SKKD 212/18

SEMIPACK® 2

Rectifier Diode Modules

SKKD 212/18

Features*

- Heat transfer through aluminum oxide ceramic insulated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E63532

Typical Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors
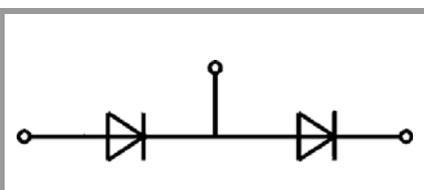
Absolute Maximum Ratings				
Symbol	**Conditions**		**Values**	**Unit**
Recitifier Diode				
I_{FAV}	sin. 180°	$T_c = 85\ °C$	213	A
	$T_j = 135\ °C$	$T_c = 100\ °C$	165	A
I_{FSM}	$t_p = 10$ ms	$T_j = 25\ °C$	6600	A
		$T_j = 135\ °C$	5500	A
i^2t	$t_p = 10$ ms	$T_j = 25\ °C$	217800	A^2s
		$T_j = 135\ °C$	151250	A^2s
V_{RSM}	$T_j = 25\ °C$		1900	V
V_{RRM}	$T_j = 25\ °C$		1800	V
T_j			-40 ... 135	°C
Module				
T_{stg}			-40 ... 125	°C
V_{isol}	a.c.; 50 Hz; r.m.s.	1 min	3000	V
		1 s	3600	V

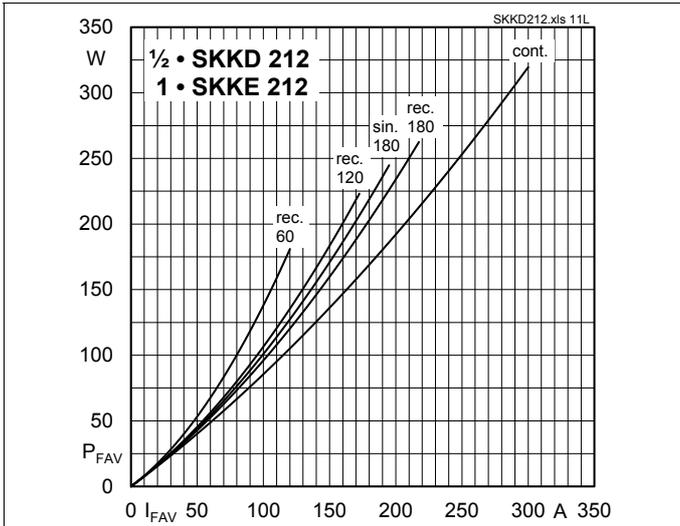| Characteristics						
Symbol	**Conditions**		**min.**	**typ.**	**max.**	**Unit**
Diode						
V_F	$T_j = 25\ °C$, $I_F = 500$ A				1.40	V
V_{F0}	$T_j = 135\ °C$				0.75	V
r_F	$T_j = 135\ °C$				1.05	mΩ
I_R	$T_j = 135\ °C$, $V_{RD} = V_{RRM}$				9	mA
$R_{th(j-c)}$	cont.	per chip			0.18	K/W
		per module			0.09	K/W
$R_{th(j-c)}$	sin. 180°	per chip			0.18	K/W
		per module			0.09	K/W
Module						
$R_{th(c-s)}$	chip, P12 (reference)			0.1		K/W
	module, P12 (reference)			0.05		K/W
M_s	to heatsink M5		4.25		5.75	Nm
M_t	to terminals M6		4.25		5.75	Nm
a					5 * 9.81	m/s^2
w				165		g

