



Stud Diode

Fast Recovery Rectifier Diode

SKN 3F20

SKR 3F20

Features

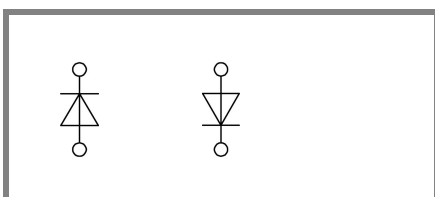
- Small recovered charge
- Soft recovery
- Up to 1200 V reverse voltage
- Hermetic metal case with glass insulator
- Threaded stud ISO M5 or 10-32 UNF
- SKN: anode to stud
- SKR: cathode to stud

Typical Applications

- Inverse diode for power transistor, GTO thyristor, asymmetric thyristor
- SMPS, inverters, choppers
- for severe ambient conditions

V_{RSM} V	V_{RRM} V	$I_{FRMS} = 41$ A (maximum value for continuous operation) $I_{FAV} = 20$ A (sin. 180; 5000 Hz; $T_c = 104$ °C)	
800	800	SKN 3F20/08	SKR 3F20/08
800	800	SKN 3F20/08UNF	SKR 3F20/08UNF
1000	1000	SKN 3F20/10	SKR 3F20/10
1000	1000	SKN 3F20/10UNF	SKR 3F20/10UNF
1200	1200	SKN 3F20/12	SKR 3F20/12
1200	1200	SKN 3F20/12UNF	SKR 3F20/12UNF

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	26 (22)	A
I_{FAV}	K5,5; $T_a = 45$ °C; sin. 180; 5000 Hz	10	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms	375	A
	$T_{vj} = 150$ °C; 10 ms	310	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	700	A ² s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	480	A ² s
V_F	$T_{vj} = 25$ °C; $I_F = 50$ A	max. 2,15	V
$V_{(TO)}$	$T_{vj} = 130$ °C	max. 1,3	V
r_T	$T_{vj} = 130$ °C	max. 12	mΩ
I_{RD}	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 0,2	mA
I_{RD}	$T_{vj} = 130$ °C; $V_{RD} = V_{RRM}$	max. 20	mA
Q_{rr}	$T_{vj} = 130$ °C, $I_F = 50$ A,	1,5	μC
I_{RM}	$-di/dt = 15$ A/μs, $V_R = 30$ V	5	A
t_{rr}		600	ns
E_{rr}		-	mJ
$R_{th(j-c)}$		1,2	K/W
$R_{th(c-s)}$		0,5	K/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 55 ... + 150	°C
V_{isol}		-	V~
M_s	to heatsink	1,5	Nm
a		5 * 9,81	m/s ²
m	approx.	7	g
Case		E 7	



