SKNa 402

Stud Diode

Avalanche Diode

SKNa 402

Publish Data

Features

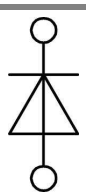
- Avalanche type reverse characteristic
- Reverse voltages up to 5000 V
- Hermetic metal case with ceramic insulator and extra long creepage distances
- Threaded stud ISO M24 x 1,5
- Cooling via heatsinks
- SKN: Anode to stud

Typical Applications*

- High voltage rectifier diode for traction and heavy duty applications
- Series connections for high voltage applications
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes

$V_{(BR)min}$ V	I_{FRMS} = 700 A (maximum value for continuous operation) I_{FAV} = 400 A (sin. 180; T_c = 88 °C)	C_{max} µF	R_{min} Ω
3600	SKNa 402/36		
4000	SKNa 402/40		
4200	SKNa 402/42		
4500	SKNa 402/45		
4600	SKNa 402/46		
4800	SKNa 402/48		
5000	SKNa 402/50		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180 ; T_c = 88 (100) °C	400 (350)	A
I_D	P4/200; T_a = 45 °C; B2 / B6	455 / 655	A
	K 0,55F; T_a = 35 °C; B2 / B6	585 / 830	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	7800	A
	T_{vj} = 160 °C; 10 ms	6600	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	300000	A^2s
	T_{vj} = 160 °C; 8,3 ... 10 ms	140000	A^2s
V_F	T_{vj} = 25 °C; I_F = 1200 A	max. 1,85	V
$V_{(TO)}$	T_{vj} = 150 °C	max. 1	V
r_T	T_{vj} = 150 °C	max. 0,8	mΩ
I_{RD}	T_{vj} = 25 °C; V_{RD} = $V_{(BR)min}$	max. 3000	µA
	T_{vj} = 160 °C; V_{RD} = $V_{(BR)min}$;	max. 60	mA
P_{RSM}	T_{vj} = 160 °C; t_p = 10 µs	90	kW
$R_{th(j-c)}$		0,1	K/W
$R_{th(c-s)}$		0,01	K/W
T_{vj}		- 40 ... + 160	°C
T_{stg}		- 40 ... + 160	°C
V_{isol}		-	V~
M_s	to heatsink	60	Nm
		530	lb.in.
a		5 * 9,81	m/s^2
m	approx.	550	g
Case		E 46	



