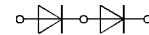
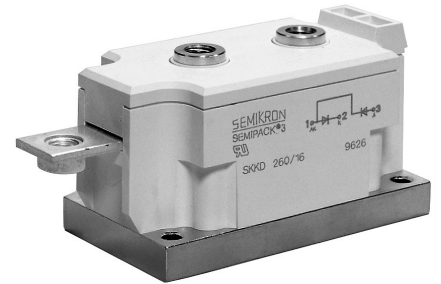


**SEMIPACK® 3**  
**Fast Diode Modules**  
**SKKD 160 M**



**SKKD**

**Features**

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- Precious metal pressure contacts
- 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

$V_{RSM}$ $V_{RRM}$	$I_{FRMS}$ (maximum values for continuous operation) 300 A
V	$I_{FAV}$ (sin. 180; $T_{case} = 85\text{ °C}$ ; 50 Hz) 160 A
800	<b>SKKD 160 M 08</b>
1000	<b>SKKD 160 M 10</b>
1200	<b>SKKD 160 M 12</b>
1400	<b>SKKD 160 M 14</b>

Symbol	Conditions	SKKD 160 M
$I_{FAV}$	sin. 180; $T_{case} = 85\text{ °C}$	163 A
$I_{FSM}$	$T_{vj} = 25\text{ °C}$ ; 10 ms $T_{vj} = 130\text{ °C}$ ; 10 ms	7 000 A 6 000 A
$i^2t$	$T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms $T_{vj} = 130\text{ °C}$ ; 8,3 ... 10 ms	245 000 A <sup>2</sup> s 180 000 A <sup>2</sup> s
$t_{rr}$	$T_{vj} = 25\text{ °C}$ ; $I_F = 1\text{ A}$ ; – $di_F/dt = 15\text{ A}/\mu\text{s}$ ; $V_R = 30\text{ V}$	2 $\mu\text{s}$
$Q_{rr}$	} $T_{vj} = 130\text{ °C}$ ; $I_F = 100\text{ A}$ ; – $di_F/dt = 30\text{ A}/\mu\text{s}$ ; $V_R = 30\text{ V}$	65 $\mu\text{C}$
$I_{RM}$		45 A
$I_R$	$T_{vj} = 25\text{ °C}$ ; $V_R = V_{RRM}$ $T_{vj} = 130\text{ °C}$ ; $V_R = V_{RRM}$	2 mA 50 mA
$V_F$	$T_{vj} = 25\text{ °C}$ ; $I_F = 400\text{ A}$	1,5 V
$V_{(TO)}$	$T_{vj} = 130\text{ °C}$	1,25 V
$r_T$	$T_{vj} = 130\text{ °C}$	0,5 m $\Omega$
$R_{thjc}$ $R_{thch}$	} per diode/per module	0,19/0,095 $\text{°C}/\text{W}$
$T_{vj}$		– 40 ... +130 $\text{°C}$
$T_{stg}$		– 40 ... +130 $\text{°C}$
$V_{isol}$		a. c. 50 Hz; r.m.s.; 1 s/1 min.
$M_1$	} Case to heatsink Busbars to terminals	SI units/ US units
$M_2$		5 Nm/44 lb. in. $\pm 15\%$ 9 Nm/80 lb. in. $\pm 15\%$
w	approx.	800 g
Case	→ page B 2 – 34	A 16

