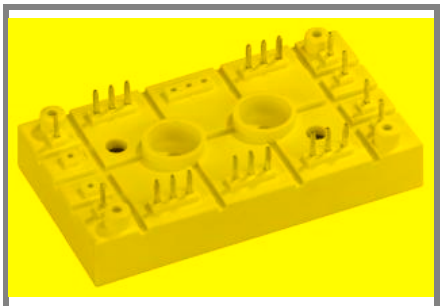
SKDT 145



SEMIPONT™ 5

Bridge Rectifier

SKDT 145

Target Data

Features

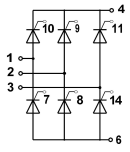
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (low R_{th})
- Low resistance in steady-state and high reliability
- High surge currents
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage
- UL -recognized, file no. E 63 532

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 = 140 A (full conduction) (T_s = 80 °C)
1300	1200	SKDT 145/12
1700	1600	SKDT 145/16

Symbol	Conditions	Values	Units
I_D	T_s = 80 °C	140	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	1350	A
	T_{vj} = 125 °C; 10 ms	1250	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	9000	A²s
	T_{vj} = 125 °C; 8,3 ... 10 ms	7800	A²s
V_T	T_{vj} = 25 °C; I_T = 150A	max. 1,6	V
$V_{T(TO)}$	T_{vj} = 125 °C;	max. 0,9	V
r_T	T_{vj} = 125 °C	max. 5	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.	- / 250	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω	- / 600	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. 6	mA
			K/W
			K/W
$R_{th(j-s)}$	per thyristor	0,6	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