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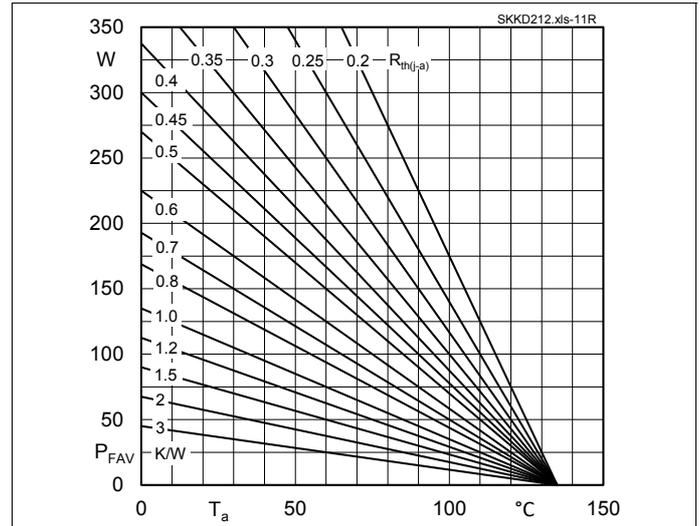Fig. 11L: Power dissipation per diode vs. forward current

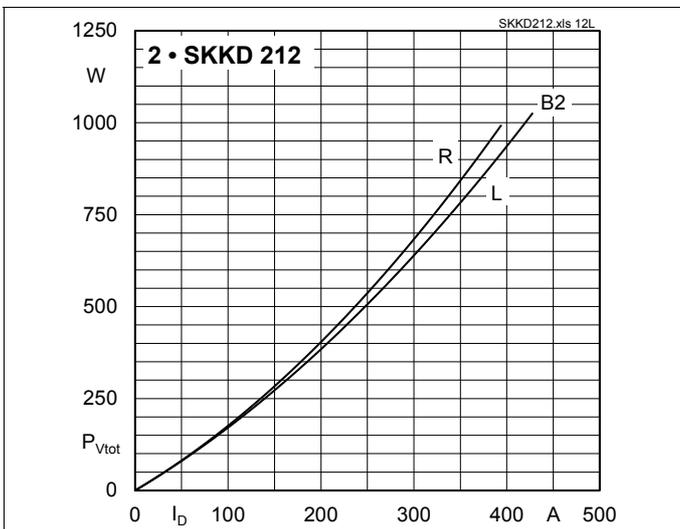Fig. 11R: Power dissipation per diode vs. ambient temperature

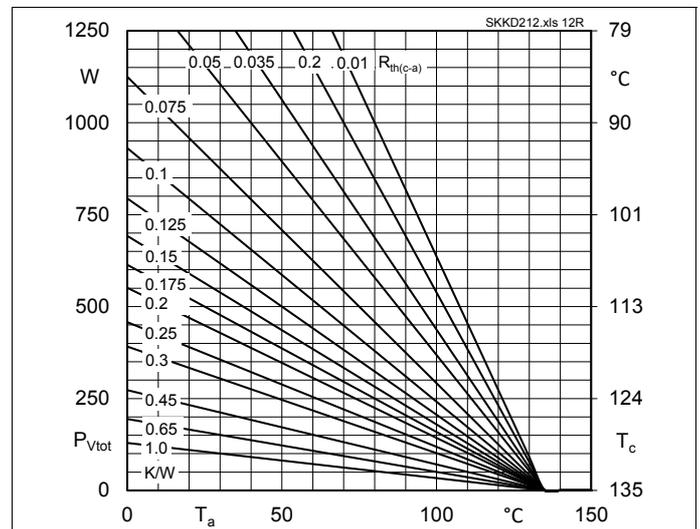Fig. 12L: Power dissipation of two modules vs. direct current

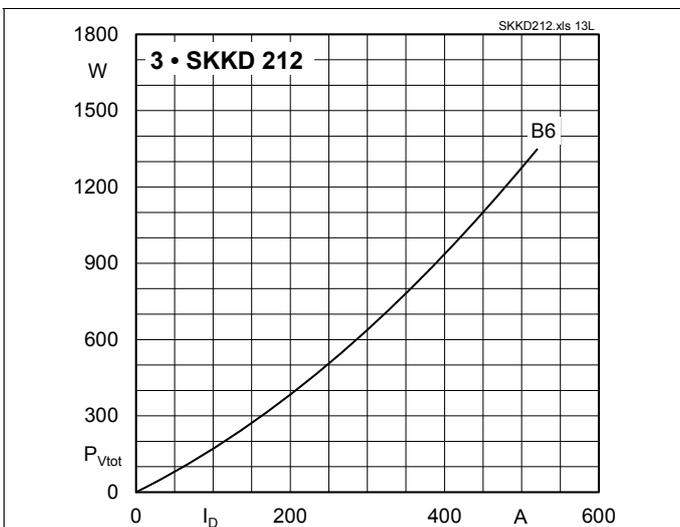Fig. 12R: Power dissipation of two modules vs. ambient temperature

