

# SK 40 DH



SEMITOP® 3

## Half Controlled Bridge Rectifier

### SK 40 DH

Preliminary Data

### Features

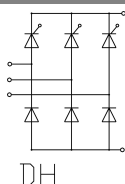
- Compact design
- One screw mounting
- Heat transfer and insulation through direct copper bonded aluminium oxide ceramic (DBC)
- Glass passivated thyristor chips
- Up to 1600V reverse voltage
- UL recognized, file no. E 63 532

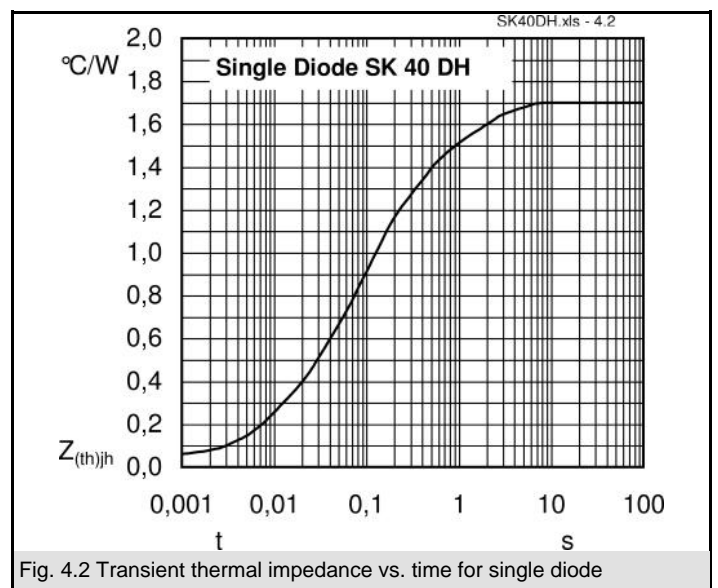
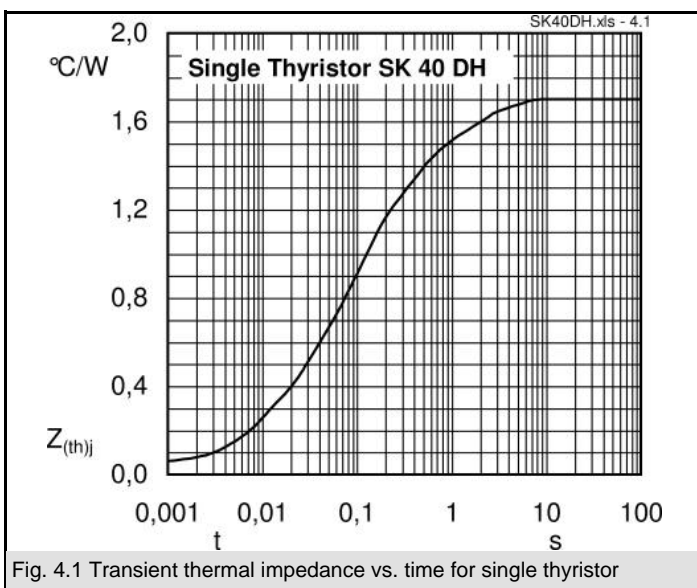
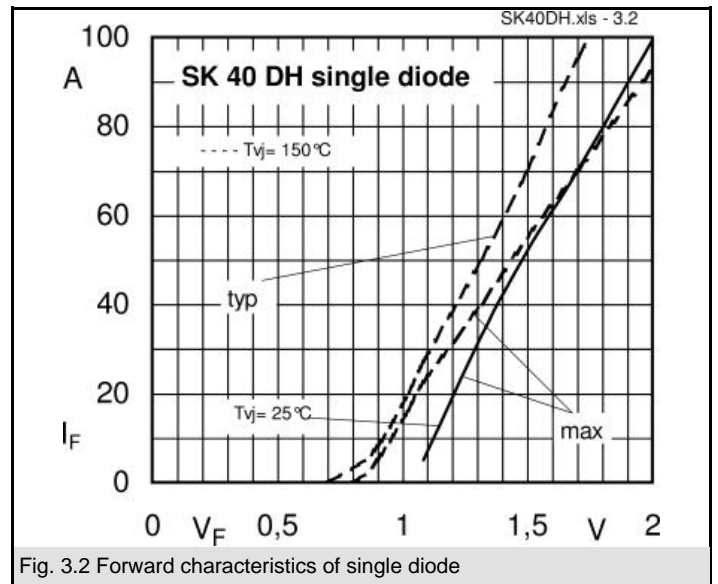
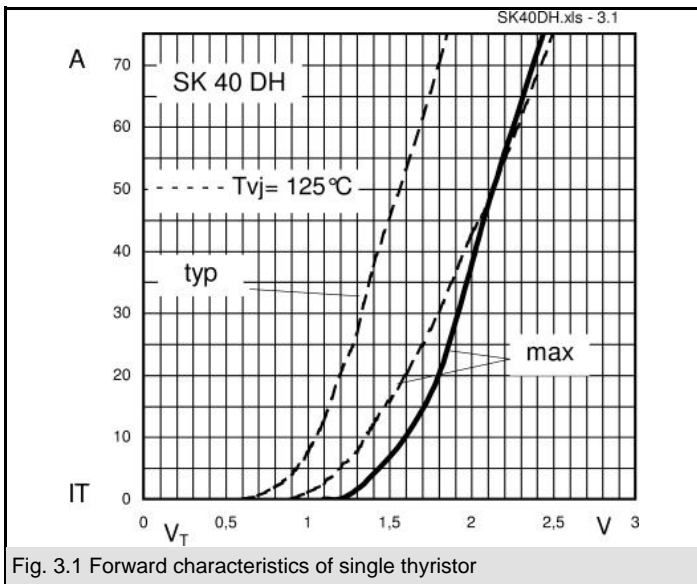
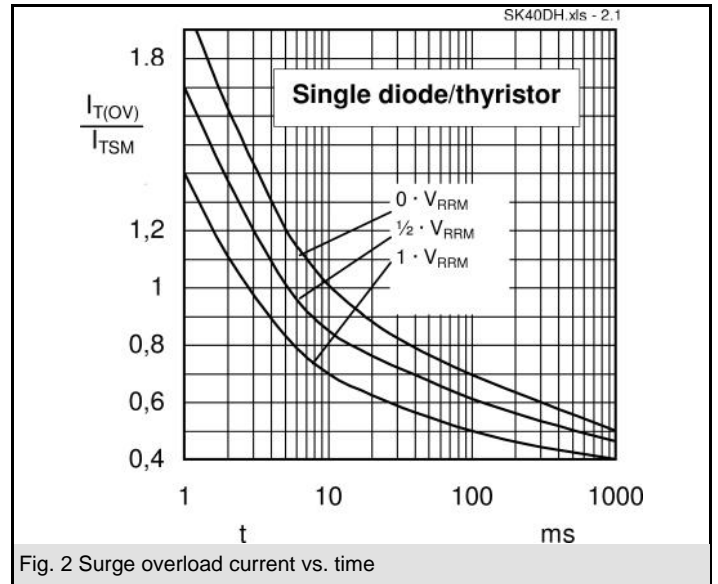
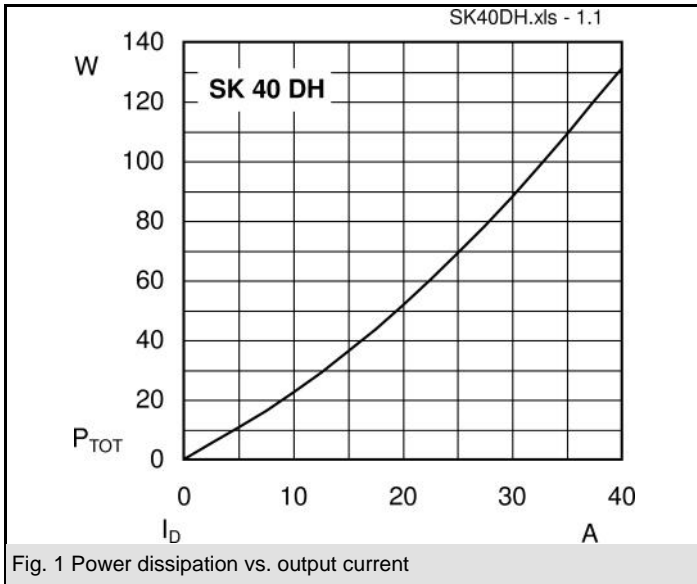
### Typical Applications

