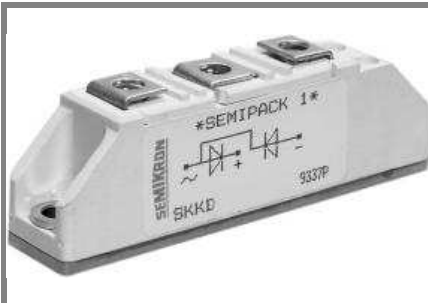


SKKD 42F



SEMIPACK® 1

Fast Diode Modules

SKKD 42F

Features

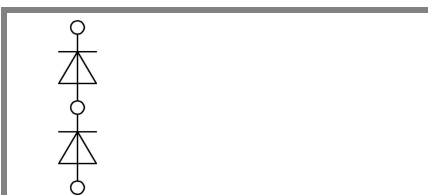
- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- SKKD half bridge connection; SKMD common cathode; SKND common anode
- UL recognized, file no. E 63 532

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 1400	1200 1400	SKKD 42F12 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 $T_{vj} = 130$ °C; 10 ms	1200 1100	A A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 130$ °C; 8,3 ... 10 ms	7200 6000	A ² s A ² s
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, $-di/dt = 50$ A/μs, $V_R = 30$ V	75	μC
I_{RM}		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/s ²
m	approx.	120	g
Case	SKKD SKMD SKND	A 10 A 33 A 37	



