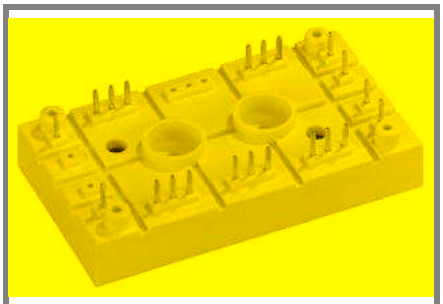
SKDH 115



SEMIPONT™ 5

Half Controlled 3-phase Bridge Rectifier

SKDH 115

Target Data

Features

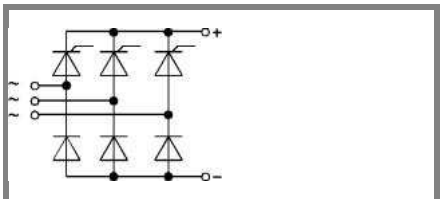
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (low R_{th})
- Low resistance in steady-state and high reliability
- High surge currents
- UL -recognized, file no. E 63 532

Typical Applications*

- For DC drives with a fixed direction of rotation
- Controlled field rectifier for DC motors
- Controlled battery charger

V_{RSM} V	V_{RRM}, V_{DRM} V	I_D = 110 A (full conduction) (T_s = 80 °C)
1200	1200	SKDH 115/12
1600	1600	SKDH 115/16

Symbol	Conditions	Values	Units
I_D	T_s = 80 °C	110	A
I_{TSM}, I_{FSM}	T_{vj} = 25 °C; 10 ms	1050	A
	T_{vj} = 125 °C; 10 ms	950	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	5500	A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	4500	A^2s
V_T, V_F	T_{vj} = 25 °C; I_T, I_F=120A	max. 1,8	V
$V_{T(TO)}$ / $V_{F(TO)}$	T_{vj} = 125 °C;	max. 1,1	V
r_T	T_{vj} = 125 °C	max. 6	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}	max. 20	mA
t_{gd}	T_{vj} = °C; I_G = A; di_G/dt = A/µs		µs
t_{gr}	V_D = · V_{DRM}		µs
$(dv/dt)_{cr}$	T_{vj} = 125 °C	max. 1000	V/µs
$(di/dt)_{cr}$	T_{vj} = 125 °C; f = 50...60 Hz	max. 50	A/µs
t_q	T_{vj} = 125 °C; typ.	150	µs
I_H	T_{vj} = 25 °C; typ. / max.	- / 200	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω	- / 400	mA
V_{GT}	T_{vj} = 25 °C; d.c.	min. 3	V
I_{GT}	T_{vj} = 25 °C; d.c.	min. 150	mA
V_{GD}	T_{vj} = 125 °C; d.c.	max. 0,25	V
I_{GD}	T_{vj} = 125 °C; d.c.	max. 5	mA
			K/W
			K/W
$R_{th(j-s)}$	per thiristor / diode	0,84	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 125	°C
T_{solder}	terminals	260	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 (3000)	V
M_s	to heatsink	2,5	Nm
M_t			Nm
m	approx.	75	g
Case	SEMIPONT 5	G 61	



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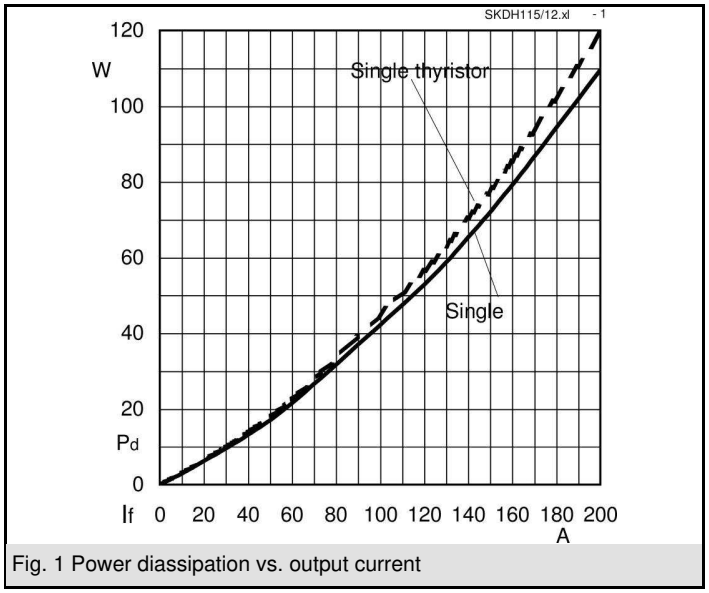

