SKN 141F

Stud Diode

Fast Recovery Rectifier Diode

SKN 141F

SKR 141F

Features

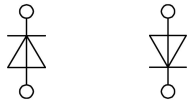
- Small recovered charge
- Soft recovery
- Hermetic metal case with glass insulator
- Threaded stud M12
- SKN: anode to stud; SKR: cathode to stud

Typical Applications*

- Inverse diode for GTO and asymmetric thyristor
- Inverters and choppers
- A.C. motor control
- Uniterruptible power supplies (UPS)

V_{RSM} V	V_{RRM} V	I_{FRMS} = 260 A (maximum value for continuous operation) I_{FAV} = 140 A (sin. 180; 1000 Hz; T_c = 100 °C)	
1200	1200	SKN 141F12	SKR 141F12
1400	1400	SKN 141F14	SKR 141F14
1500	1500	SKN 141F15	SKR 141F15
1700	1700	SKN 141F17	SKR 141F17

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	168 (140)	A
I_{FAV}	K1,1F; T_a = 35 °C; sin. 180; 1000 Hz	114	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	2500	A
	T_{vj} = 150 °C; 10 ms	2100	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	31000	A²s
	T_{vj} = 150 °C; 8,3 ... 10 ms	22000	A²s
V_F	T_{vj} = 25 °C; I_F = 300 A	max. 1,8	V
$V_{(TO)}$	T_{vj} = 150 °C	max. 1,1	V
r_T	T_{vj} = 150 °C	max. 2	mΩ
I_{RD}	T_{vj} = 25 °C; V_{RD} = V_{RRM}	max. 1	mA
I_{RD}	T_{vj} = 150 °C, V_{RD} = V_{RRM}	max. 100	mA
Q_{rr}	T_{vj} = 150 °C, I_F = 100 A,	90	µC
I_{RM}	-di/dt = 100 A/µs, V_R = 400 V	90	A
t_{rr}		2000	ns
E_{rr}		-	mJ
$R_{th(j-c)}$		0,2	K/W
$R_{th(c-s)}$		0,08	K/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 55 ... + 150	°C
V_{isol}		-	V~
M_s	to heatsink	10	Nm
a		5 * 9,81	m/s²
m	approx.	75	g
Case		E 31	



