SKN 140F

THYRISTOR BRIDGE,SCR BRIDGE



Stud Diode

Fast Recovery Rectifier Diode

SKN 140F

SKR 140F

Features

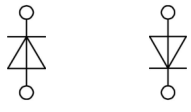
- Small recovered charge
- Soft recovery
- Hermetic metal case with glass insulator
- Threaded stud M12
- SKN: anode to stud; SKR: cathode to stud

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 140F12	SKR 140F12
1400	1400	SKN 140F14	SKR 140F14
1500	1500	SKN 140F15	SKR 140F15
1700	1700	SKN 140F17	SKR 140F17

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.	100	g
Case		E 14	



SKN SKR

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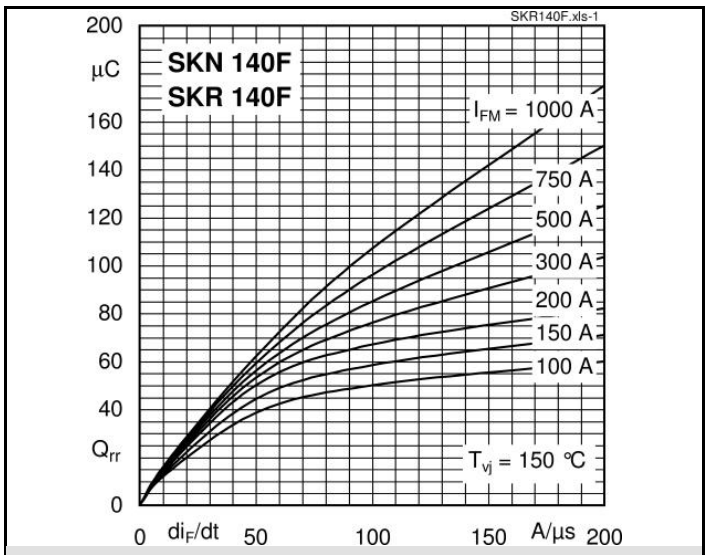