Fig. 1 Power diassipation vs. output current

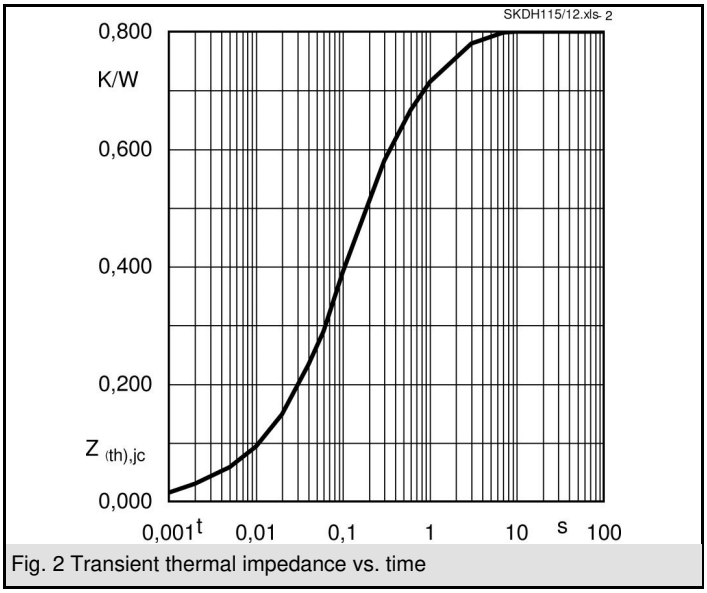

Fig. 2 Transient thermal impedance vs. time

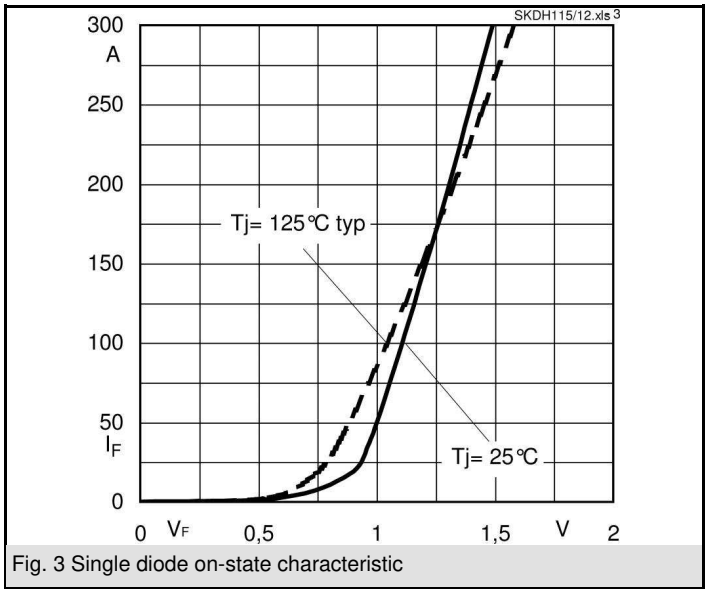

Fig. 3 Single diode on-state characteristic

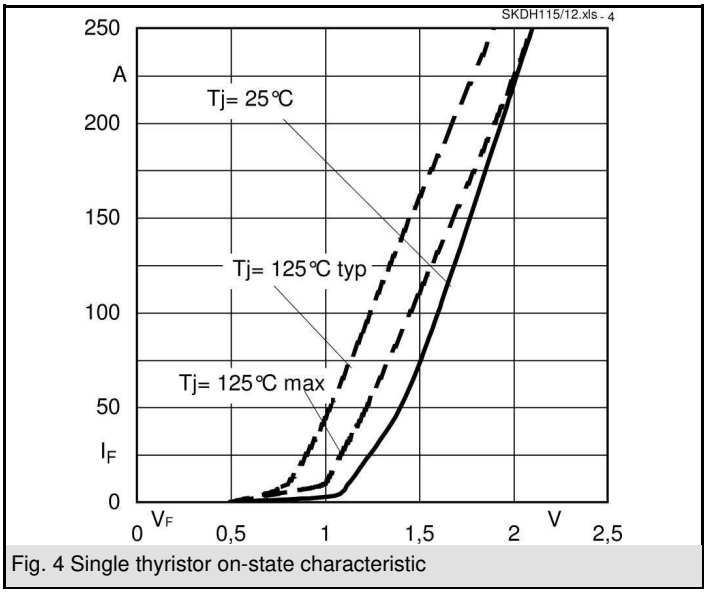

Fig. 4 Single thyristor on-state characteristic