SKKD

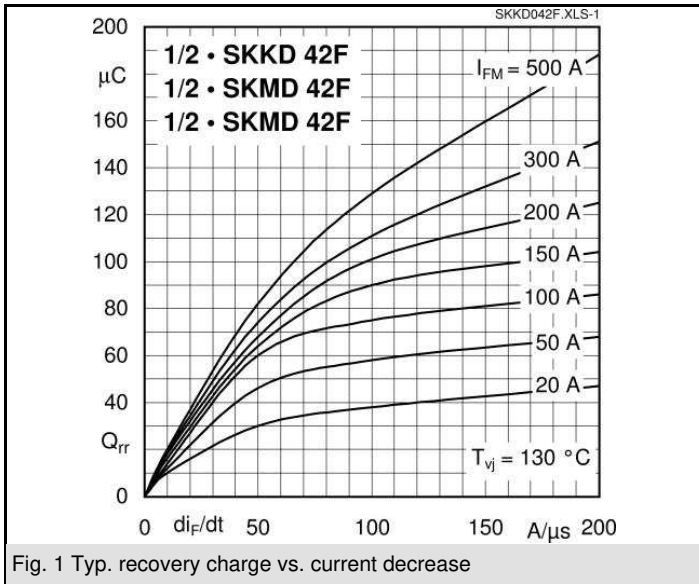


Fig. 1 Typ. recovery charge vs. current decrease

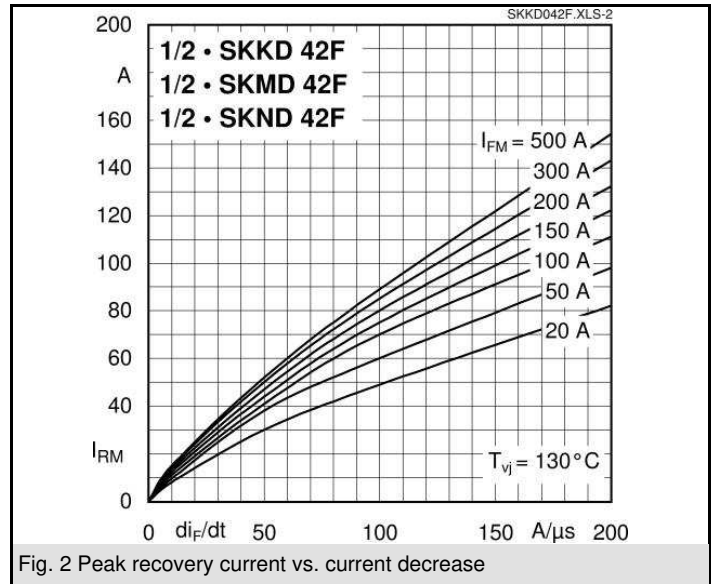


Fig. 2 Peak recovery current vs. current decrease

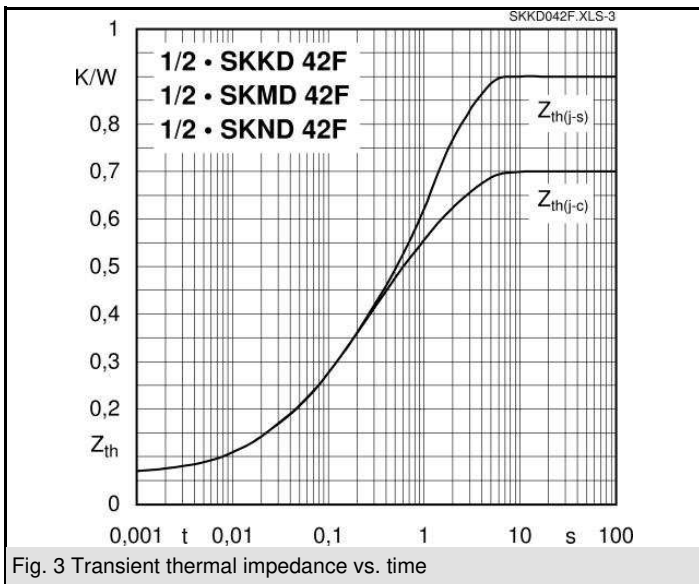


Fig. 3 Transient thermal impedance vs. time

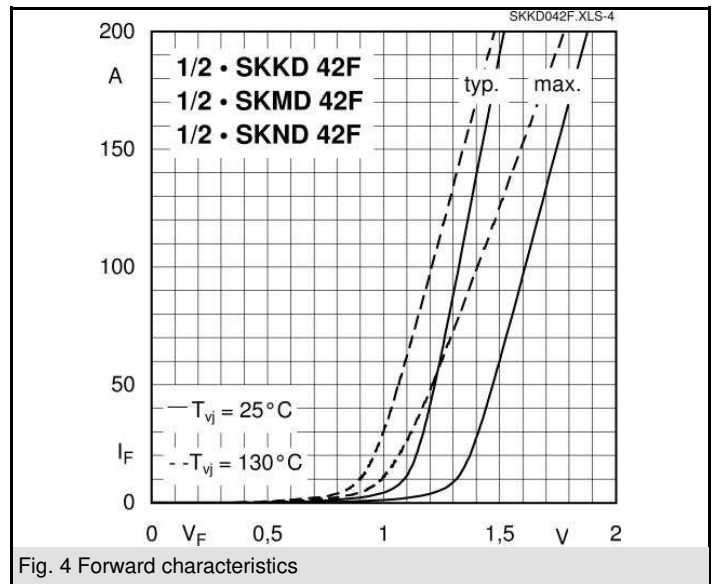


