

# SKKQ 45



## SEMIPACK<sup>®</sup> 0

### Antiparallel Thyristor Module

#### SKKQ 31

Preliminary Data

#### Features

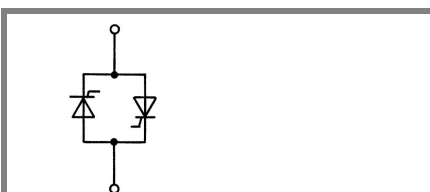
- Compact Design
- Heat transfer through aluminium oxide ceramic isolated metal baseplat
- UL recognized, file no. E 63 532

#### Typical Applications\*

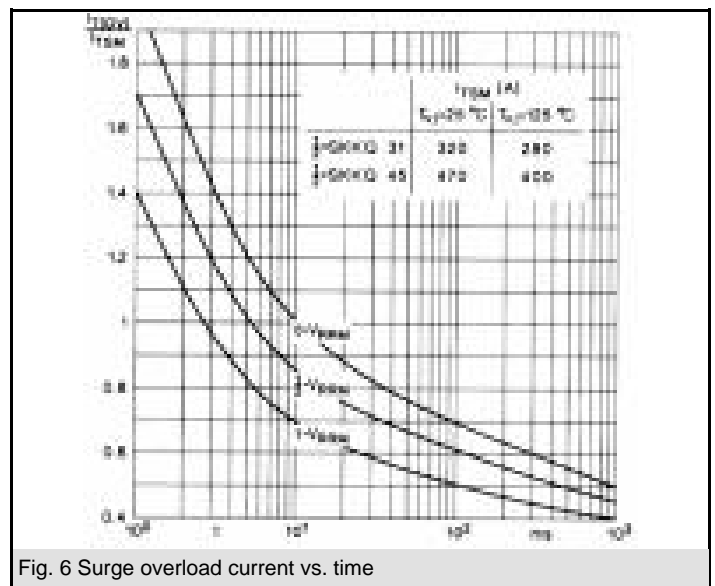
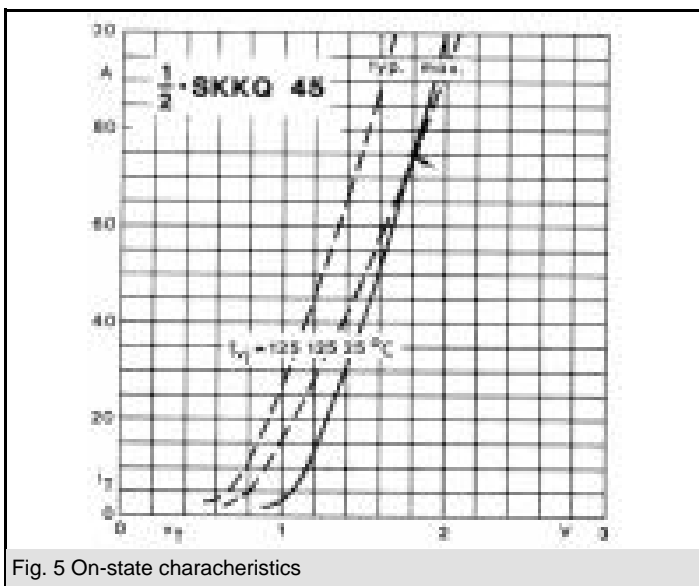
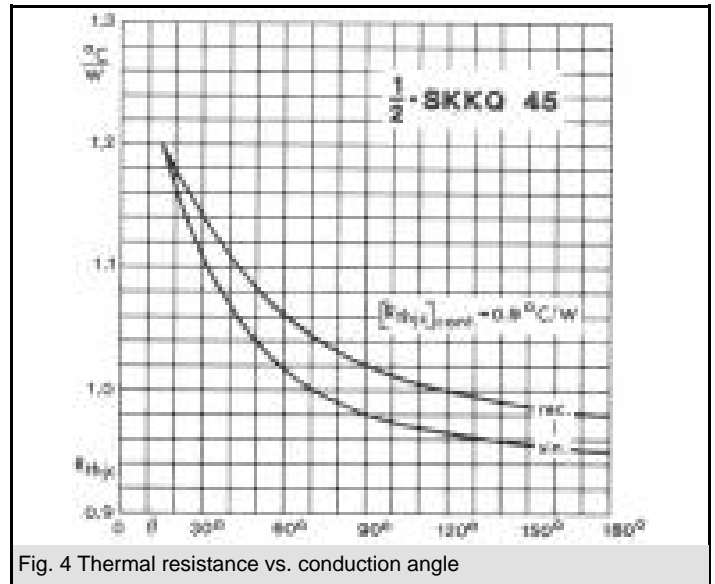
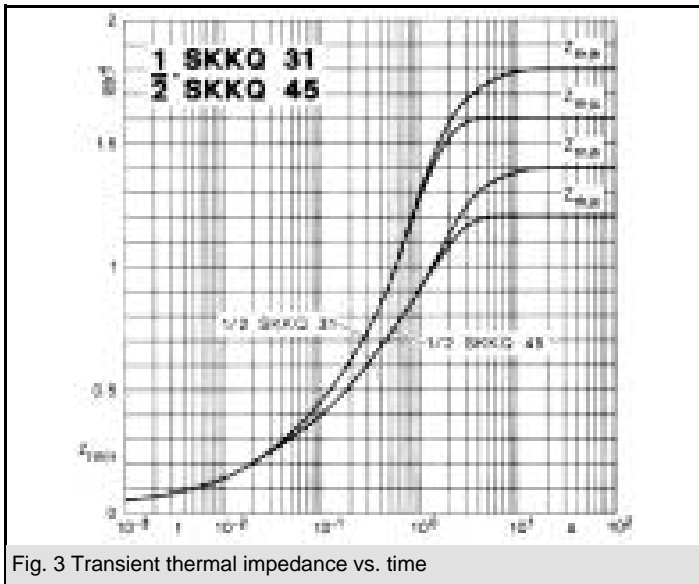
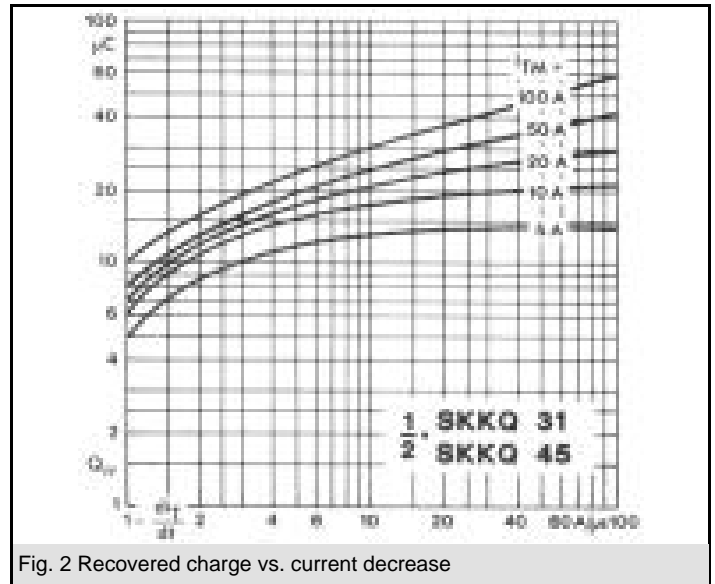
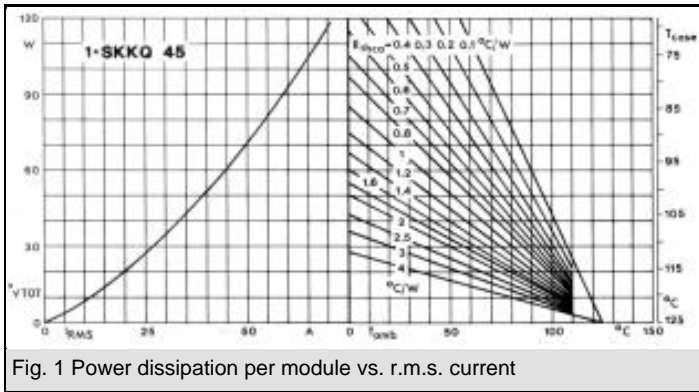
- AC motor starters
- Light control (studios, theaters...)
- Temperature control