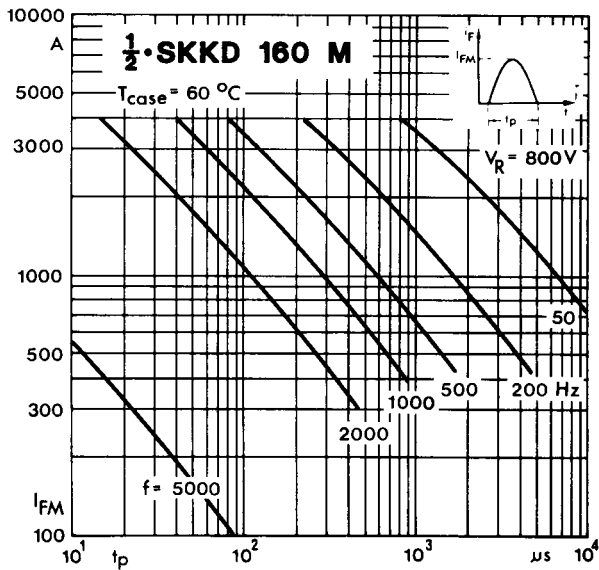


Fig. 12 a Rated sinusoidal peak forward current

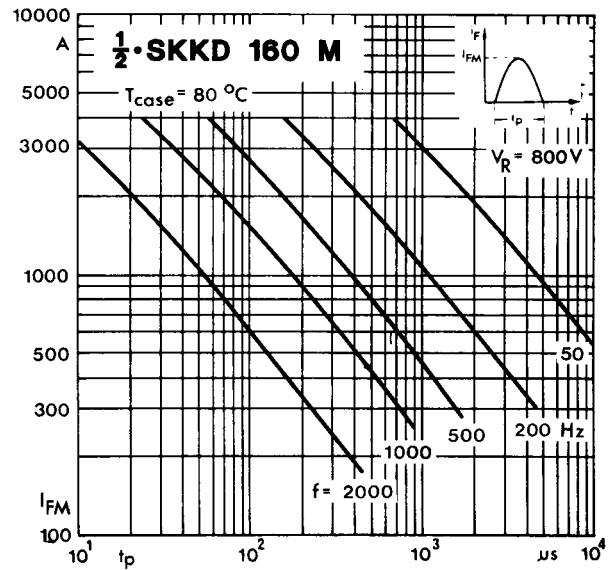


Fig. 12 b Rated sinusoidal peak forward current

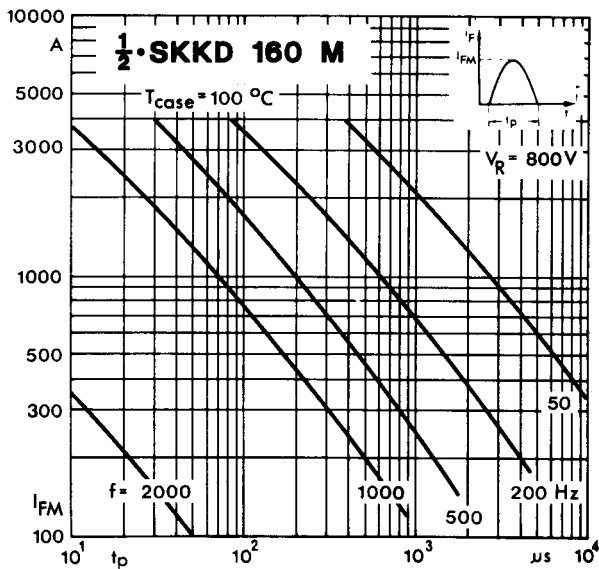


Fig. 12 c Rated sinusoidal peak forward current

