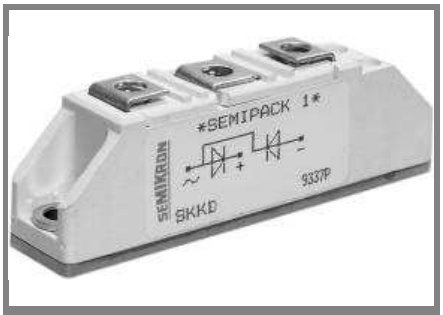
SKKD 42F



SEMIPACK® 1

Fast Diode Modules

SKKD 42F

Features

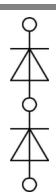
- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- SKKD half bridge connection; SKMD common cathode; SKND common anode
- UL recognized, file no. E 63 532

Typical Applications*

- Self-commutated inverters
- DC choppers
- AC motor speed control
- Inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications

V_{RSM} V	V_{RRM} V	I_{FRMS} = 120 A (maximum value for continuous operation) I_{FAV} = 42 A (sin. 180; 50 Hz; T_c = 85 °C)		
1200	1200	SKKD 42F12		
1400	1400	SKKD 42F14		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; T_c = 85 (100) °C	42 (31)	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	1200	A
	T_{vj} = 130 °C; 10 ms	1100	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	7200	A²s
	T_{vj} = 130 °C; 8,3 ... 10 ms	6000	A²s
V_F	T_{vj} = 25 °C; I_F = 150 A	max. 1,85	V
$V_{(TO)}$	T_{vj} = 130 °C	max. 1	V
r_T	T_{vj} = 130 °C	max. 5	mΩ
I_{RD}	T_{vj} = 25 °C; V_{RD} = V_{RRM}	max. 0,4	mA
I_{RD}	T_{vj} = 130 °C; V_{RD} = V_{RRM}	max. 30	mA
Q_{rr}	T_{vj} = 130 °C, I_F = 50 A,	75	µC
I_{RM}	-di/dt = 50 A/µs, V_R = 30 V	70	A
t_{rr}		2140	ns
E_{rr}		1,12	mJ
$R_{th(j-c)}$	per diode / per module	0,7 / 0,35	K/W
$R_{th(c-s)}$	per diode / per module	0,2 / 0,1	K/W
T_{vj}		- 40 ... + 130	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	to heatsink	5 ± 15 %	Nm
M_t	to terminals	3 ± 15 %	Nm
a		5 * 9,81	m/s²
m	approx.	120	g
Case	SKKD	A 10	
	SKMD	A 33	
	SKND	A 37	



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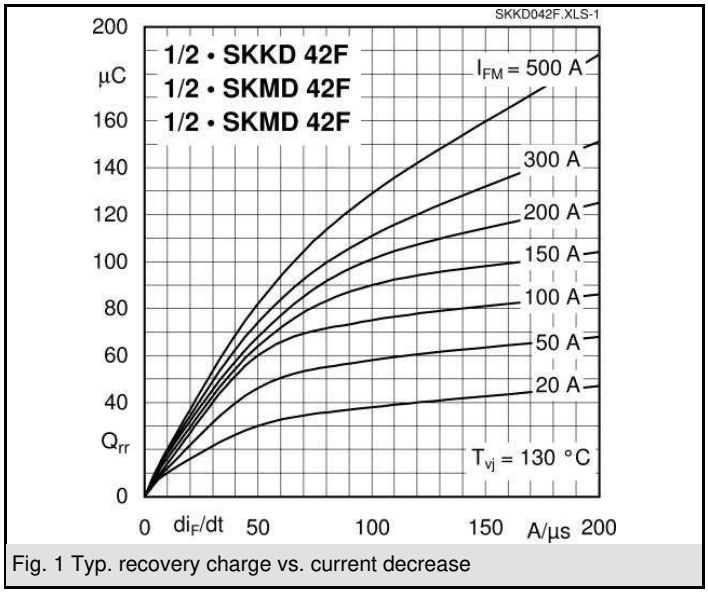