Fig. 1 Typ. recovery charge vs. current decrease

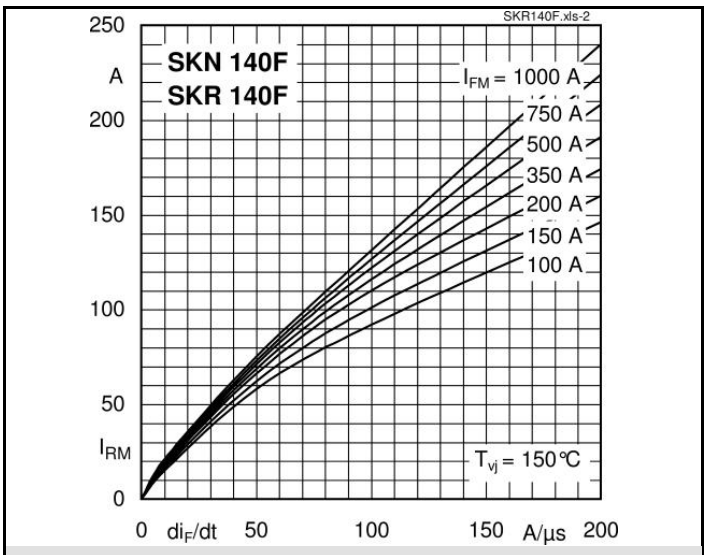


Fig. 2 Peak recovery current vs. current decrease

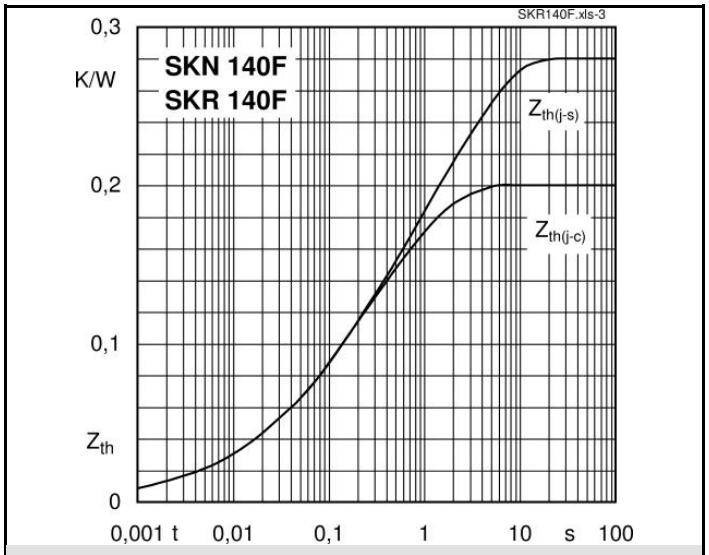


Fig. 3 Transient thermal impedance vs. time

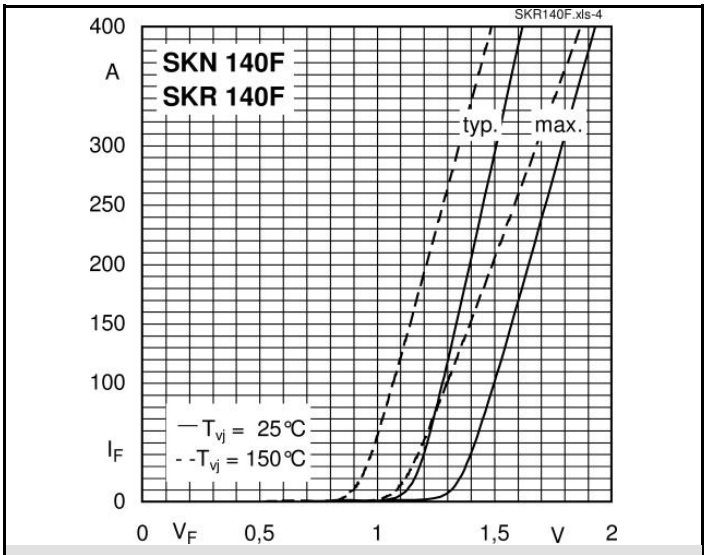


Fig. 4 Forward characteristics

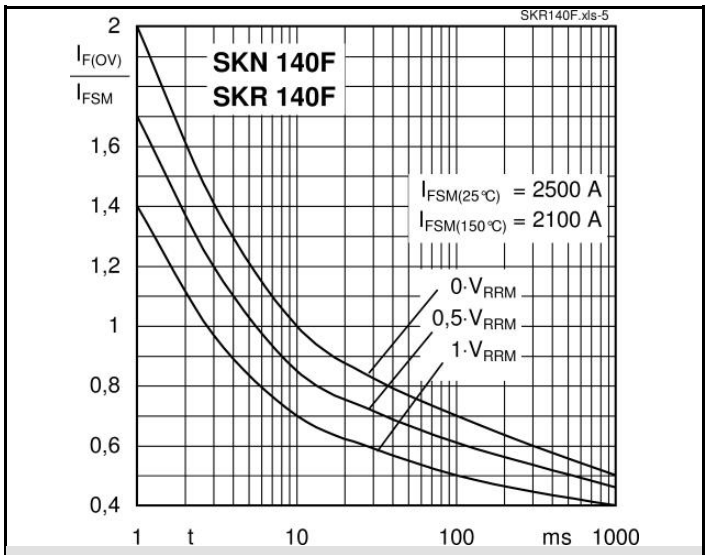
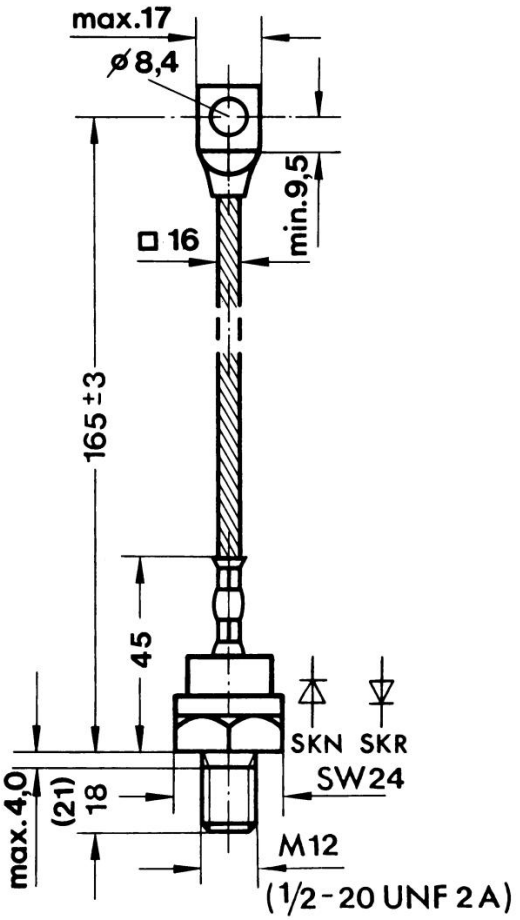


Fig. 5 Surge overload current vs. time

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Dimensions in mm



Case E 14 (IEC 60191: A 9 MA modified; JEDEC: DO-205 AC (DO-30) modified)

* 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.

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