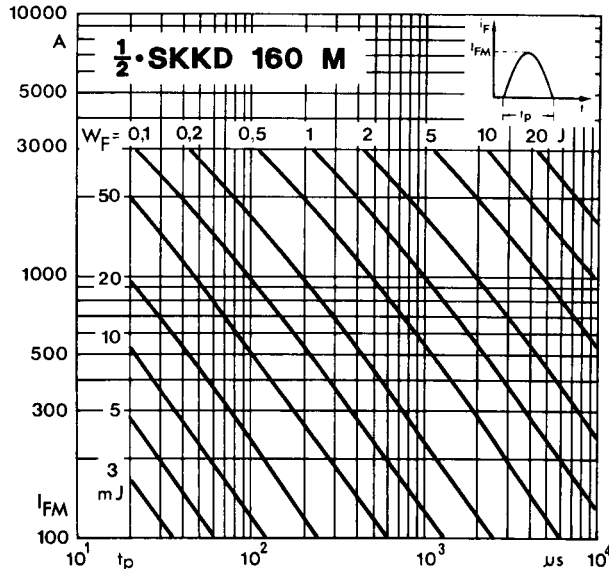


Fig. 13 Forward energy dissipation, sinusoidal

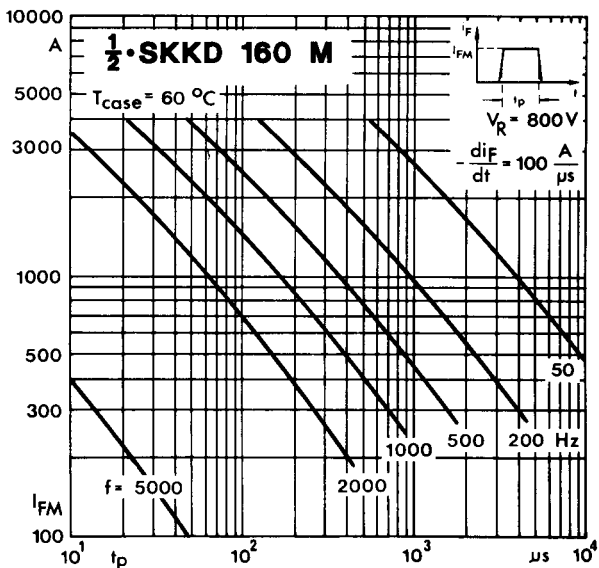


Fig. 14 a Rated rectangular peak forward current

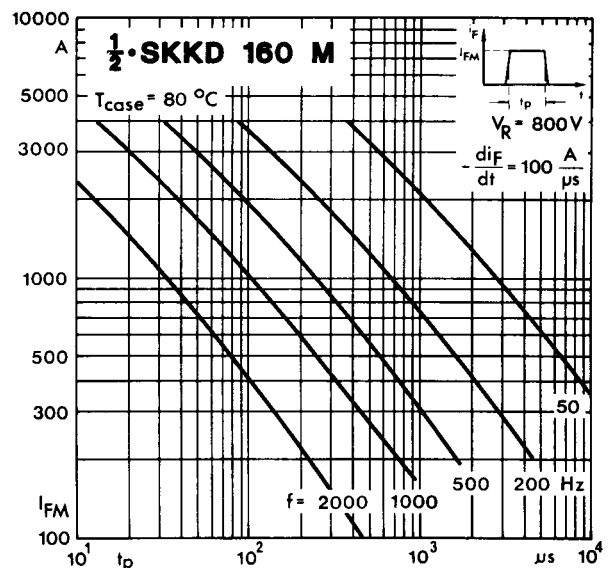


Fig. 14 b Rated rectangular peak forward current

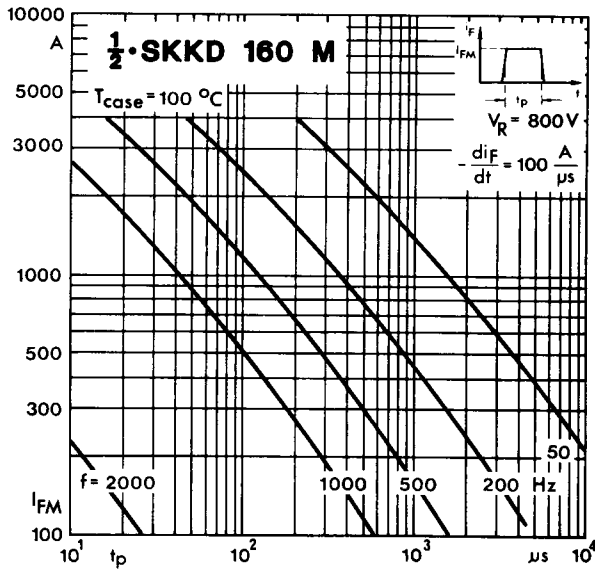


