

# SKN 60F



**Stud diode**

## Fast Recovery Rectifier Diode

**SKN 60F**

**SKR 60F**

### Features

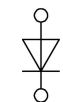
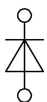
- Small recovered charge
- Soft recovery
- Up to 1500 V reverse voltage
- Hermetic metal case with glass insulator
- Threaded studs ISO M6 and M8
- SKN: anode to stud; SKR: cathode to stud

### 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**

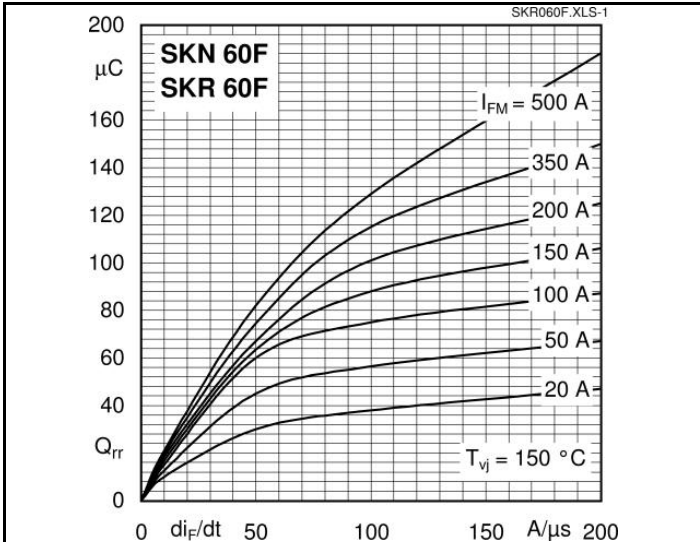