SKN SKR

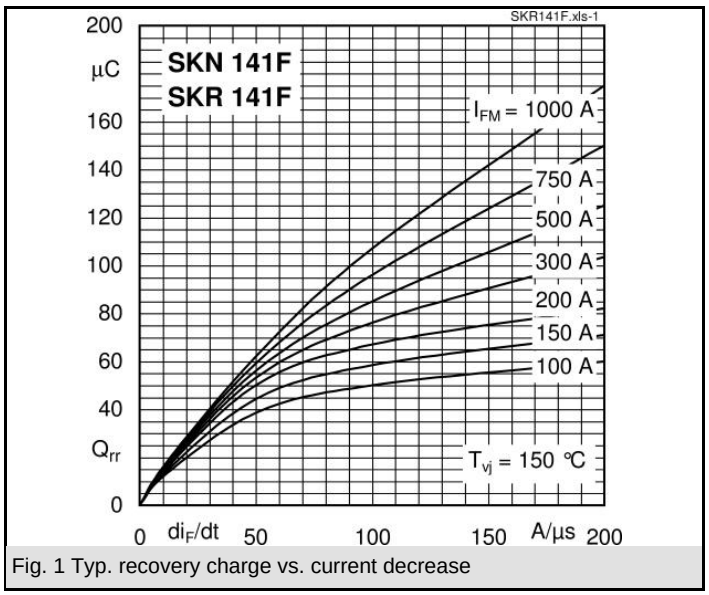


Fig. 1 Typ. recovery charge vs. current decrease

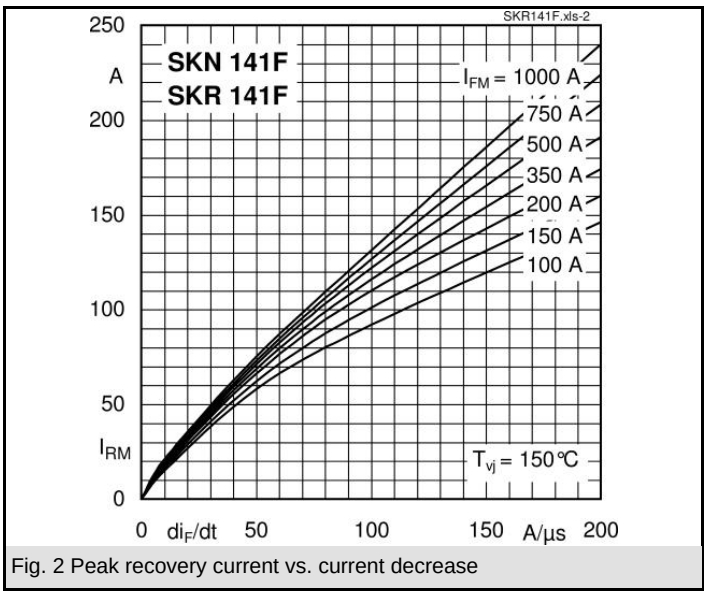


Fig. 2 Peak recovery current vs. current decrease

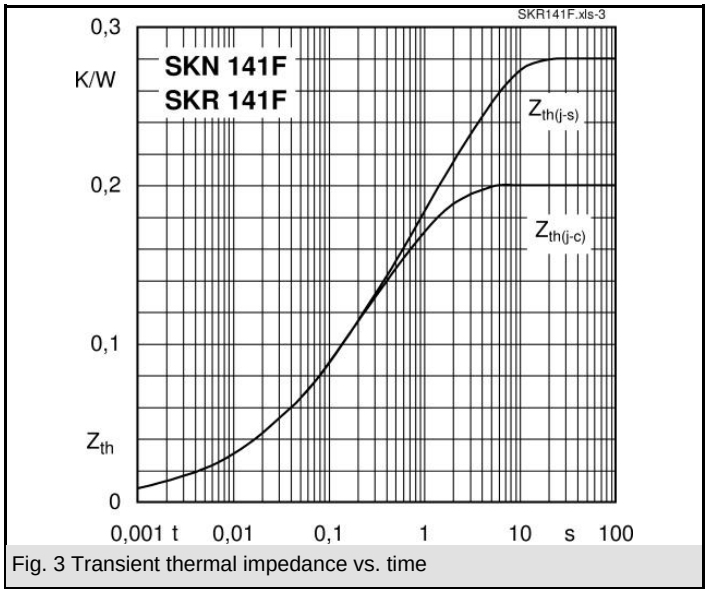


Fig. 3 Transient thermal impedance vs. time

