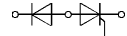


SEMIKRON® 1 Modules with Thyristor and Free-Wheeling Diode

SKNH 56
SKNH 91 ¹⁾



SKNH

Features

- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications

- Special modules for DC braking of AC induction motors

V_{RSM}	V_{DRM} V_{RRM}	I_d (P 3/120, $T_{amb} = 45^\circ C$) 70 A
V	V	
1300	1200	SKNH 56/12 D
1500	1400	SKNH 56/14 D
1700	1600	SKNH 56/16 D

Symbol	Conditions	SKNH 56
I_{TAV}	$T_{case} = 85^\circ C$	50 A
I_{TRMS}		max. 95 A
I_{TSM}	$T_{vj} = 25^\circ C$ $T_{vj} = 125^\circ C$	1500 A 1250 A
i^2t	$T_{vj} = 25^\circ C$ $T_{vj} = 125^\circ C$	11 000 A ² s 8 000 A ² s
t_{gd}	$T_{vj} = 25^\circ C$; $I_G = 1 A$; $di_G/dt = 1 A/\mu s$	1 μs
t_{gr}	$V_D = 0,67 \cdot V_{DRM}$	2 μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ C$	100 A/ μs
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ C$	500 A/ μs
t_q	$T_{vj} = 125^\circ C$	typ. 50 ... 150 μs
I_H	$T_{vj} = 25^\circ C$	max. 250 mA
I_L	$T_{vj} = 25^\circ C$; $R_G = 33 \Omega$	max. 600 mA
V_T	$T_{vj} = 25^\circ C$; ($I_T = \dots$)	1,65 V (200 A)
$V_{T(TO)}$	$T_{vj} = 125^\circ C$	0,9 V
r_T	$T_{vj} = 125^\circ C$	3,5 m Ω
I_{DD} ; I_{RD}	$T_{vj} = 125^\circ C$; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$	15 mA
V_{GT}	$T_{vj} = 25^\circ C$; d. c.	3 V
I_{GT}	$T_{vj} = 25^\circ C$; d. c.	150 mA
V_{GD}	$T_{vj} = 125^\circ C$; d. c.	0,25 V
I_{GD}	$T_{vj} = 125^\circ C$; d. c.	6 mA
R_{thjc}	sin. 180 $^\circ C$; per thyristor (per diode)	0,64 $^\circ C/W$ 0,32 $^\circ C/W$
R_{thch}	sin. 180; per module	0,2 $^\circ C/0,1^\circ C/W$
T_{vj}	per thyristor/per module	- 40 ... +125 $^\circ C$
T_{stg}		- 40 ... +125 $^\circ C$
V_{isol}	a.c. 50 Hz; r.m.s.; 1 s/1 min	3000 V~ /2500 V~
M_1	Case to heatsink	5 Nm/44 lb. in. $\pm$ 15 %
M_2	Busbars to terminals	3 Nm/26 lb. in. $\pm$ 15 %
a		5 · 9,81 m/s ²
w	approx.	120 g
Case	→ page B 1 – 85	A 7

¹⁾ SKNH 91 available on request, electrical data see page B1-55

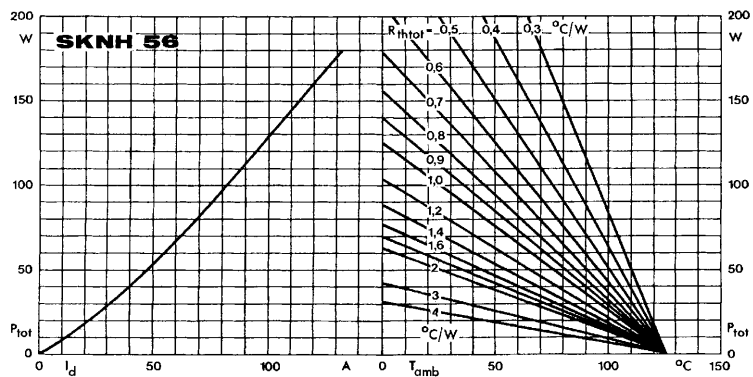


Fig. 17 Power dissipation vs. braking current and ambient temperature

Further diagrams see with type SKKT 56