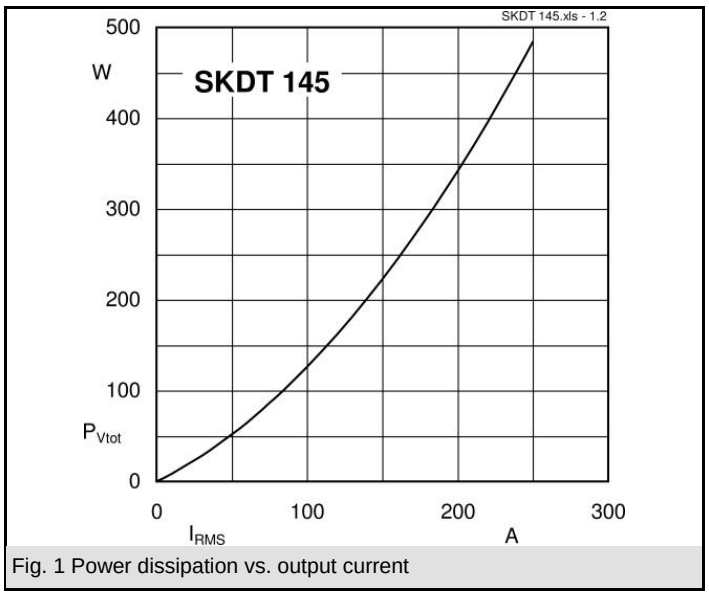


Fig. 1 Power dissipation vs. output current

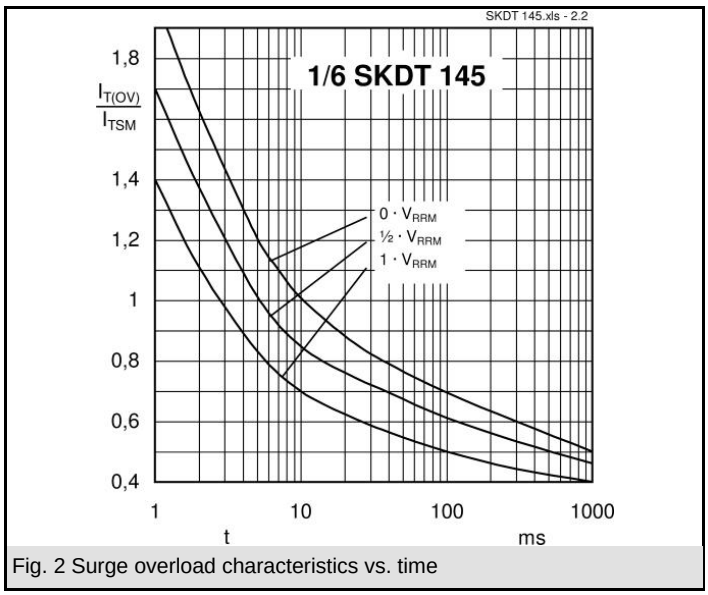


Fig. 2 Surge overload characteristics vs. time

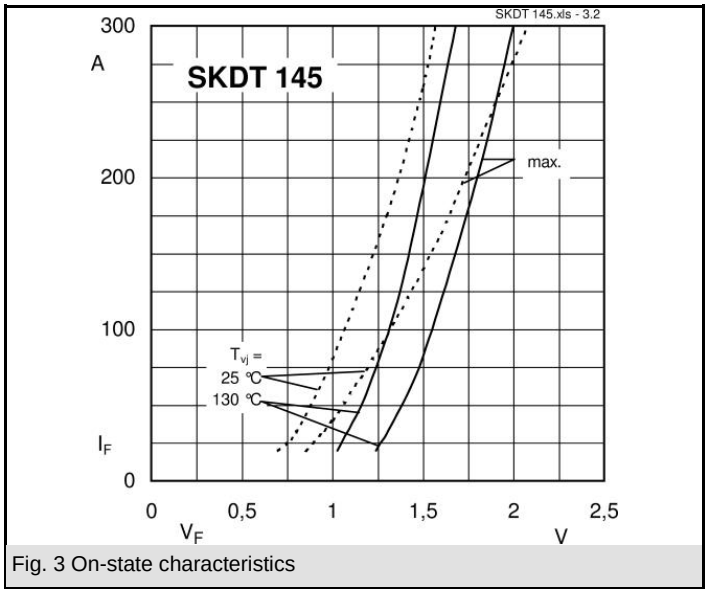


Fig. 3 On-state characteristics

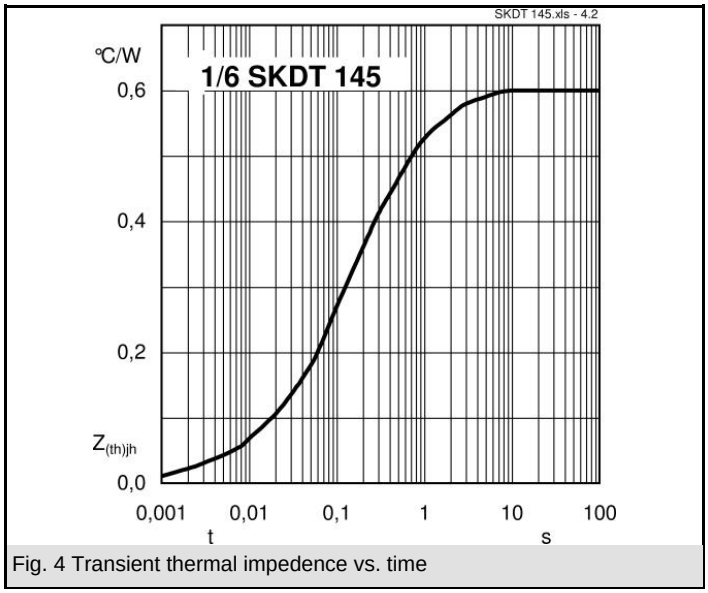


Fig. 4 Transient thermal impedence vs. time

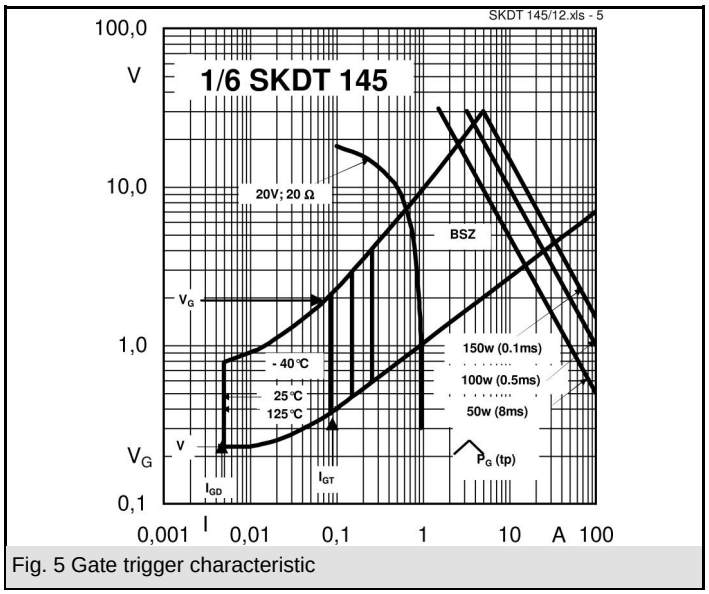


Fig. 5 Gate trigger characteristic

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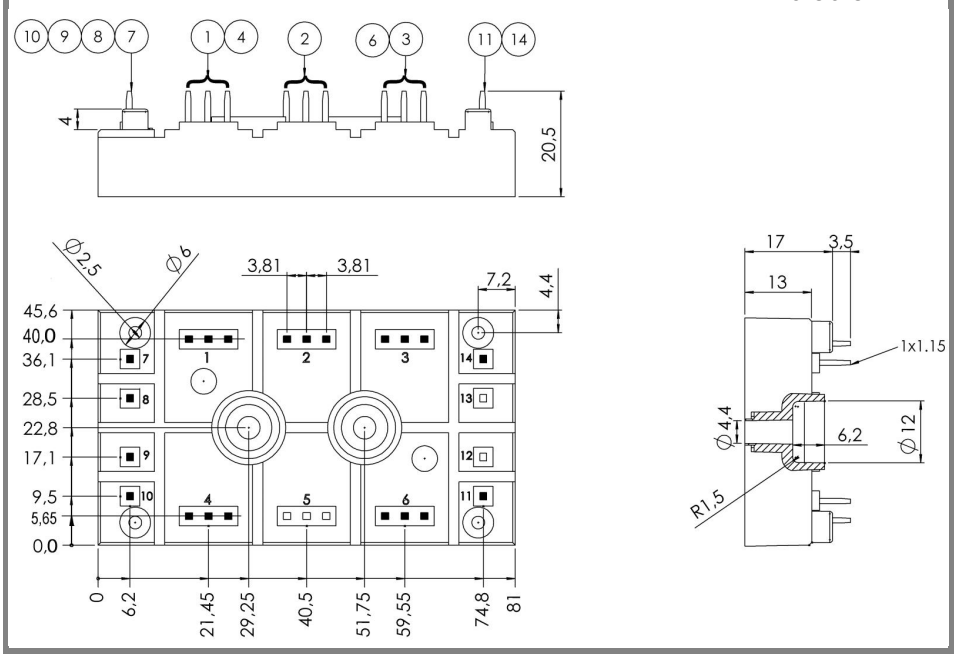
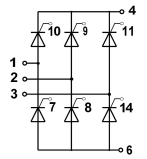
Dimensions in mm



Case G 58



G 58 DT

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