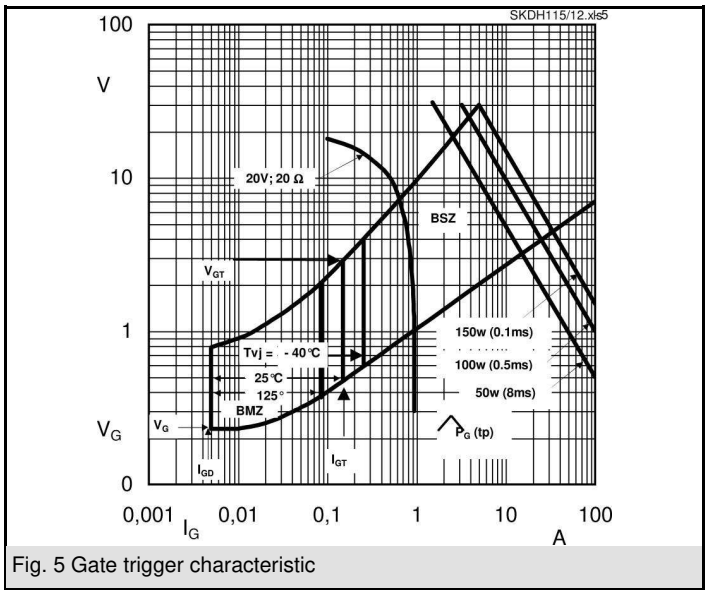

Fig. 5 Gate trigger characteristic

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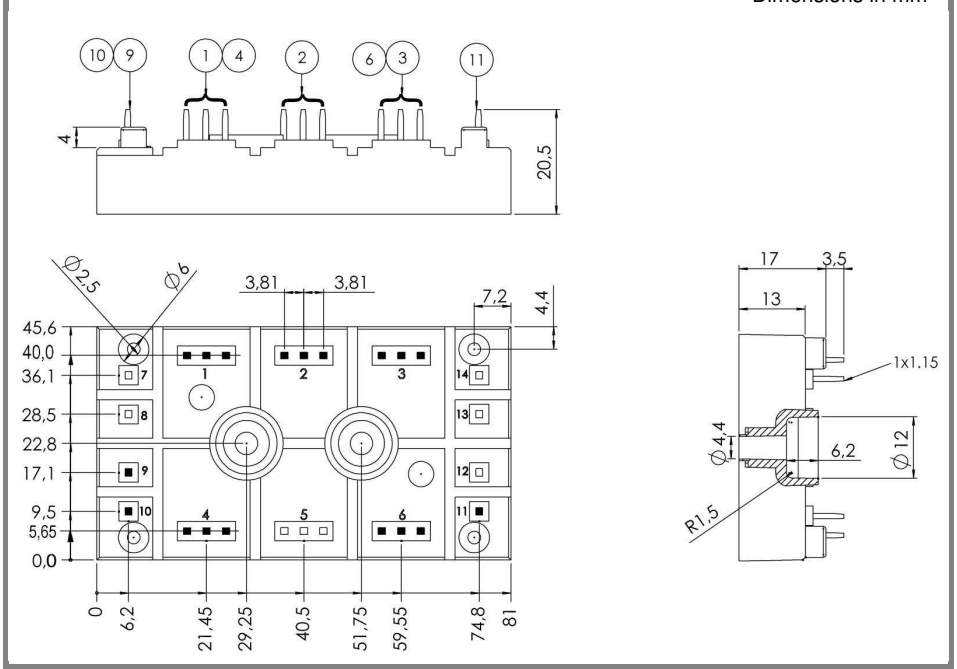
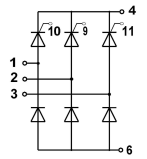
Dimensions in mm



Case G 61



G 61 DH

* 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.