$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_{RMS} = 24 A^{(1)}; 45 A^{(2)}$ A (full conduction) ( $T_s = 85^\circ C$ )
700	600	SKKQ 45/06 E
900	800	SKKQ 45/08 E
1300	1200	SKKQ 45/12 E
1500	1400	SKKQ 45/14 E
1700	1600	SKKQ 45/16 E

Symbol	Conditions	Values	Units
$I_{RMS}$	W1C ; sin. 180° ; $T_{case} = 85^\circ C^{(2)}$ ; sin. 180° ;	45	A A
$I_{tRMS}$	W1C, sin. 180°, $T_{case}=85^\circ C$	32	A
$I_{TSM}$	$T_{vj} = 25^\circ C$ ; 10 ms $T_{vj} = 125^\circ C$ ; 10 ms	470 400	A A
$i^2t$	$T_{vj} = 25^\circ C$ ; 8,3...10 ms $T_{vj} = 125^\circ C$ ; 8,3...10 ms	1100 800	A <sup>2</sup> s A <sup>2</sup> s
$V_T$	$T_{vj} = 25^\circ C, I_T = 75 A$	max. 1,8	V
$V_{T(TO)}$	$T_{vj} = 125^\circ C$	max. 0,9	V
$r_T$	$T_{vj} = 125^\circ C$	max. 12	mΩ
$I_{DD}, I_{RD}$	$T_{vj} = 25^\circ C, V_{RD}=V_{RRM}$ $T_{vj} = 125^\circ C, V_{RD}=V_{RRM}$	max. 10	mA mA
$t_{gd}$	$T_{vj} = 25^\circ C, I_G = 1 A; di_G/dt = 1 A/\mu s$	1	μs
$t_{gr}$	$V_D = 0,67 * V_{DRM}$	1	μs
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ C$	1000	V/μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ C; f = 50...60 Hz$	100	A/μs
$t_q$	$T_{vj} = 125^\circ C; typ.$	80	μs
$I_H$	$T_{vj} = 25^\circ C; typ. / max.$	100 / 200	mA
$I_L$	$T_{vj} = 25^\circ C; R_G = 33 \Omega; typ. / max.$	250 / 400	mA
$V_{GT}$	$T_{vj} = 25^\circ C; d.c.$	min. 3	V
$I_{GT}$	$T_{vj} = 25^\circ C; d.c.$	min. 150	mA
$V_{GD}$	$T_{vj} = 125^\circ C; d.c.$	max. 0,25	V
$I_{GD}$	$T_{vj} = 125^\circ C; d.c.$	max. 5	mA
$R_{th(j-s)}$	cont. per thyristor sin 180° per thyristor	1,2 1,3	K/W K/W
$R_{th(j-s)}$	cont. per W1C sin 180° per W1C	0,6 0,6	K/W K/W
$T_{vj}$		-40 ... +125	°C
$T_{stg}$	terminals, 10s	-40 ... +125	°C
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
$M_s$	Mounting torque to heatsink	1,5	Nm
$M_t$			Nm
$a$			m/s <sup>2</sup>
$m$		50	g
Case	SEMIPACK <sup>®</sup> 0	A 41	