Fig. 1 Typ. recovery charge vs. current decrease

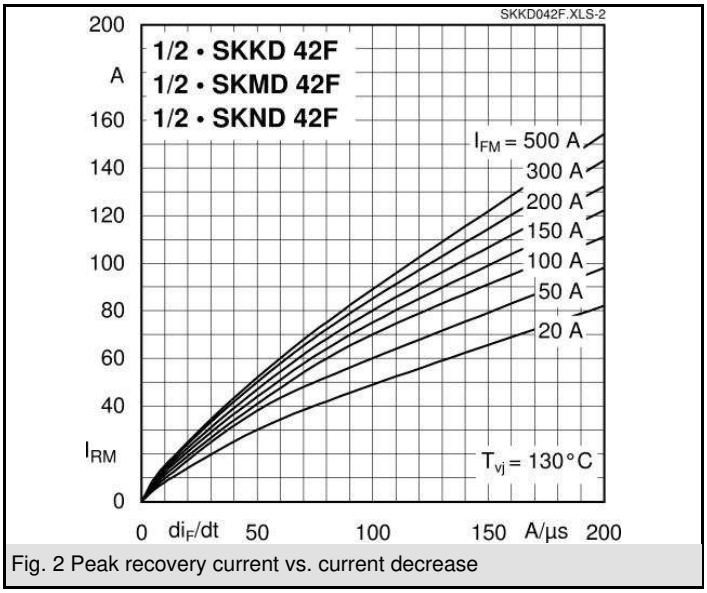

Fig. 2 Peak recovery current vs. current decrease

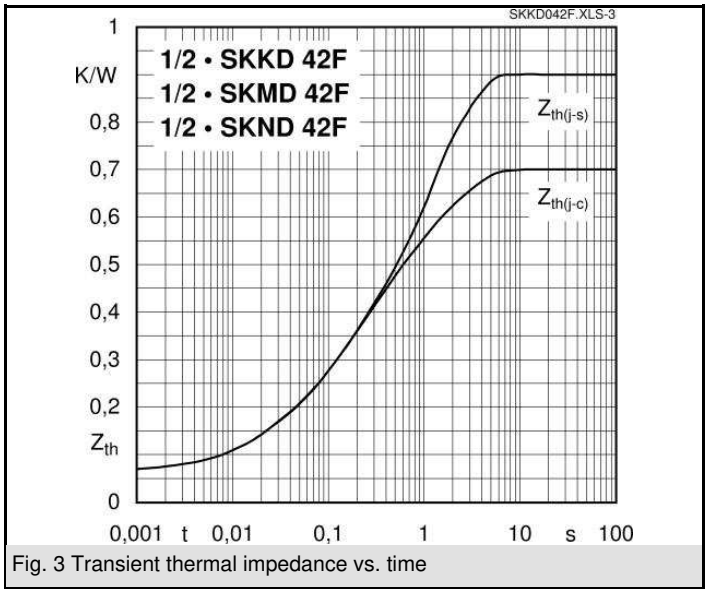

Fig. 3 Transient thermal impedance vs. time

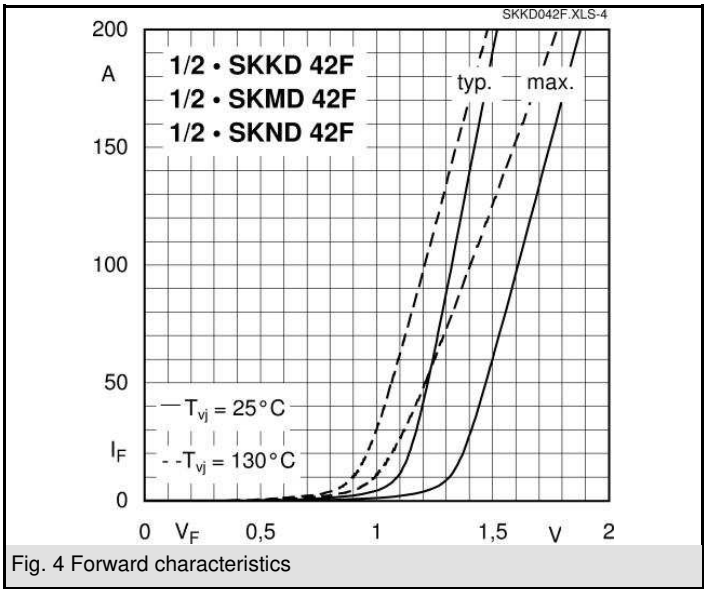

Fig. 4 Forward characteristics