SKN

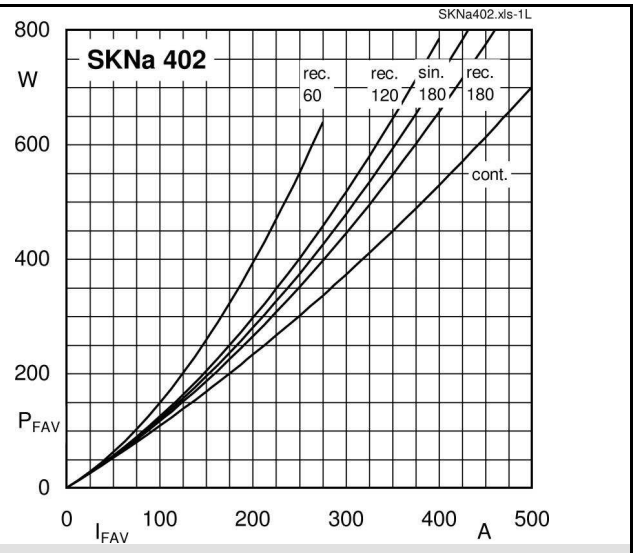


Fig. 1L Power dissipation vs. forward current

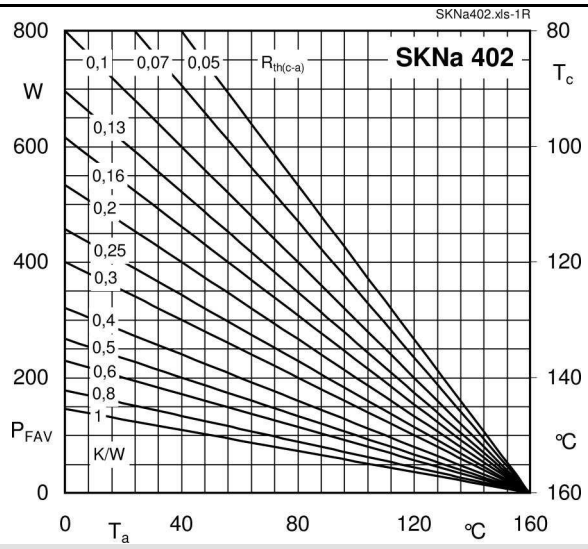


Fig. 1R Power dissipation vs. ambient temperature

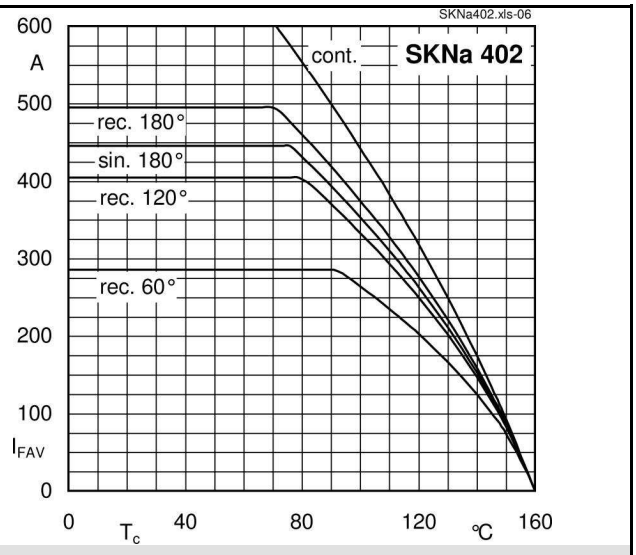


Fig. 2 Forward current vs. case temperature

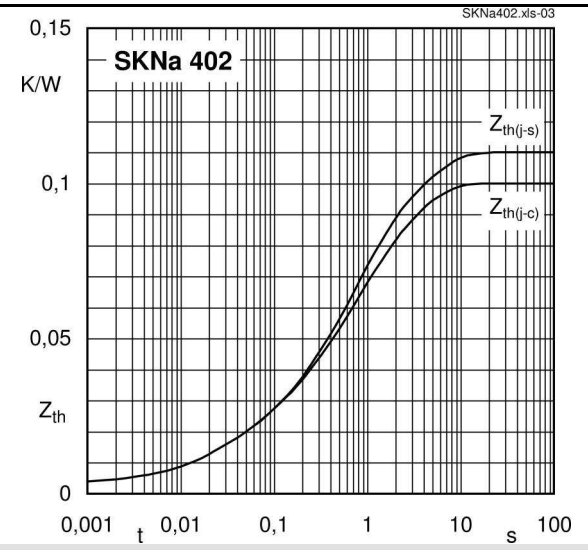


Fig. 4 Transient thermal impedance vs. time

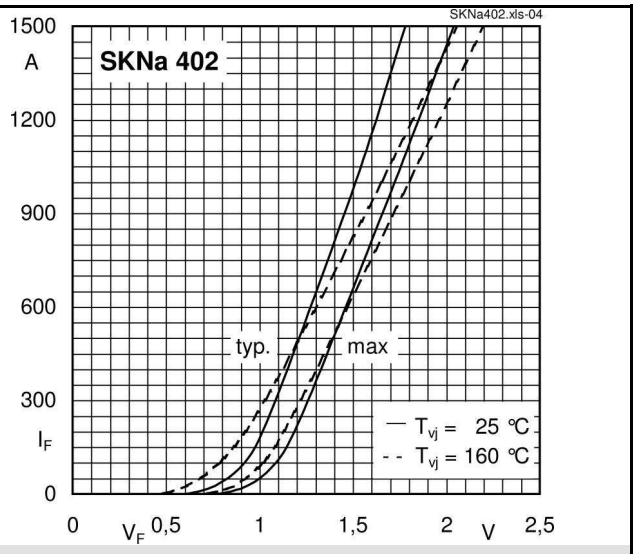


Fig. 5 Forward characteristics

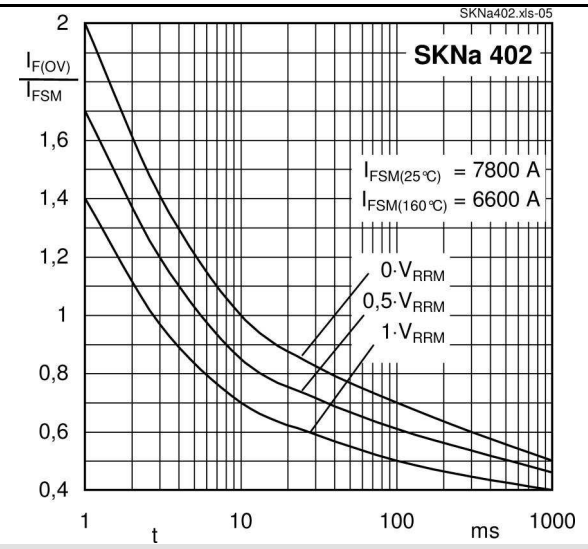
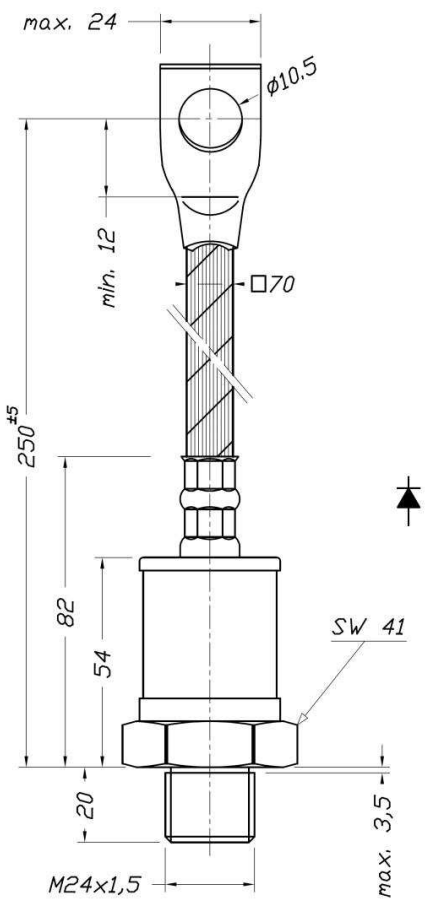


Fig. 6 Surge overload current vs. time

Dimensions in mm



CASE E 46 (IEC 60191: A 22 B 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.

