SKN 60F

Stud diode

Fast Recovery Rectifier Diode

SKN 60F

SKR 60F

Features

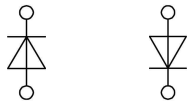
- Small recovered charge
- Soft recovery
- Up to 1500 V reverse voltage
- Hermetic metal case with glass insulator
- Threaded studs ISO M6 and M8
- SKN: anode to stud; SKR: cathode to stud

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
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	9800	A²s
	T_{vj} = 150 °C; 8,3 ... 10 ms	7200	A²s
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/s²
m	approx.	20	g
Case		E 10	



SKN SKR

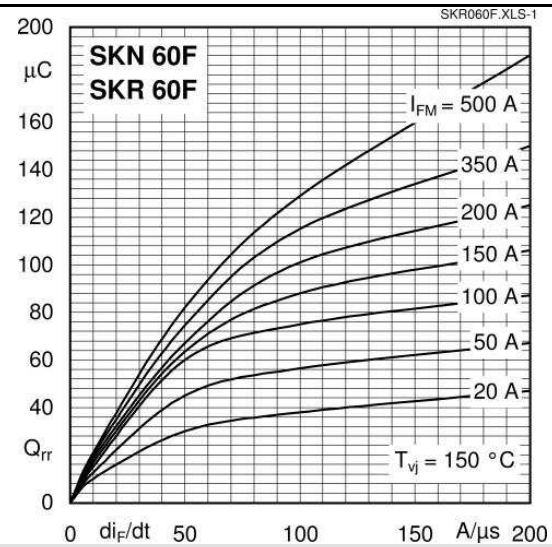


Fig. 1 Typ. recovery charge vs. current decrease

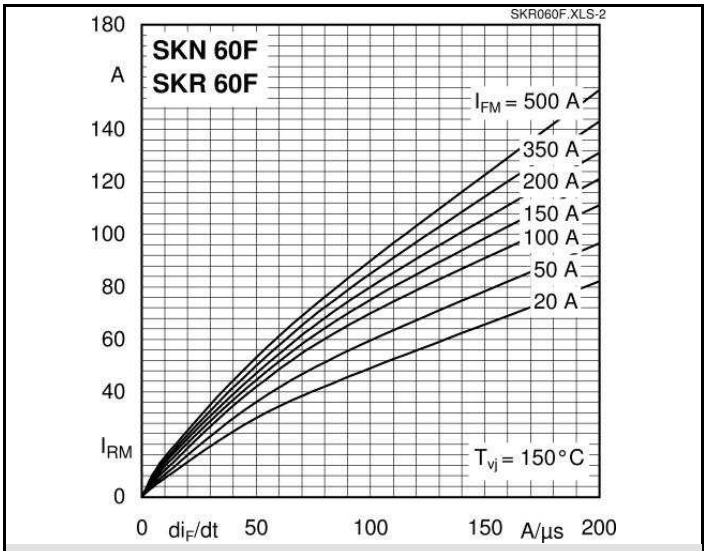


Fig. 2 Peak recovery current vs. current decrease

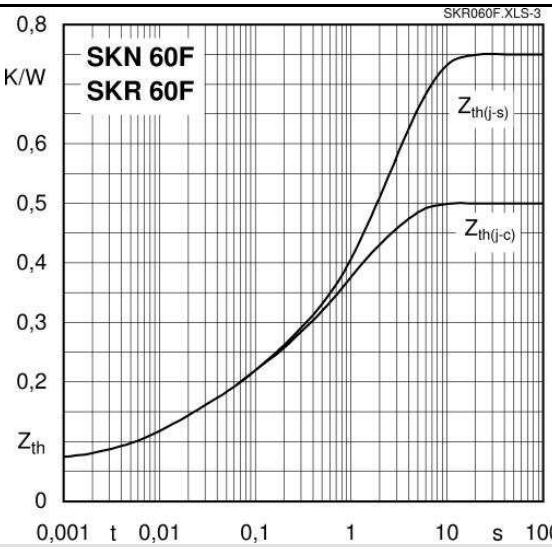


Fig. 3 Transient thermal impedance vs. time

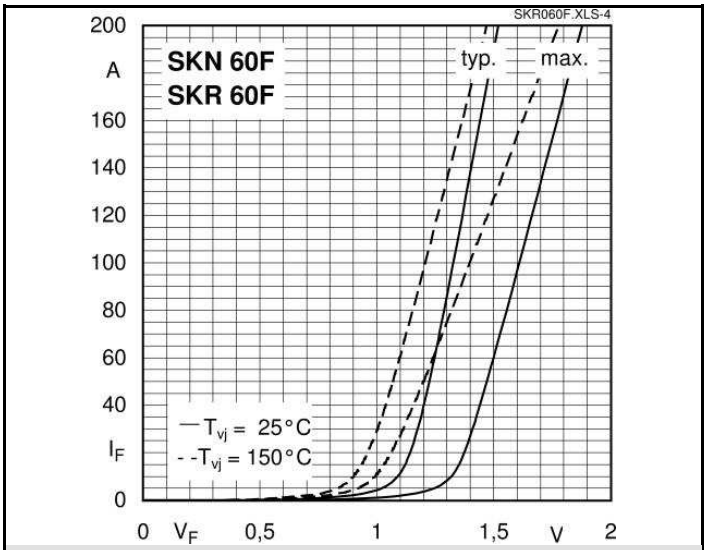


Fig. 4 Forward characteristics

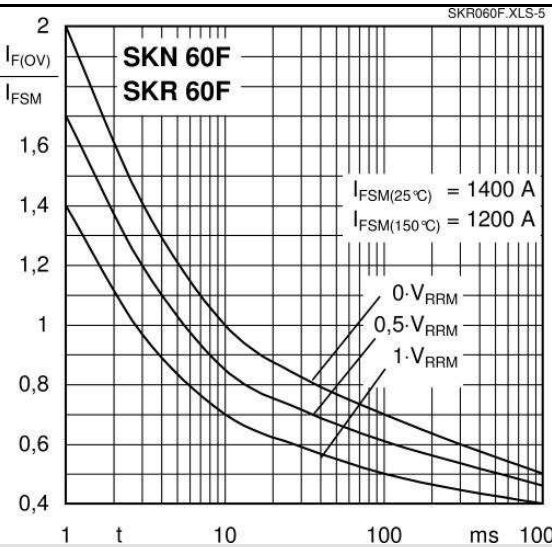
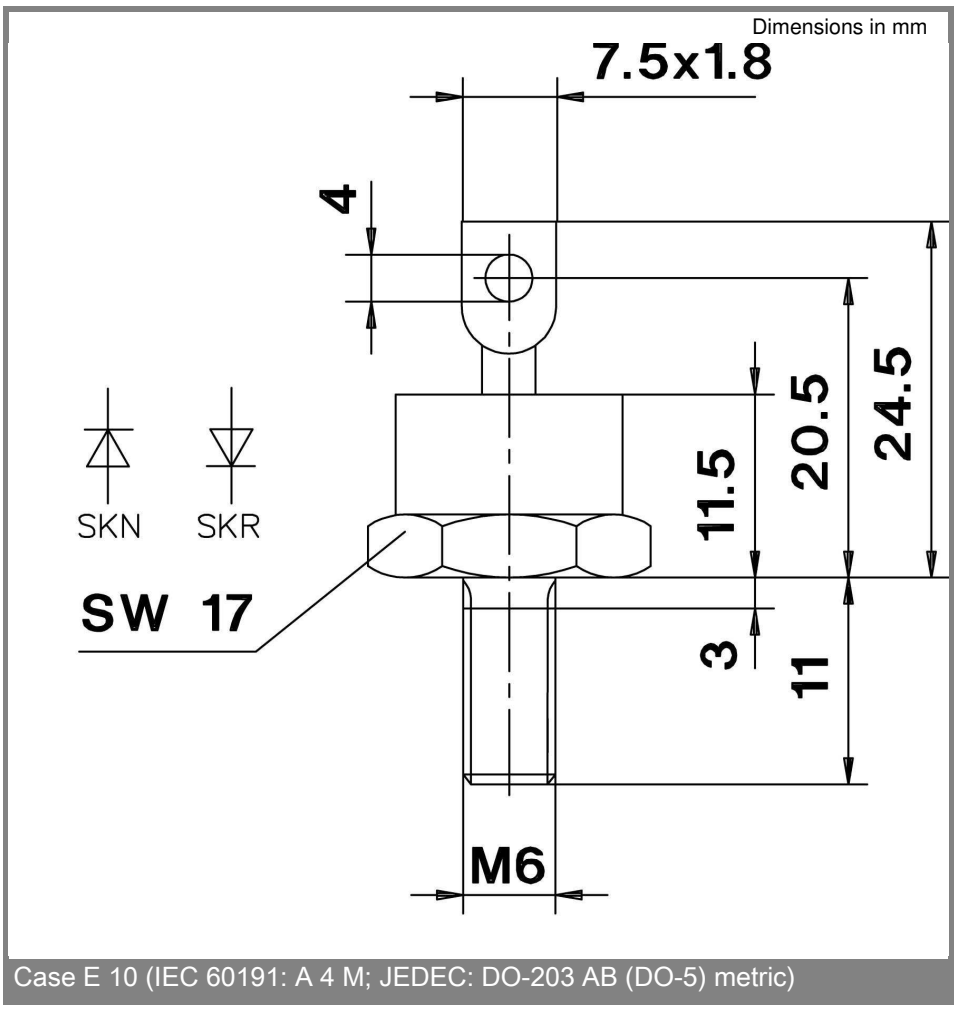


Fig. 5 Surge overload current vs. time



Case E 10 (IEC 60191: A 4 M; JEDEC: DO-203 AB (DO-5) metric)

* 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.