Fig. 1 Typ. recovery charge vs. current decrease

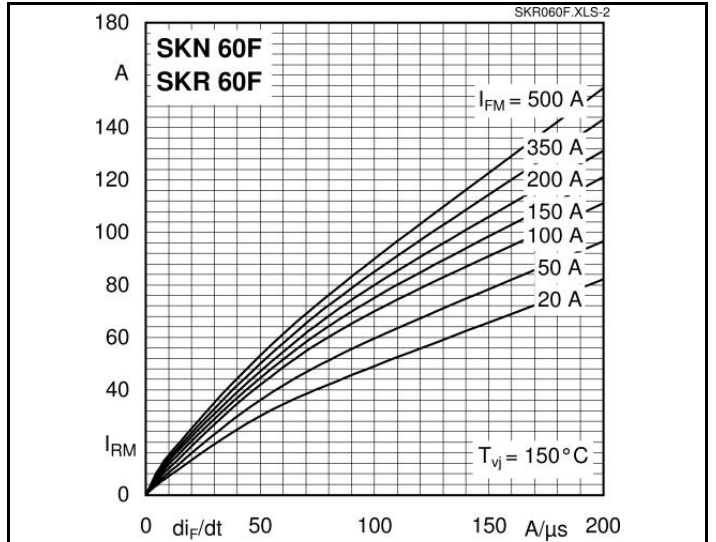


Fig. 2 Peak recovery current vs. current decrease

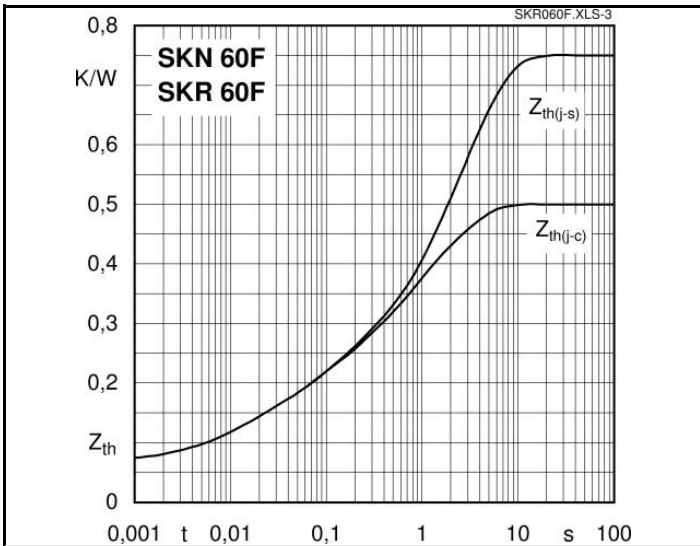


Fig. 3 Transient thermal impedance vs. time

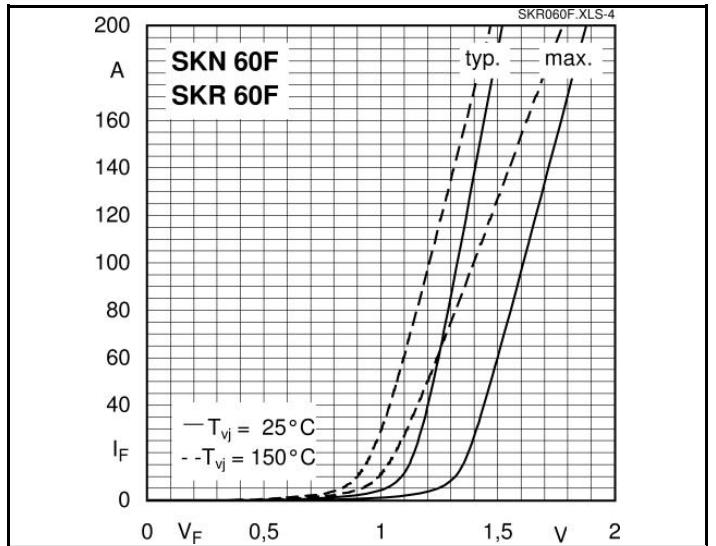


Fig. 4 Forward characteristics

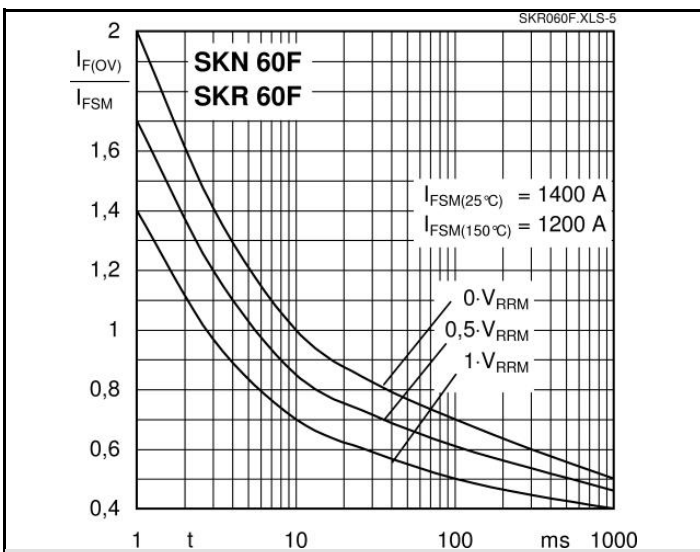
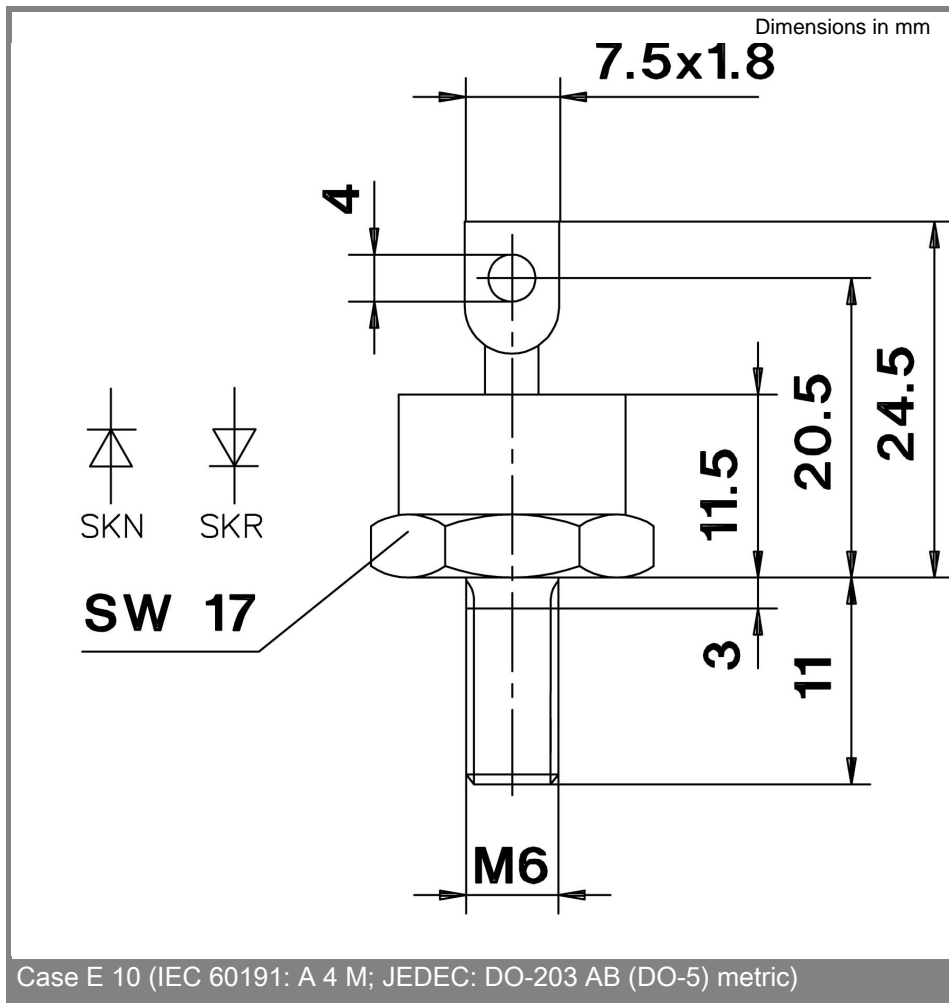


Fig. 5 Surge overload current vs. time



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