



SEMIPACK® 0

Antiparallel Thyristor Module

SKKQ 31

Preliminary Data

Features

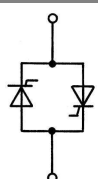
- Compact Design
- Heat transfer through aluminium oxide ceramic isolated metal baseplat
- UL recognized, file no. E 63 532

Typical Applications*

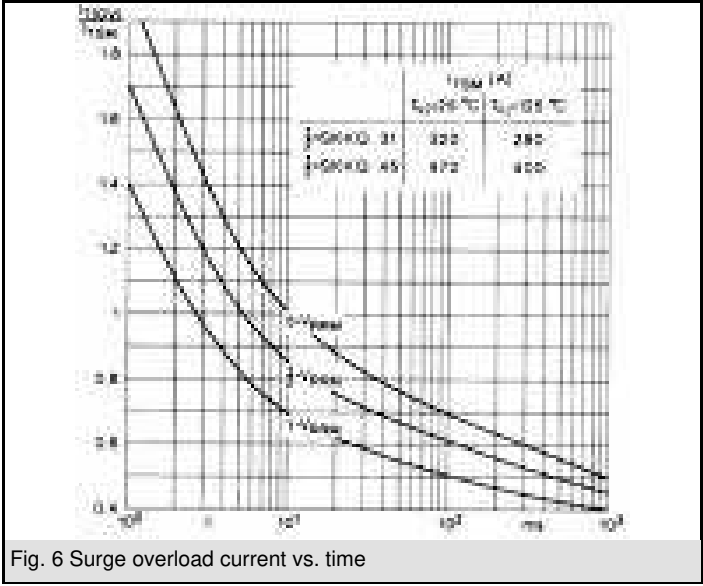
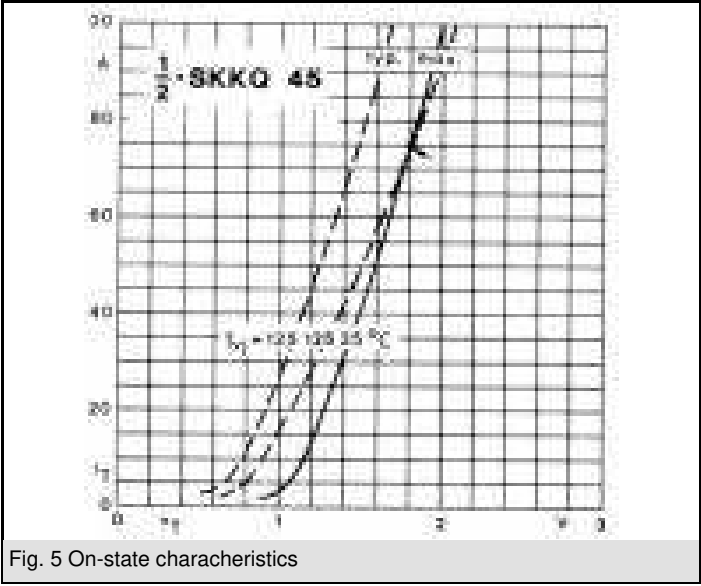
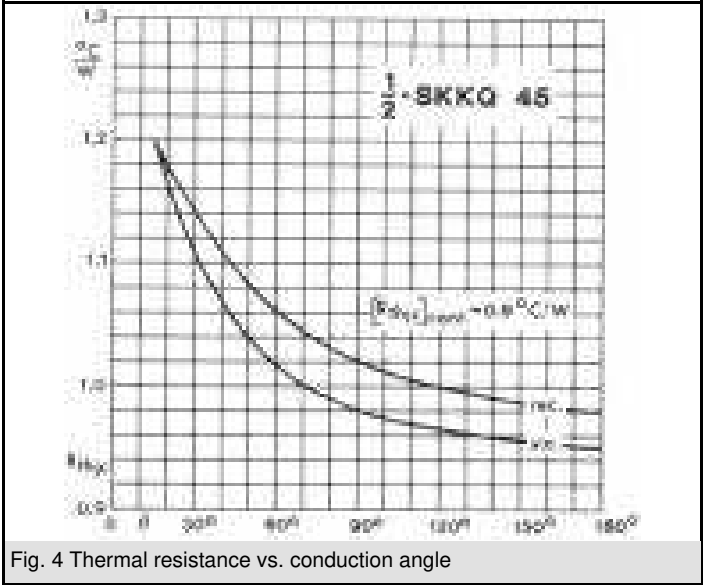
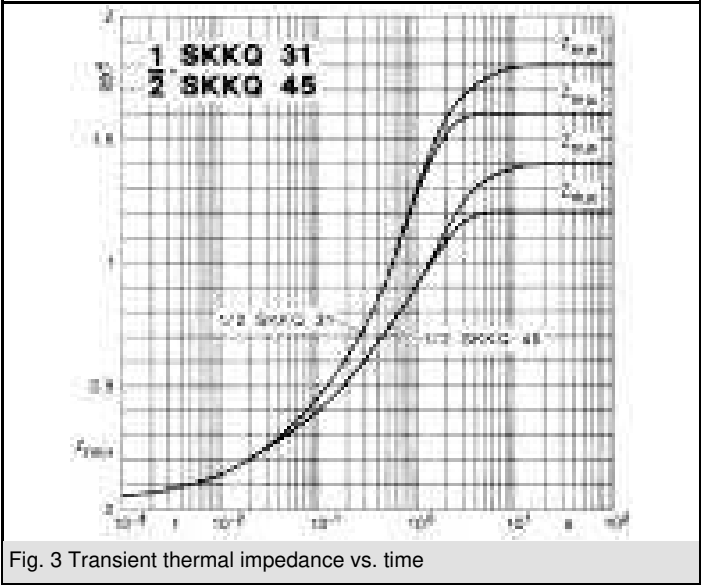
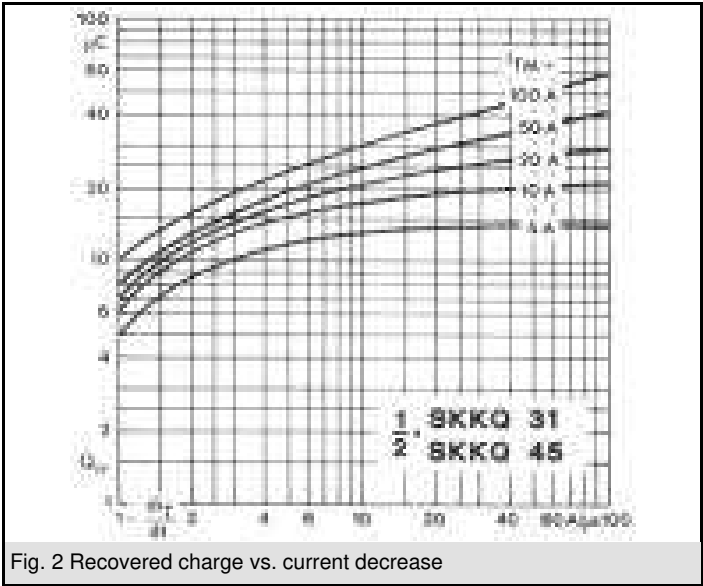
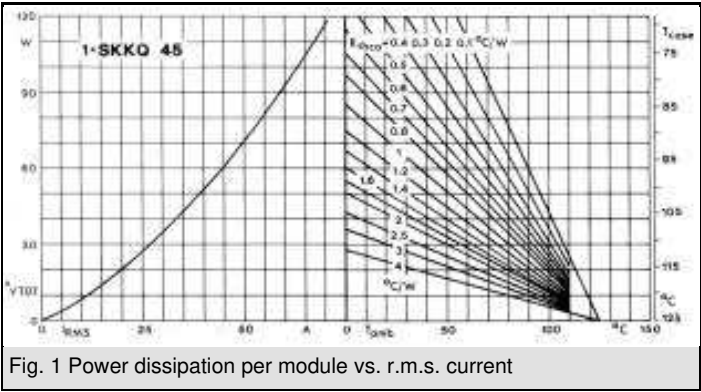
- AC motor starters
- Light control (studios, theaters...)
- Temperature control