Fig. 14 c Rated rectangular peak forward current

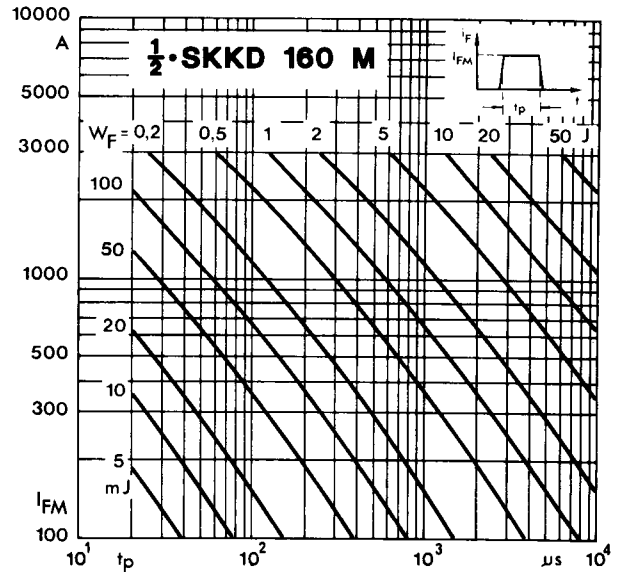


Fig. 15 Forward energy dissipation, rectangular

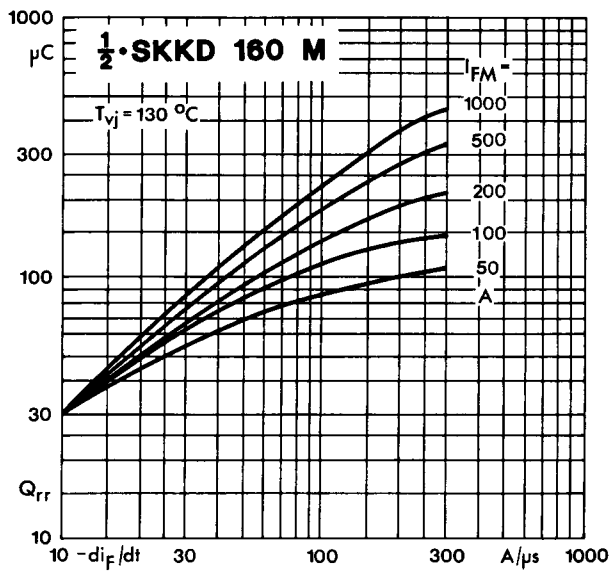


Fig. 16 Recovered charge vs. current decrease

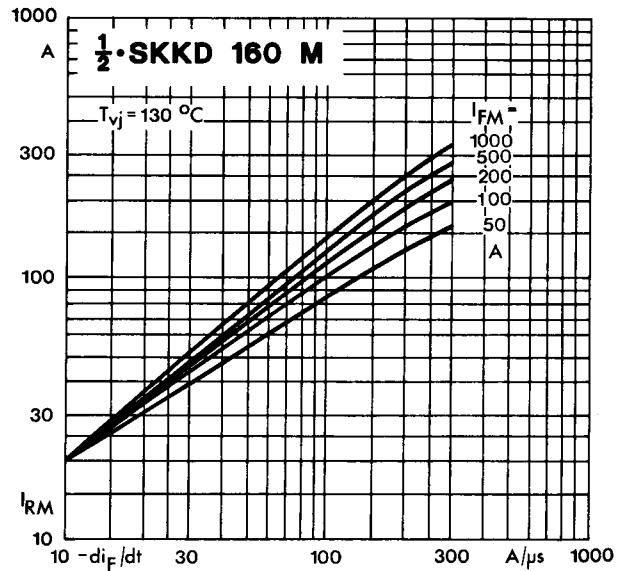