SKN

SKR

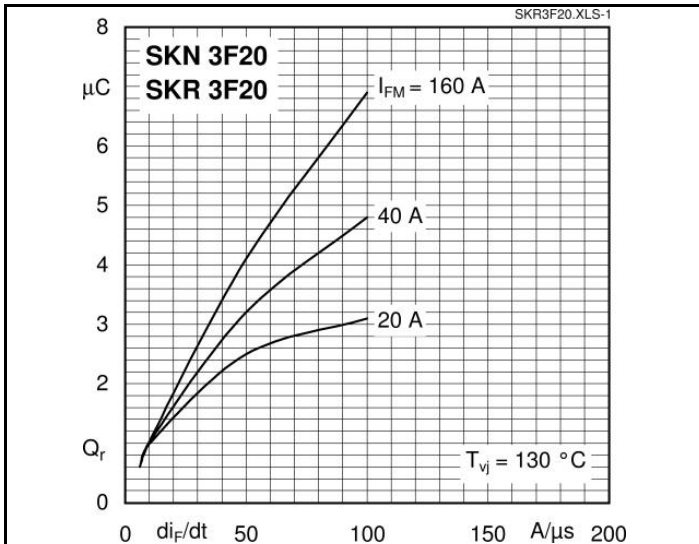


Fig. 1 Typ. recovery charge vs. current decrease

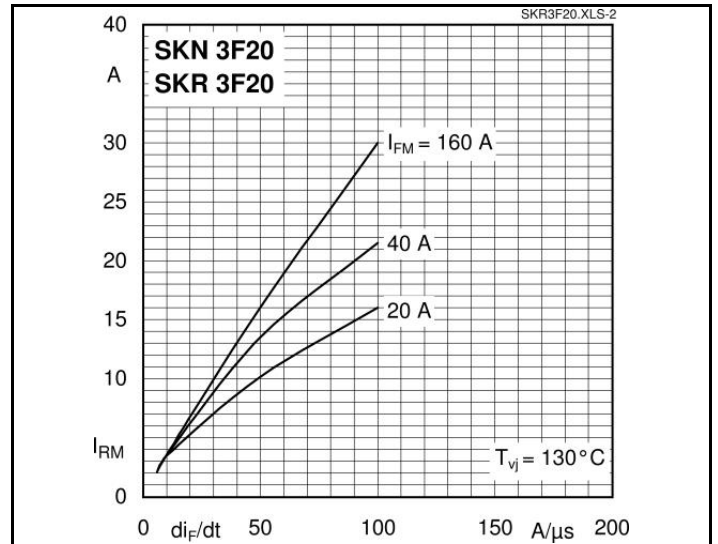


Fig. 2 Peak recovery current vs. current decrease

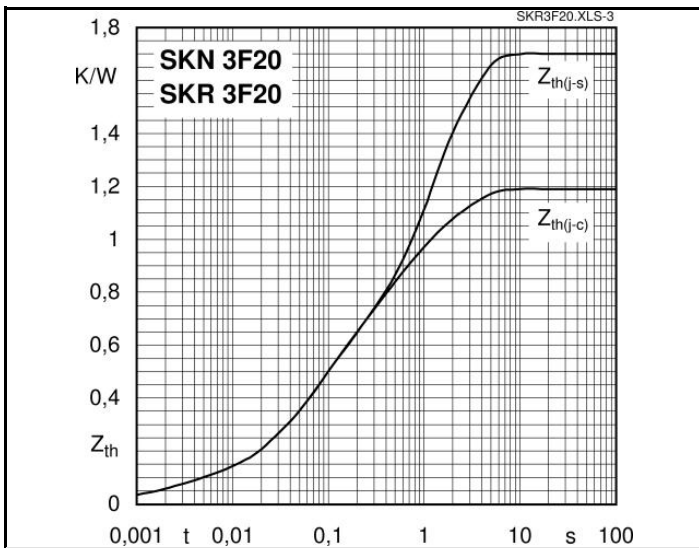


Fig. 3 Transient thermal impedance vs. time

