

**SEMIPONT™ 5**

## Bridge Rectifier

### SKDT 145

#### Target Data

#### Features

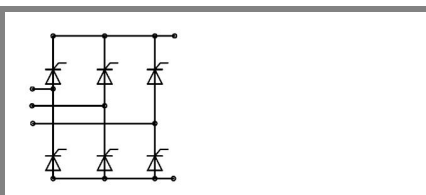
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (low  $R_{th}$ )
- Low resistance in steady-state and high reliability
- High surge currents
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage
- UL -recognized, file no. E 63 532

#### Typical Applications\*

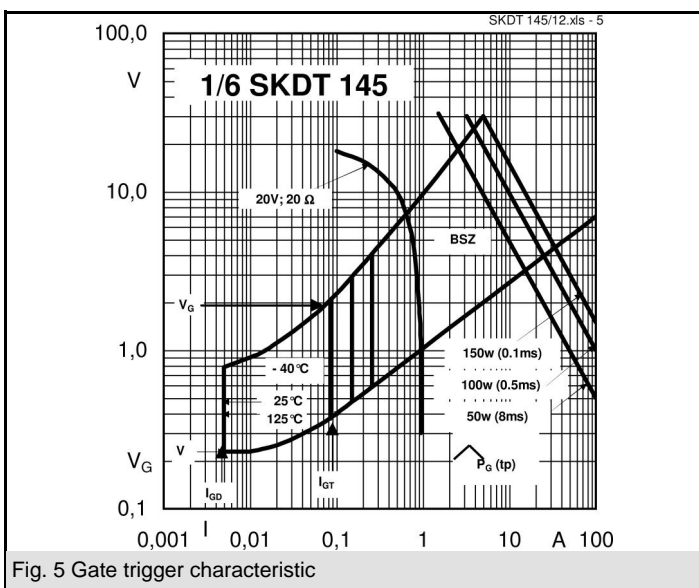
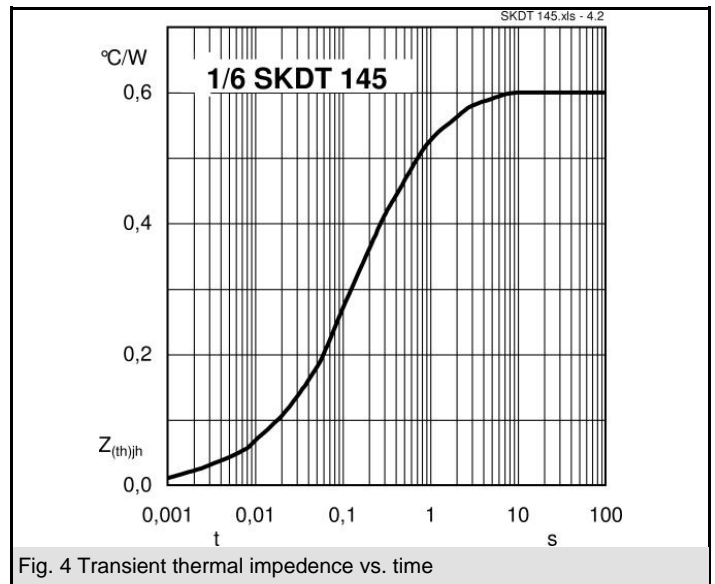
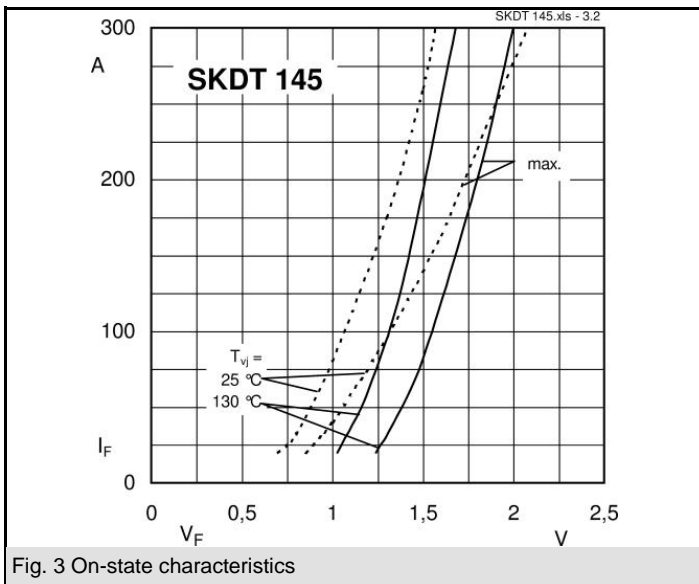
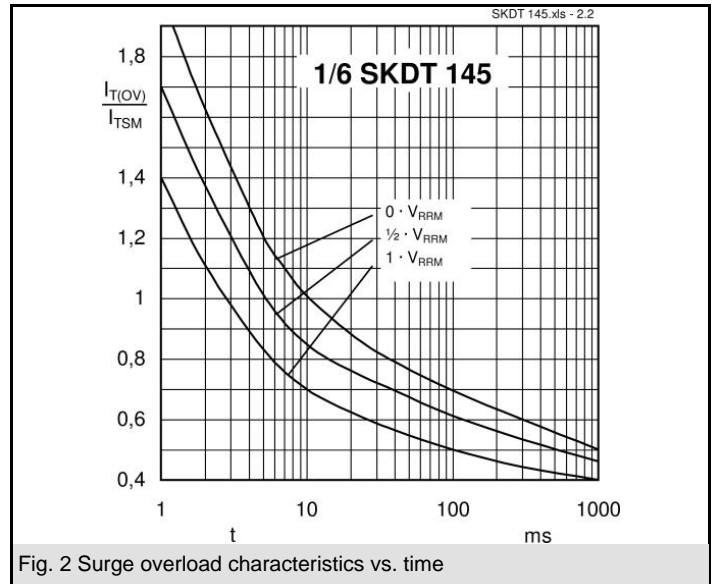
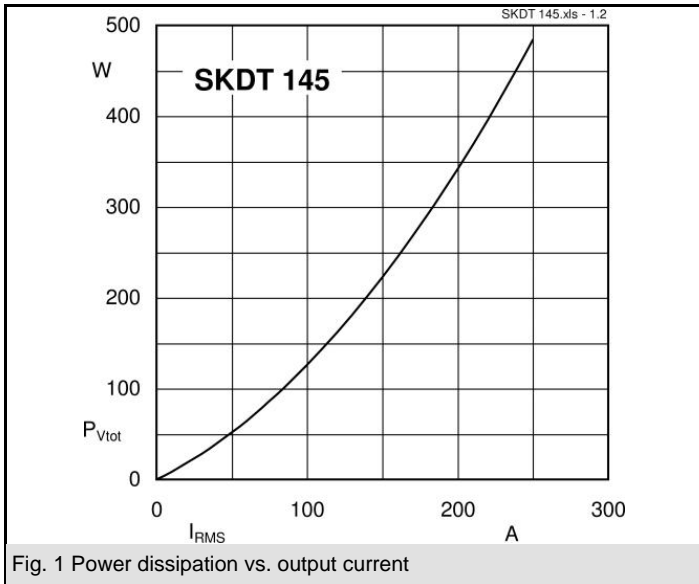
- DC and AC drives
- Controlled field rectifier for DC motors
- Controlled battery charger