Fig. 17 Peak recovery current vs. current decrease

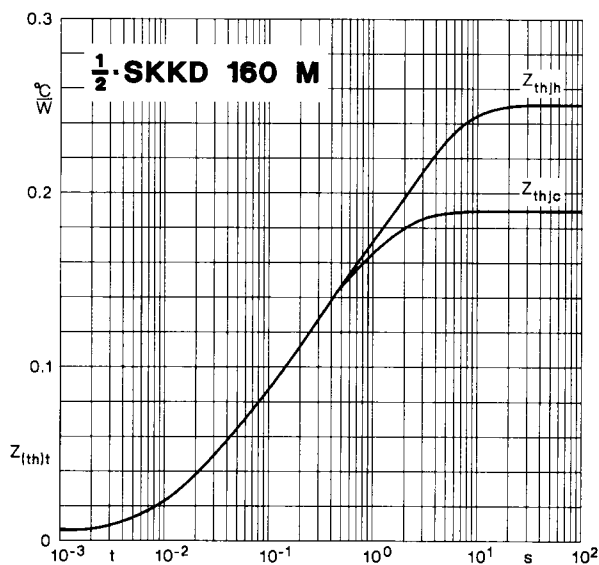


Fig. 18 Transient thermal impedance vs. time

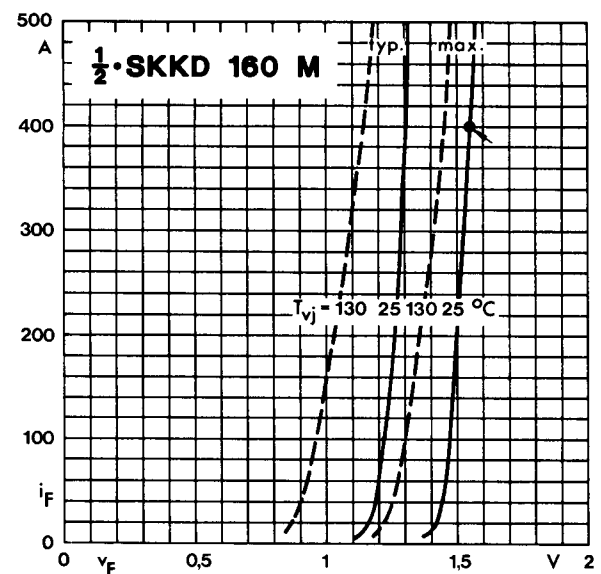


Fig. 19 Forward characteristics

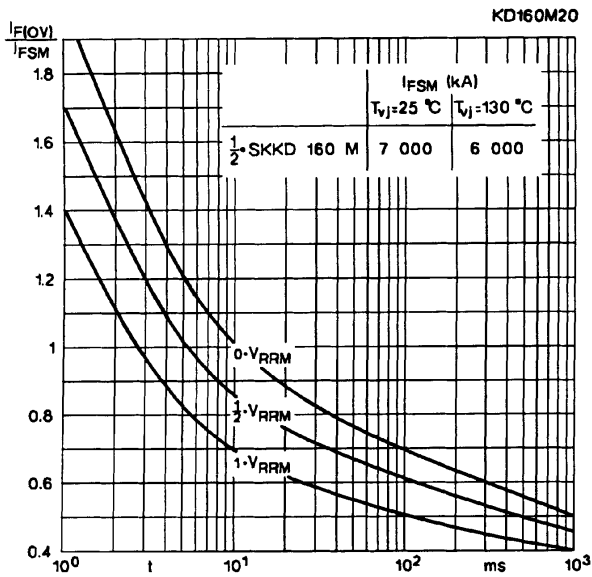


Fig. 20 Surge overload current vs. time