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
I_{tRMS}	W1C, sin. 180° , $T_{case}=85^\circ C$	32	A
I_{TSM}	$T_{vj} = 25^\circ C$; 10 ms	470	A
	$T_{vj} = 125^\circ C$; 10 ms	400	A
i^2t	$T_{vj} = 25^\circ C$; 8,3...10 ms	1100	A ² s
	$T_{vj} = 125^\circ C$; 8,3...10 ms	800	A ² 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	m Ω
I_{DD}, I_{RD}	$T_{vj} = 25^\circ C$, $V_{RD}=V_{RRM}$		mA
	$T_{vj} = 125^\circ C$, $V_{RD}=V_{RRM}$	max. 10	mA
t_{gd}	$T_{vj} = 25^\circ C$, $I_G = 1 A$; $di_G/dt = 1 A/\mu s$	1	μs
t_{gr}	$V_D = 0,67 \cdot V_{DRM}$	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	1,2	K/W
	sin 180° per thyristor	1,3	K/W
$R_{th(j-s)}$	cont. per W1C	0,6	K/W
	sin 180° per W1C	0,6	K/W
T_{vj}		-40 ... +125	$^\circ C$
T_{stg}		-40 ... +125	$^\circ C$
	terminals, 10s		$^\circ C$
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 ²
m		50	g
Case	SEMIPACK® 0	A 41	