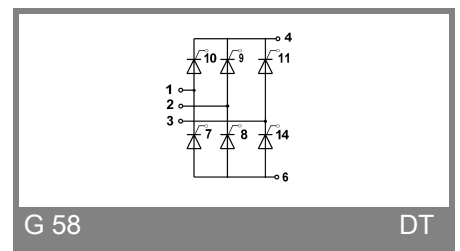
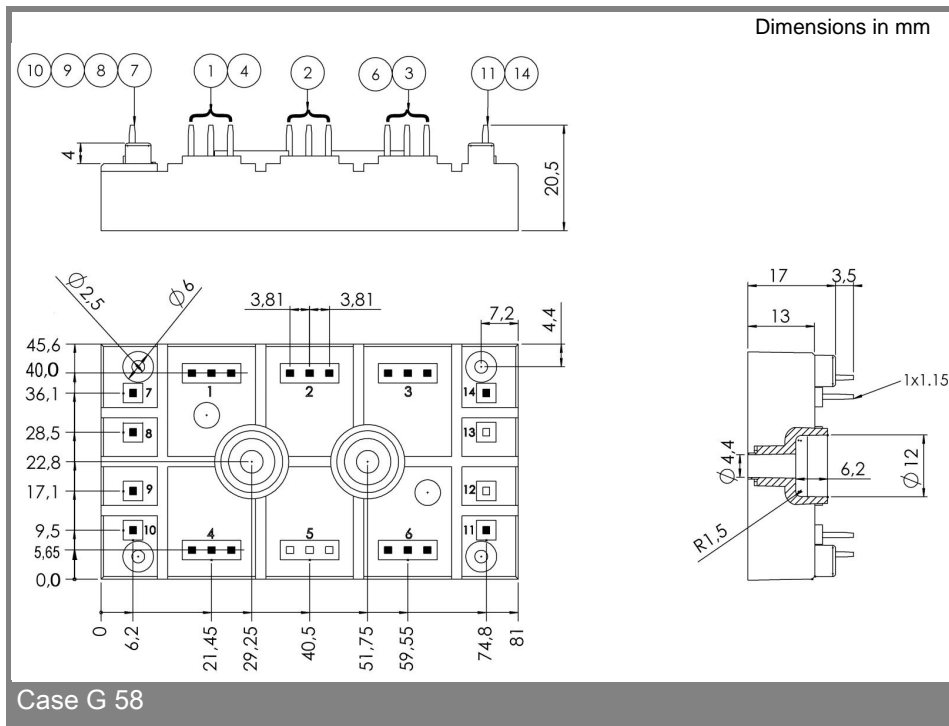
$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 140$ A (full conduction) ( $T_s = 80$ °C)
1300	1200	SKDT 145/12
1700	1600	SKDT 145/16

Symbol	Conditions	Values	Units
$I_D$	$T_s = 80$ °C	140	A
$I_{TSM}$	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms	1350 1250	A A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3 ... 10 ms	9000 7800	A <sup>2</sup> s A <sup>2</sup> s
$V_T$	$T_{vj} = 25$ °C; $I_T = 150$ A	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
$t_{gd}$	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs		μs
$t_{gr}$	$V_D = 1 \cdot V_{DRM}$		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
$R_{th(j-s)}$	per thyristor	0,6	K/W K/W 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**





\* 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.