Fig. 4 Forward characteristics

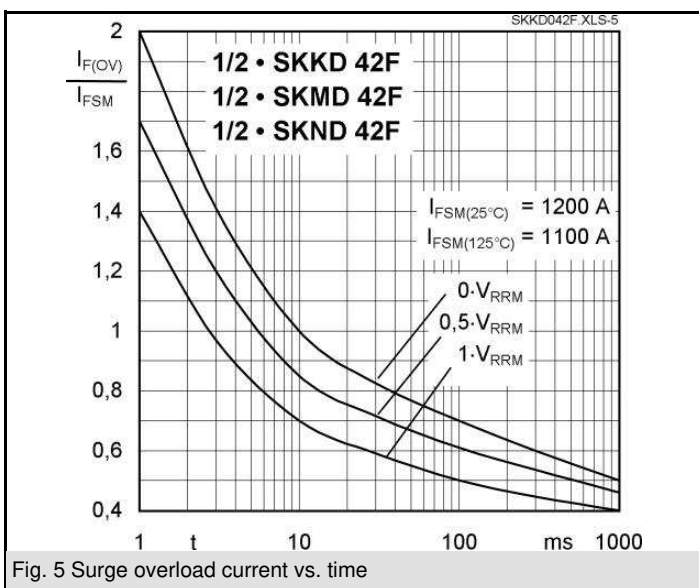
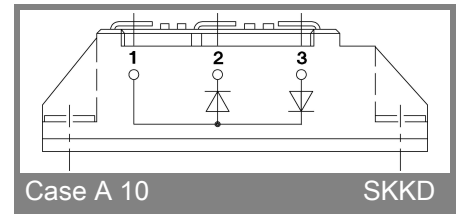
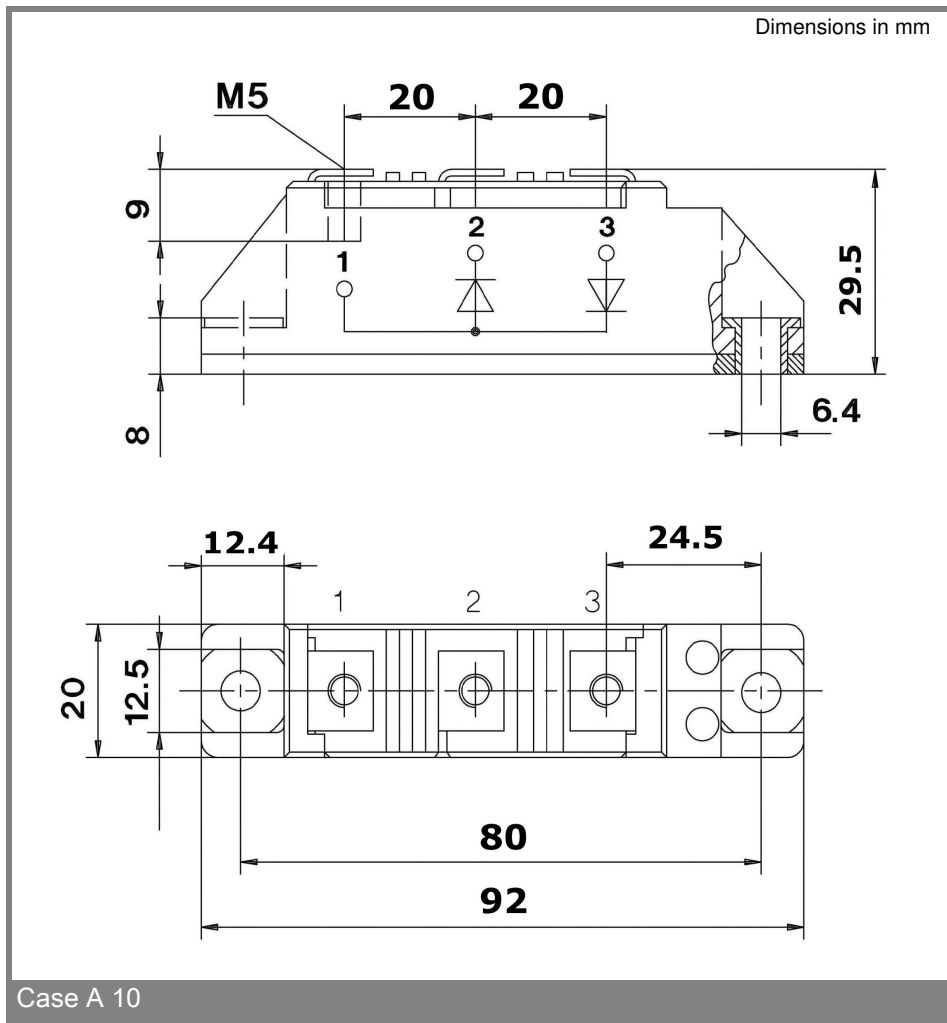


Fig. 5 Surge overload current vs. time



*IMPORTANT INFORMATION AND WARNINGS

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