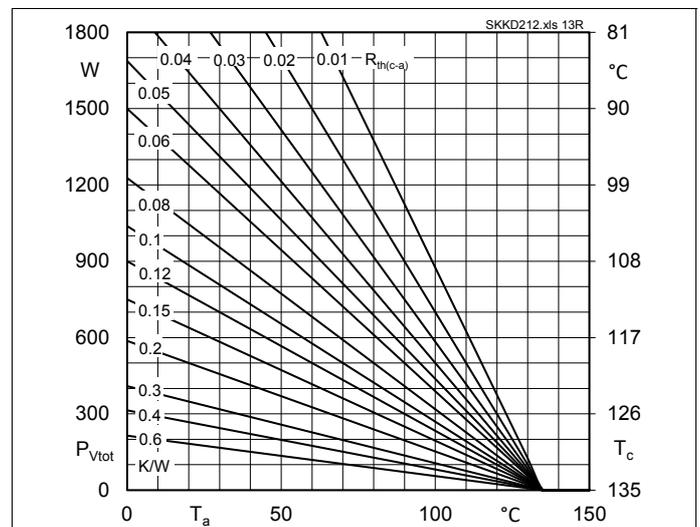Fig. 13L: Power dissipation of three modules vs. direct current

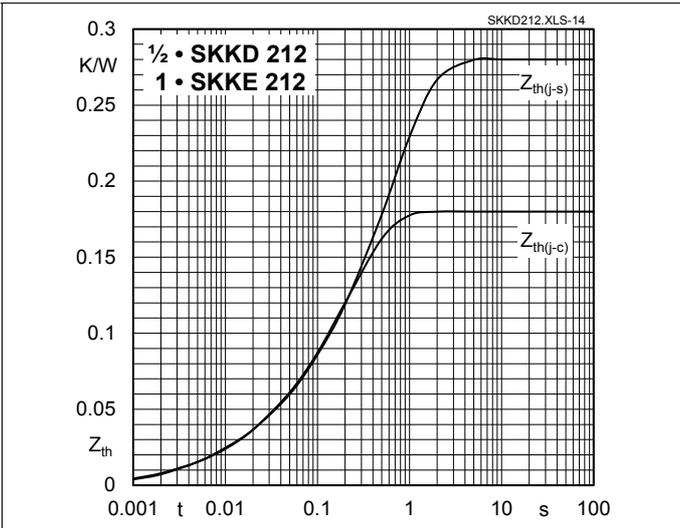Fig. 13R: Power dissipation of three modules vs. ambient temperature
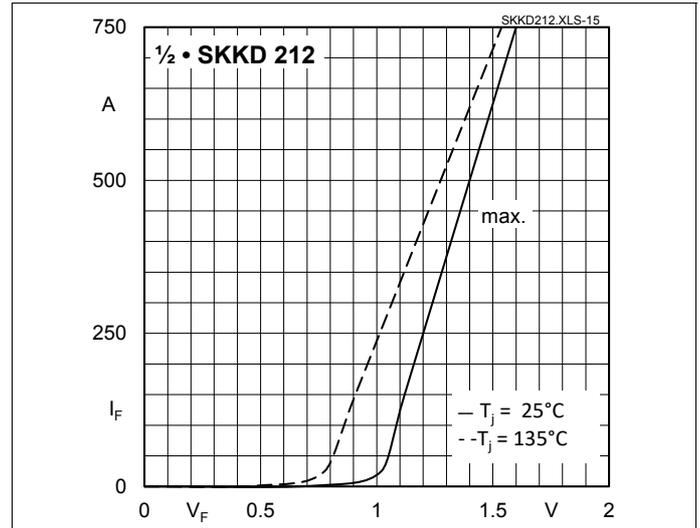
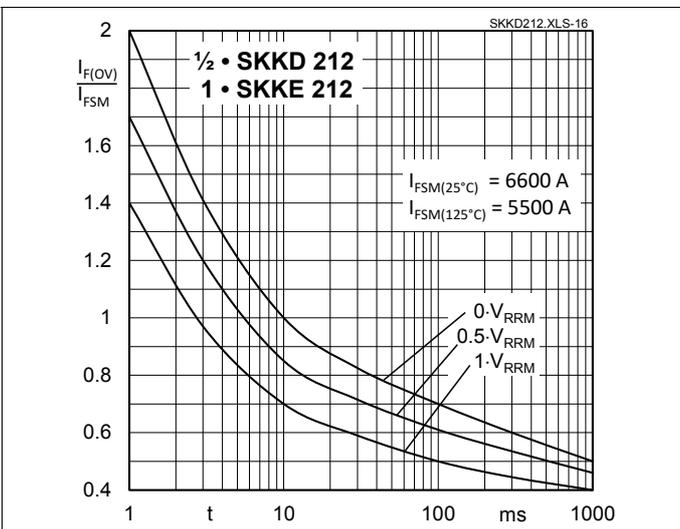**Fig. 14: Transient thermal impedance vs. time**