- Soft starters
- Light control
- Temperature control
- Motor control

$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 42$ A (full conduction) ( $T_s = 80$ °C)
900	800	SK 40 DH 08
1300	1200	SK 40 DH 12
1700	1600	SK 40 DH 16

Symbol	Conditions	Values	Units
$I_D$	$T_s = 80$ °C	42	A
$I_{FSM} / I_{TSM}$	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms	320 280	A A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3...10 ms	510 390	A <sup>2</sup> s A <sup>2</sup> s
$V_T$	$T_{vj} = 25$ °C; 75A	max. 2,45	V
$V_{T(TO)}$	$T_{vj} = 125$ °C;	1,1	V
$r_T$	$T_{vj} = 125$ °C	20	mΩ
$I_{DD}, I_{RD}$	$T_{vj} = 125$ °C; $V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$	max. 8	mA
$t_{gd}$	$T_{vj} = 80$ °C; $I_G = A$ ; $di_G/dt = A/\mu s$		μs
$t_{gr}$	$V_D = \cdot V_{DRM}$		μs
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C; d.c.	max. 1000	V/μs
$(di/dt)_{cr}$	$T_{vj} = 125$ °C; d.c.; $f = 50...60$ Hz	max. 50	A/μs
$t_q$	$T_{vj} = 125$ °C; d.c.; typ.	120	μs
$I_H$	$T_{vj} = 25$ °C; d.c.; typ. / max.	80 / 150	mA
$I_L$	$T_{vj} = 25$ °C; d.c.; $R_G = 33$ Ω	150 / 300	mA
$V_{GT}$	$T_{vj} = 25$ °C; d.c.	min. 2	V
$I_{GT}$	$T_{vj} = 25$ °C; d.c.	min. 100	mA
$V_{GD}$	$T_{vj} = 125$ °C; d.c.	max. 0,25	V
$I_{GD}$	$T_{vj} = 125$ °C; d.c.	max. 3	mA
$R_{th(j-s)}$	Per thyristor Per diode	1,7 1,7	K/W K/W
$T_{solder}$	Terminals, 10s	260	°C
$T_{vj}$	Diodes	-40...+150	°C
$T_{vj}$			°C
$T_{stg}$		-40...+125	°C
$T_{vj}$	Thyristors	-40...+125	°C
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3000 ( 2500 )	V
$M_s$	Mounting torque to heatsink	2,5	Nm
a			m/s <sup>2</sup>
m	weight	30	g
Case	SEMITOP® 3	T 39	