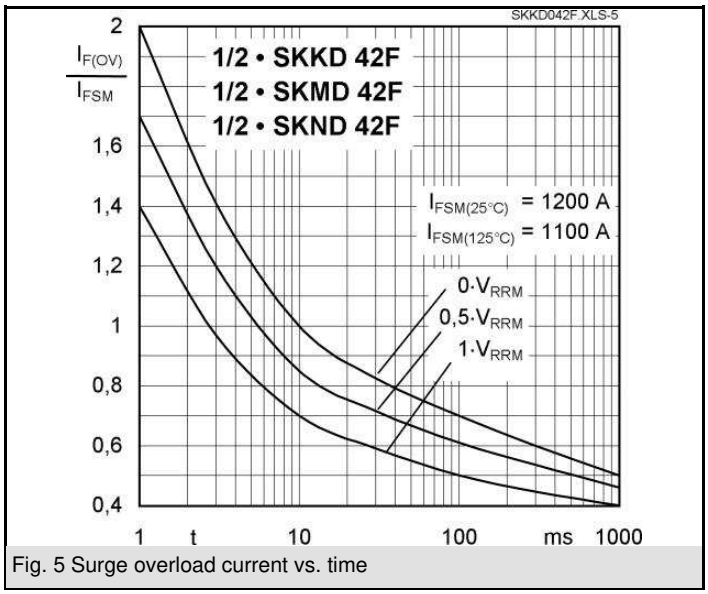

Fig. 5 Surge overload current vs. time

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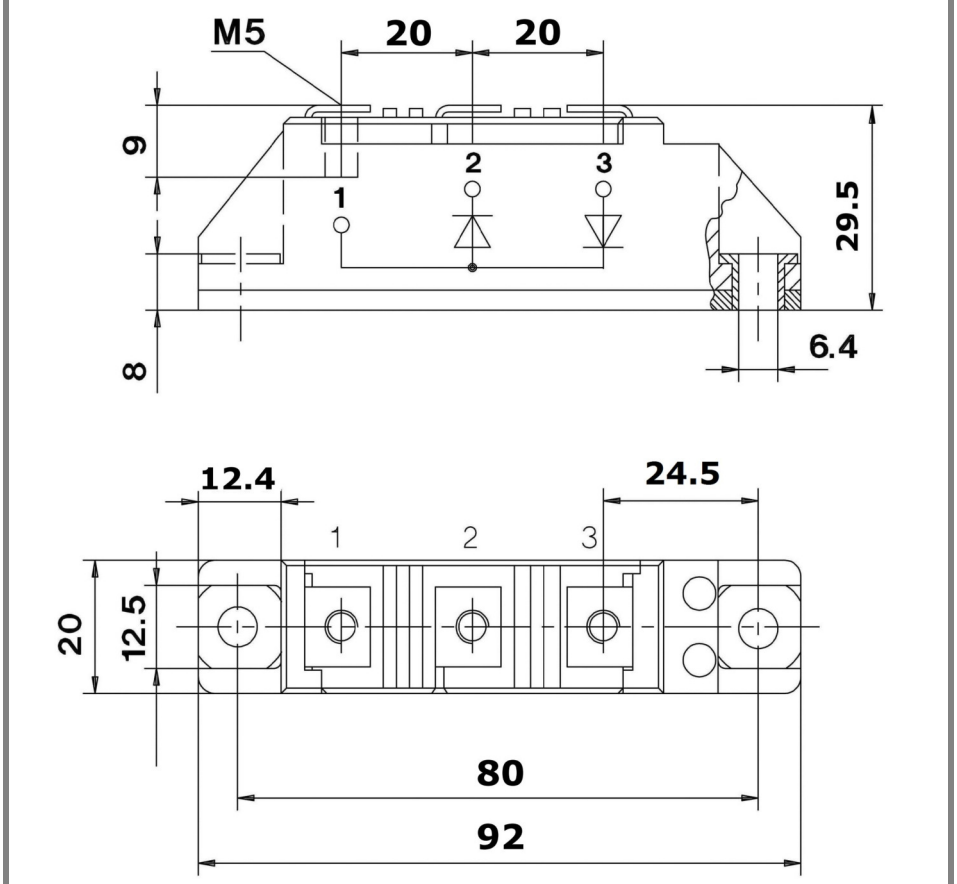
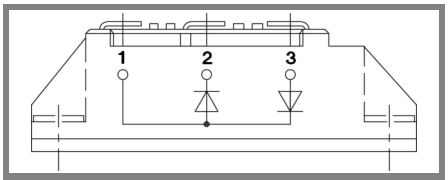
Dimensions in mm



Case A 10



Case A 10 SKKD

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