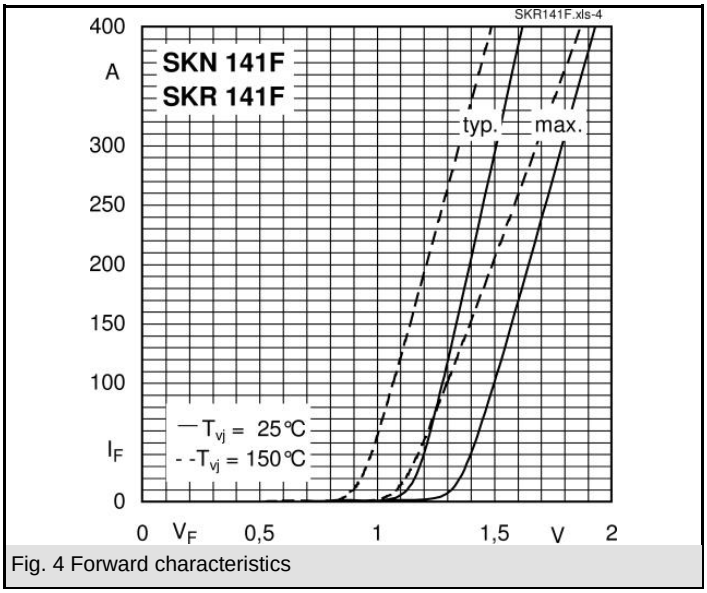


Fig. 4 Forward characteristics

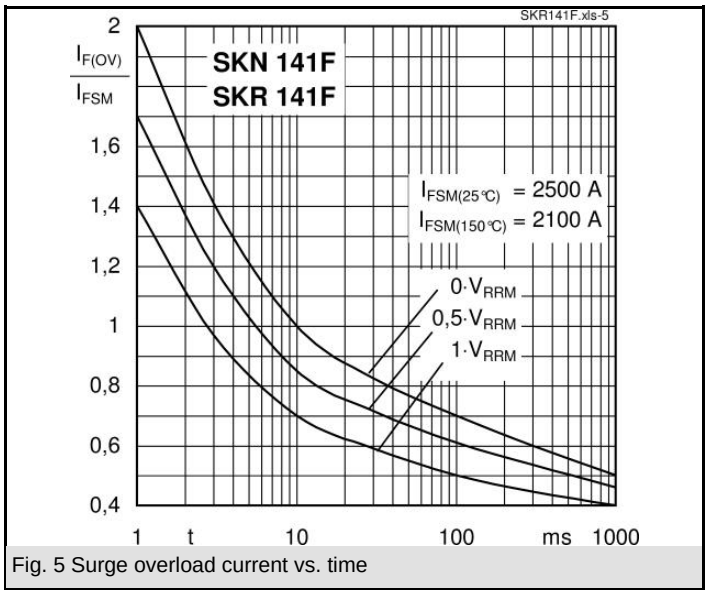
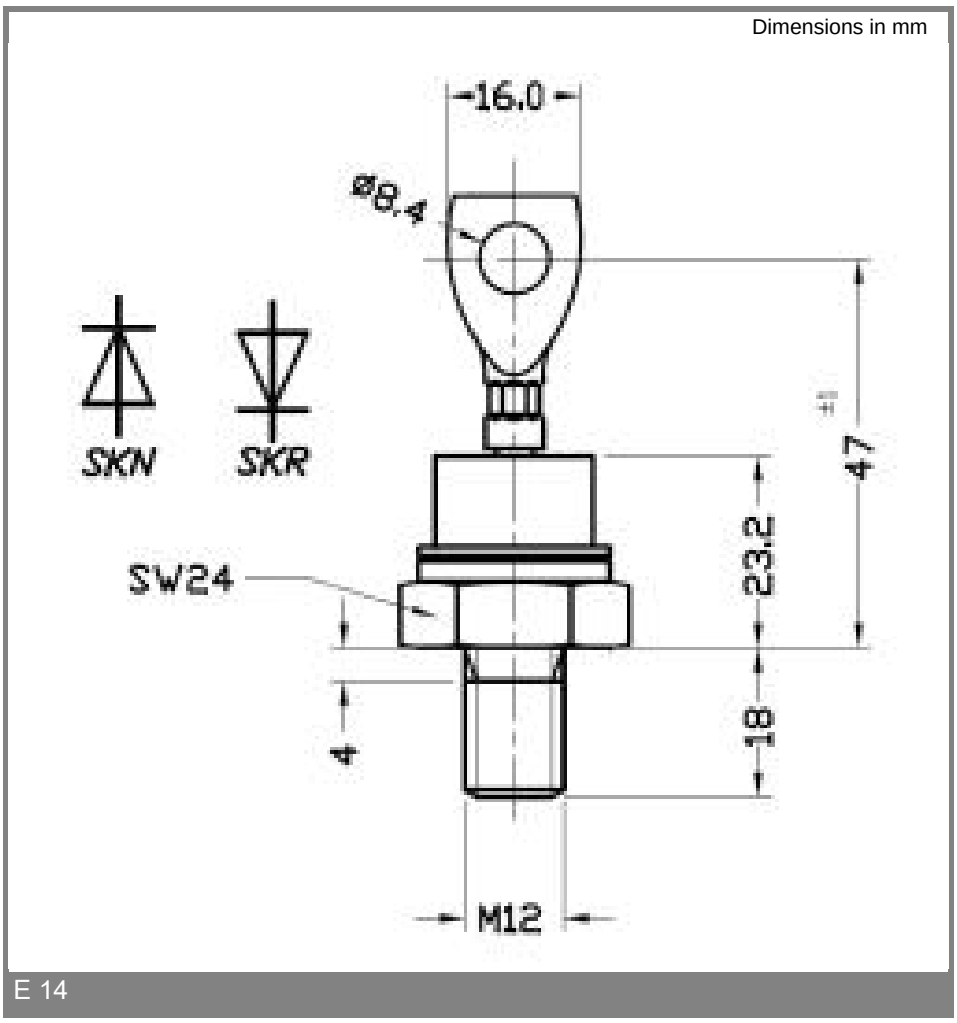


Fig. 5 Surge overload current vs. time



E 14

* 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.