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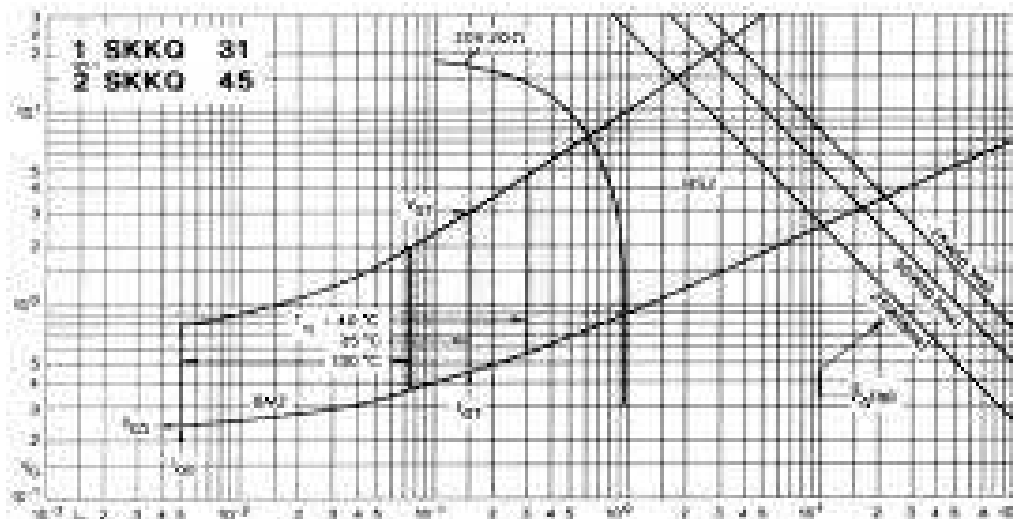
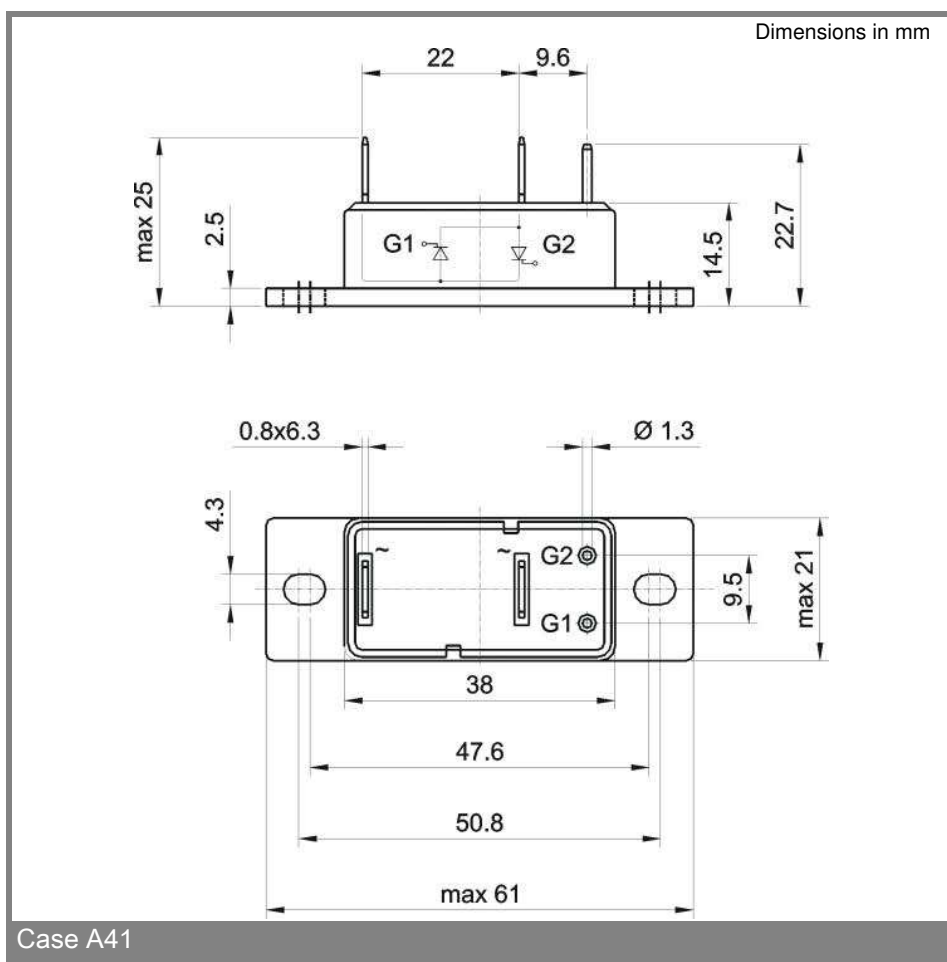


Fig. 5 Gate trigger characteristics



Case A41

* 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.