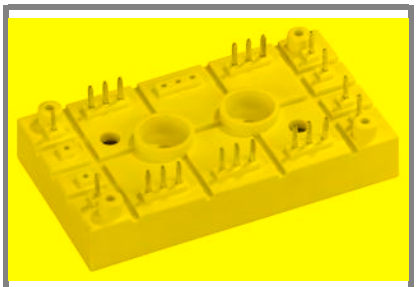
SKDT 115



SEMIPONT™ 5

Bridge Rectifier

SKDT 115

Target Data

Features

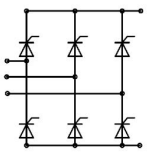
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (low R_{th})
- Low resistance in steady-state and high reliability
- High surge currents
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage
- UL -recognized, file no. E 63 532

Typical Applications*

- DC and AC drives
- 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)
1300	1200	SKDT 115/12
1700	1600	SKDT 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
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	5500	A²s
	T_{vj} = 125 °C; 8,3 ... 10 ms	4500	A²s
V_T, V_F	T_{vj} = 25 °C; I_T, I_F=120A	max. 1,8	V
$V_{T(TO)}$	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. 500	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 thyristor	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		G 58	



SKDT

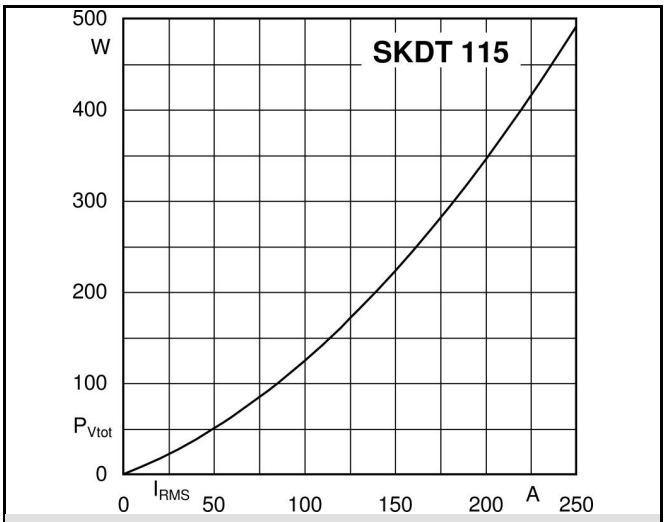


Fig. 1 Power dissipation vs. r.m.s. current

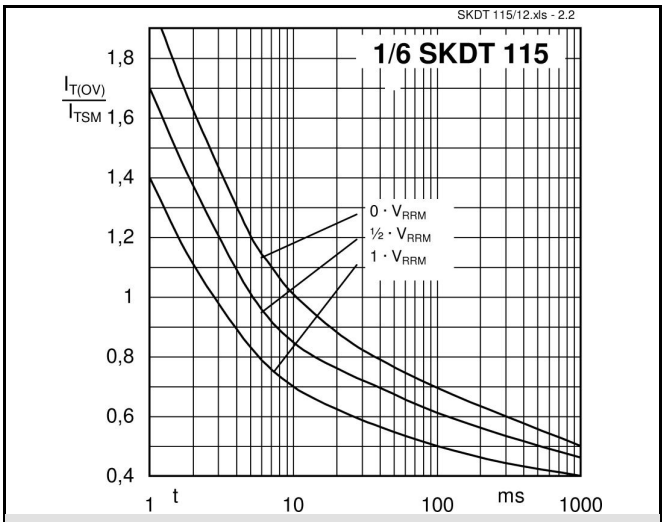


Fig. 2 Surge overload current vs. time

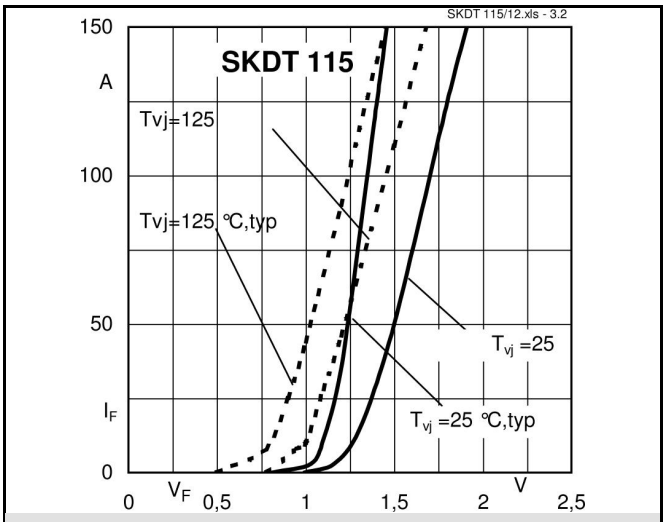


Fig. 3 Single thyristro on-state characteristic

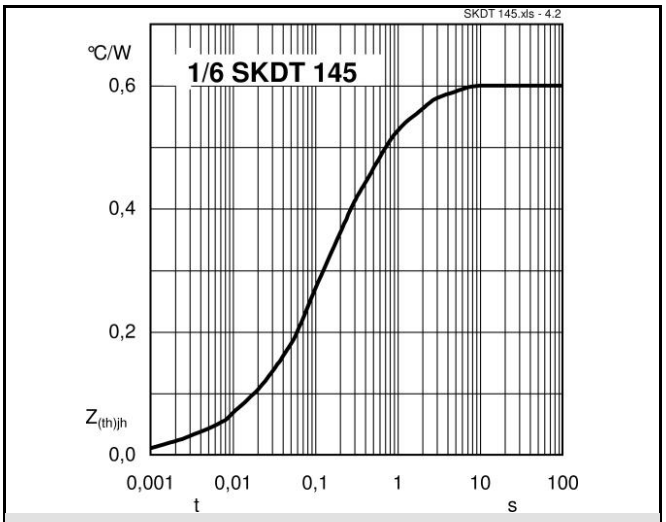


Fig. 4 Transient thermal impedance vs. time

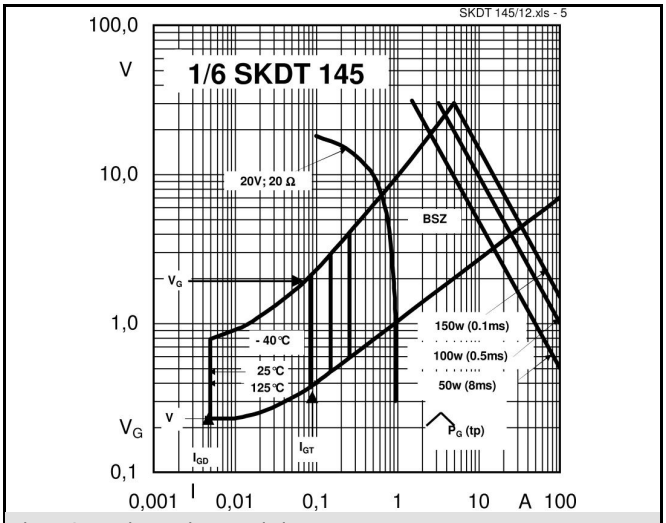
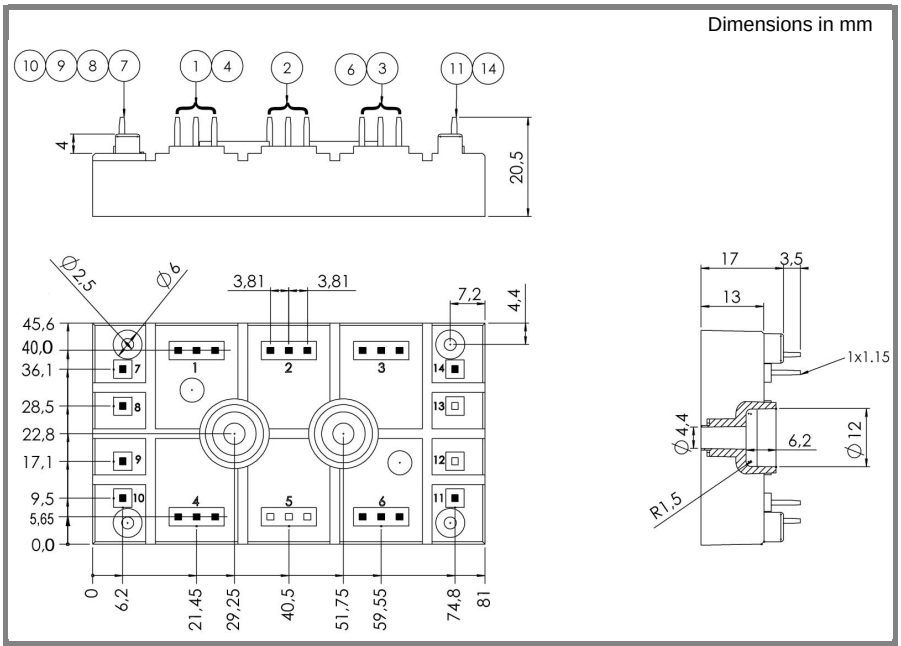
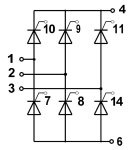


Fig. 5 Gate trigger characteristic

SKDT 115



Case G 58



G 58 DT

* 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.