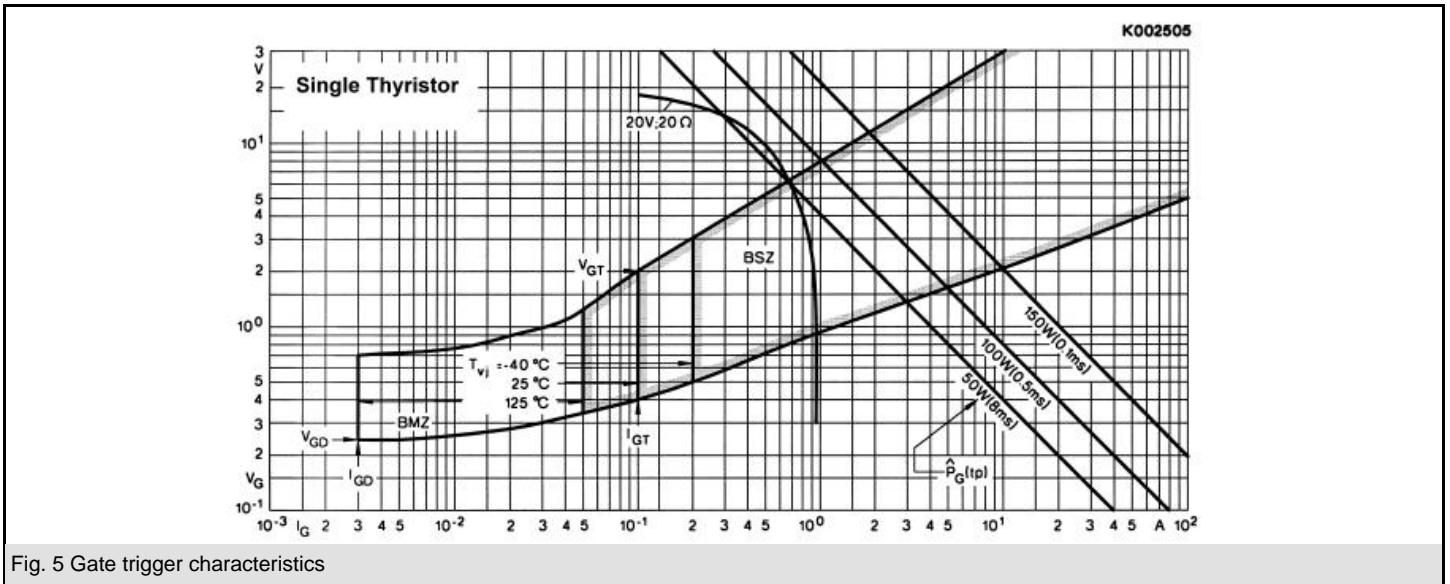
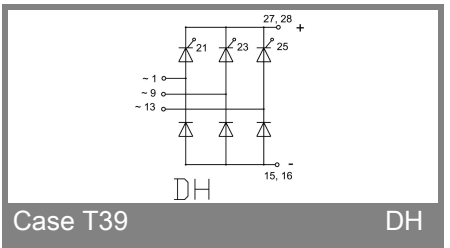
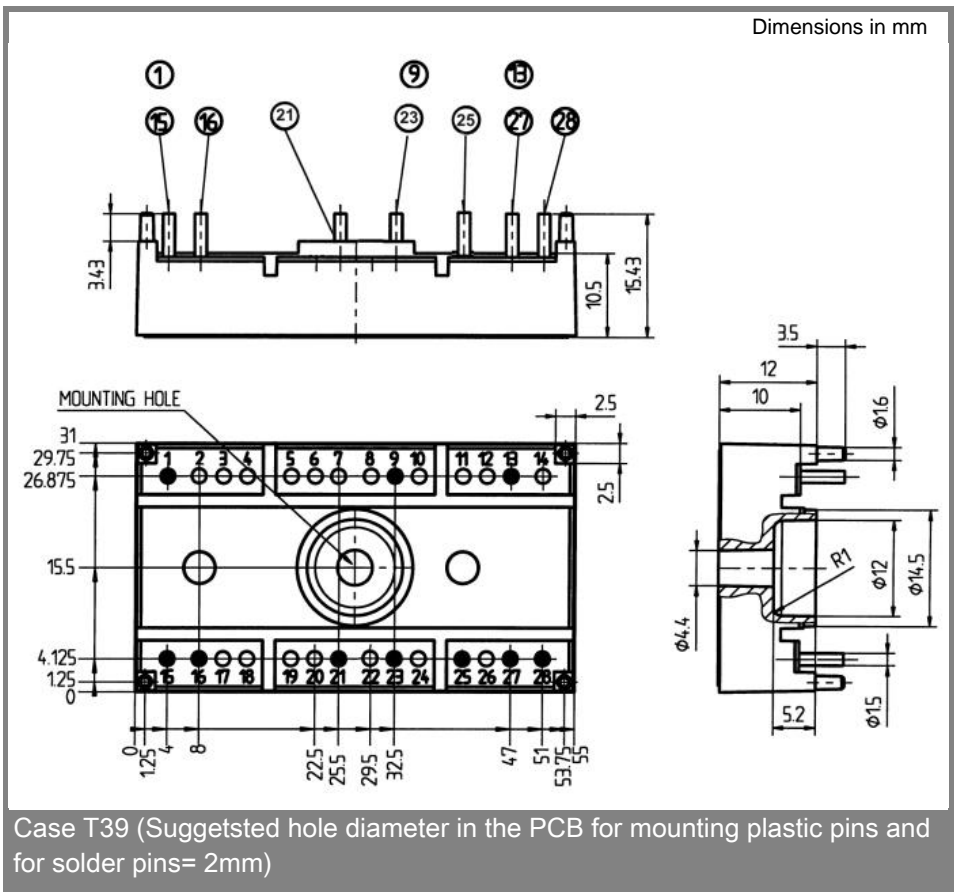


Fig. 5 Gate trigger characteristics



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