KQ



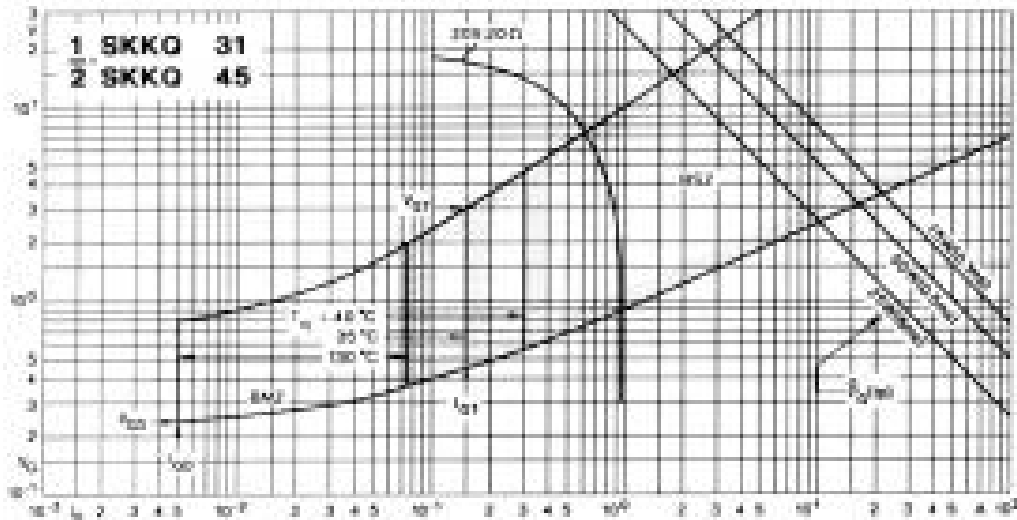
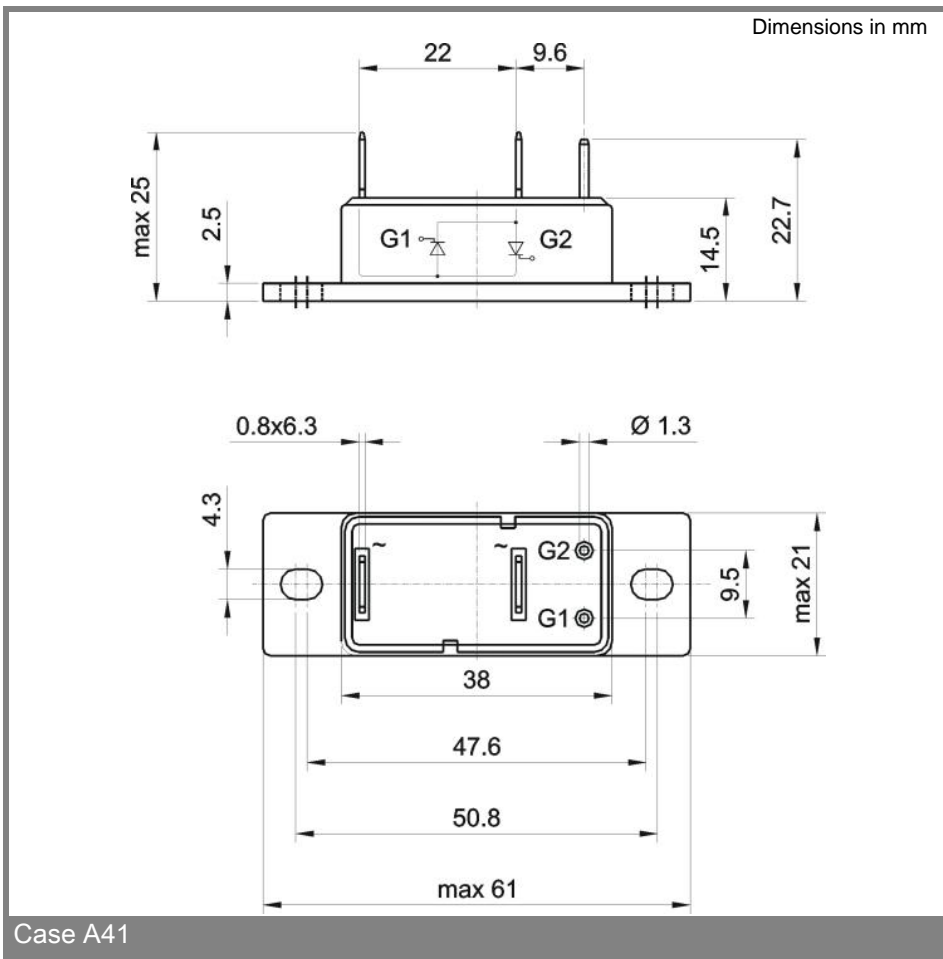


Fig. 5 Gate trigger characteristics



\* 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.