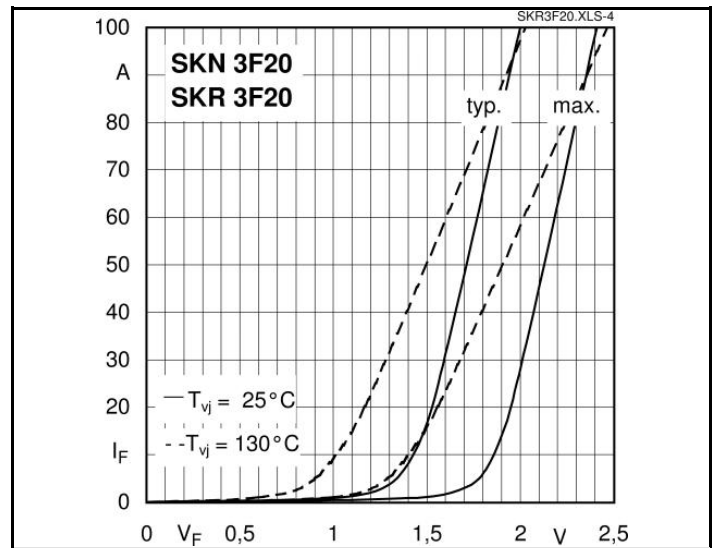


Fig. 4 Forward characteristics

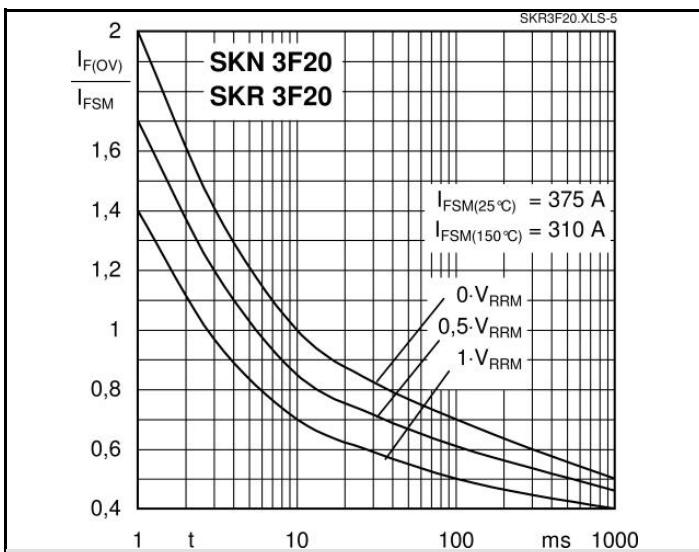
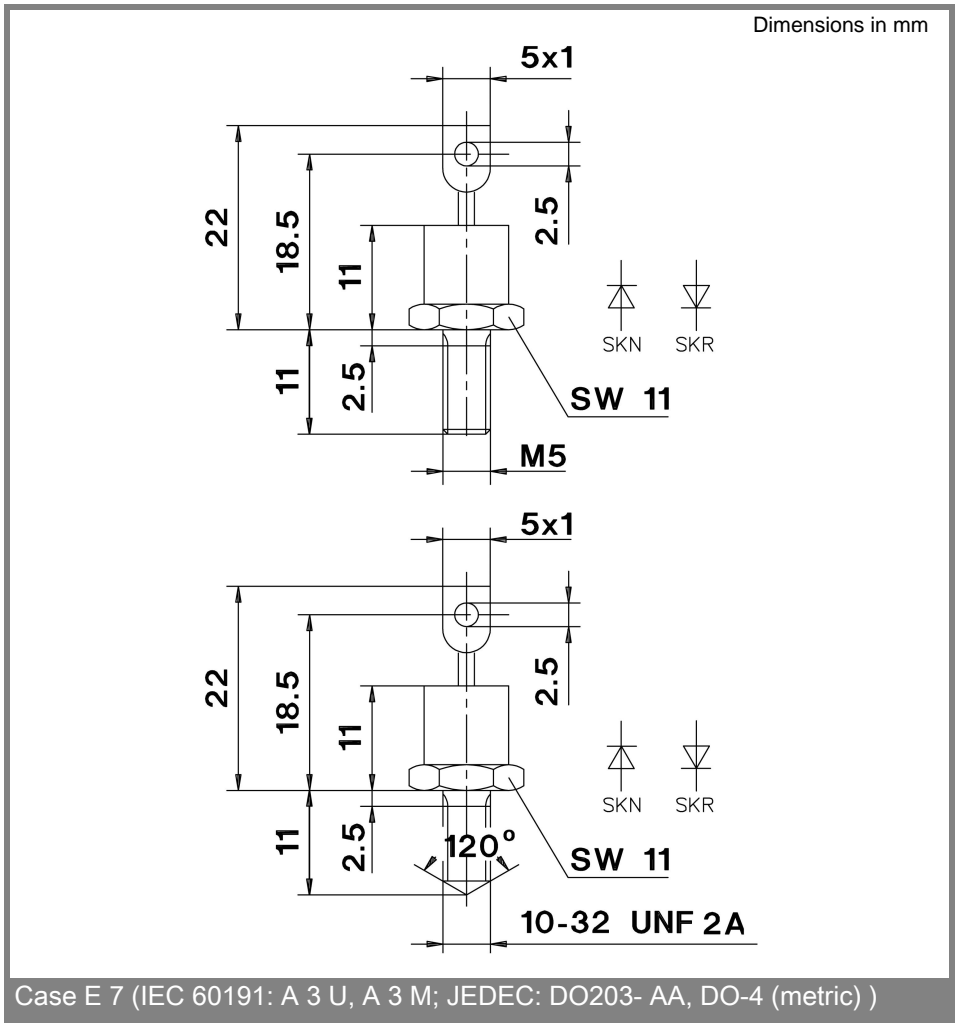


Fig. 5 Surge overload current vs. time



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