Fig. 15: Forward characteristics

Fig. 16: Surge overload current vs. time

General tolerance ±0.5 mm

Allowed screw depth max. 9 mm

30
27
8.2
⌀ 6.4

23   23   17

label   M6 (3x)

3   2   1

13.2   34

62
80
94

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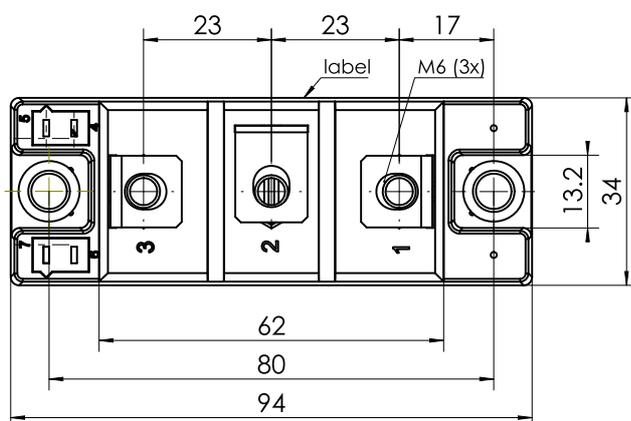
1
3   2

IMPORTANT INFORMATION AND WARNINGS

This is an electrostatic discharge sensitive device (ESDS) according to international standard IEC 61340.
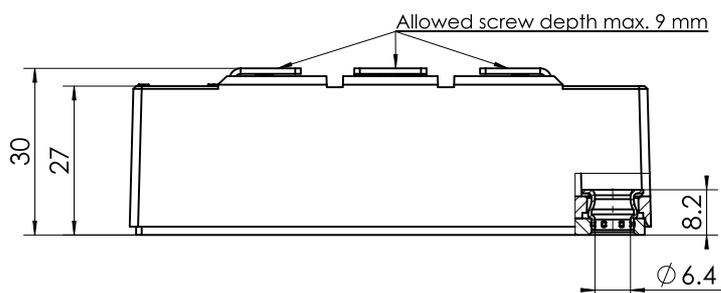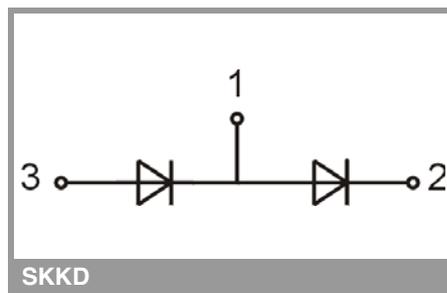
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