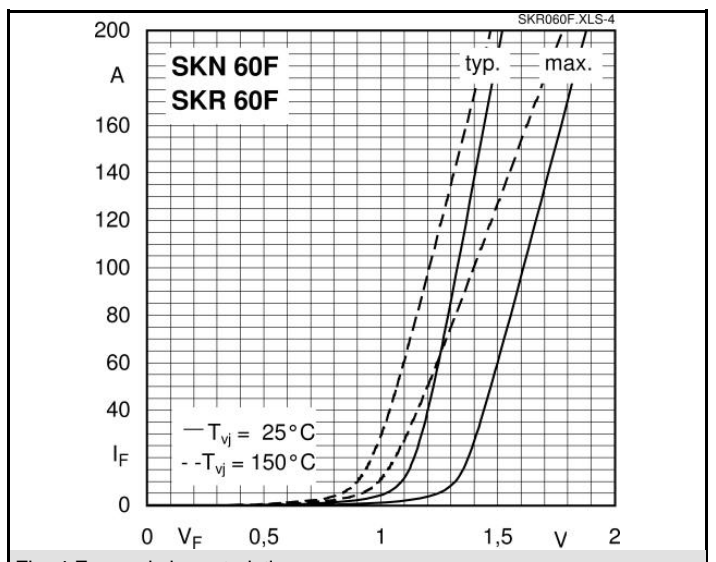


Fig. 4 Forward characteristics

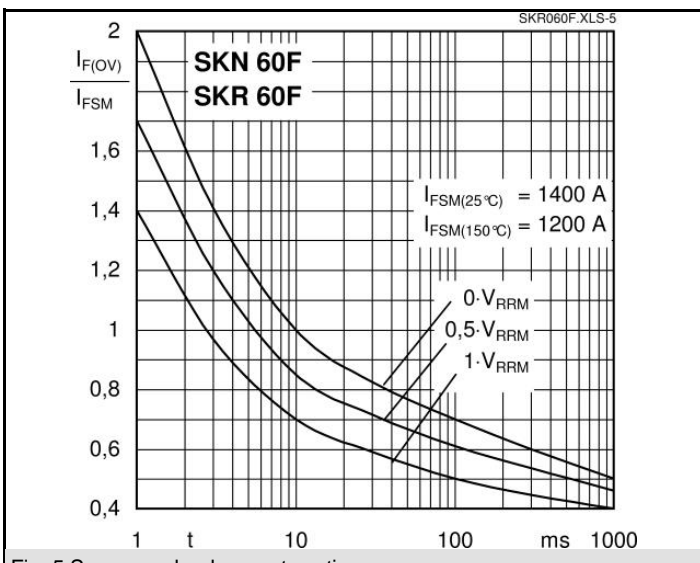
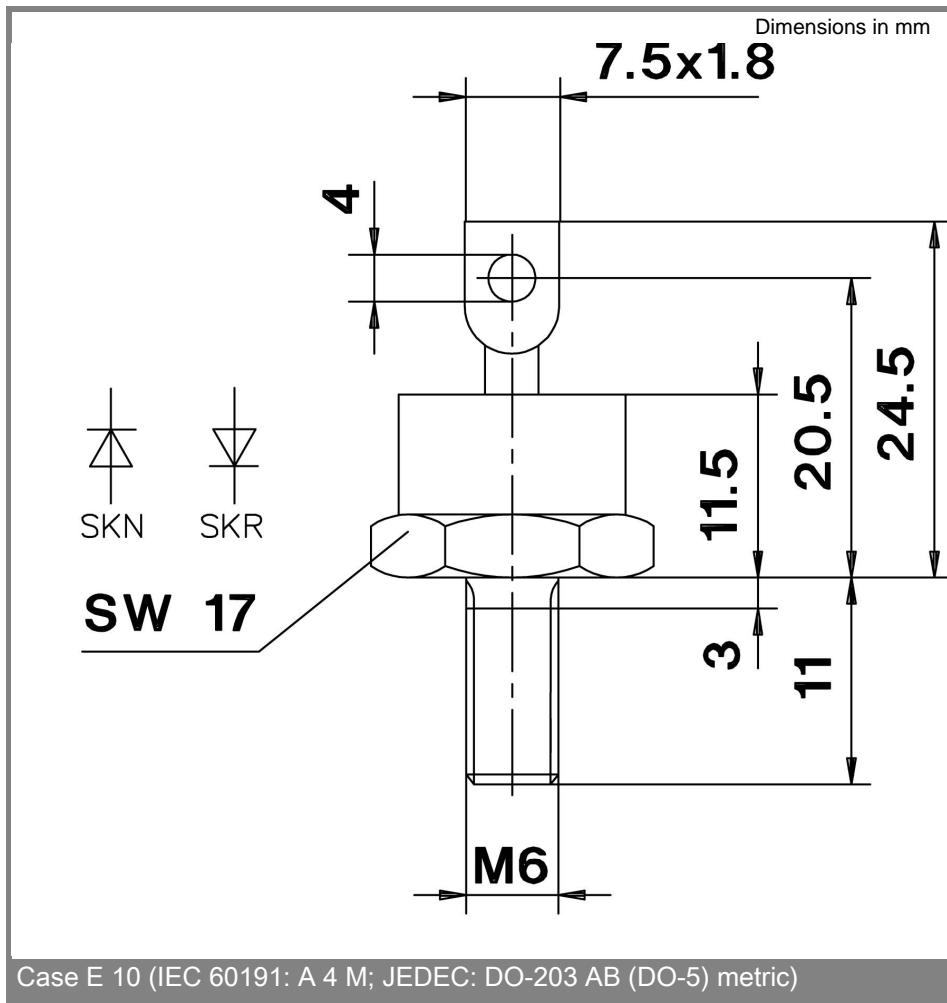


Fig. 5 Surge overload current vs. time



\* 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.