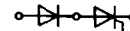
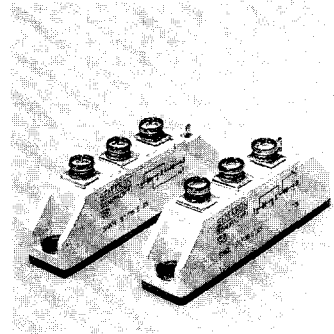


Thyristor		Diode		I_{MRMS} ($T_{case} = 90\text{ }^{\circ}\text{C}$) (R.M.S. motor current per phase)	
V_{RSM}	V_{DRM}	V_{RSM}	V_{RRM}	105 A	175 A
V	V	V	V		
1500	1400	2000		SKKH 56/14 E 20 SKKL 56/14 E 20	SKKH 91/14 E 20 SKKL 91/14 E 20
1700	1600	2500		SKKH 56/16 E 25 SKKL 56/16 E 25	SKKH 91/16 E 25 SKKL 91/16 E 25

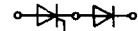
SEMIPACK® 1

Modules with Thyristor and High Voltage Diode

SKKH 56 **SKKL 56**
SKKH 91 **SKKL 91**



SKKH



SKKL

Symbol	Conditions	SKKH 56 SKKL 56	SKKH 91 SKKL 91
I_{TRMS} ; I_{FRMS}	max.	95 A	145 A
I_{TSM} ; I_{FSM}	$T_{vj} = 25\text{ }^{\circ}\text{C}$ $T_{vj} = 125\text{ }^{\circ}\text{C}$	1500 A 1250 A	2000 A 1750 A
i^2t	$T_{vj} = 25\text{ }^{\circ}\text{C}$ $T_{vj} = 125\text{ }^{\circ}\text{C}$	11 000 A ² s 7800 A ² s	20 000 A ² s 15 000 A ² s
$(di/dt)_{cr}$ $(dv/dt)_{cr}$	$T_{vj} = 125\text{ }^{\circ}\text{C}$ $T_{vj} = 125\text{ }^{\circ}\text{C}$	100 A/ μ s 1000 V/ μ s	
t_q	$T_{vj} = 125\text{ }^{\circ}\text{C}$	typ. 50 . . . 150 μ s	
I_H	$T_{vj} = 25\text{ }^{\circ}\text{C}$	max. 250 mA	
I_L	$T_{vj} = 25\text{ }^{\circ}\text{C}$; $R_G = 33\text{ }\Omega$	max. 600 mA	
V_T	$T_{vj} = 25\text{ }^{\circ}\text{C}$; ($I_T = \dots$); max.	1,65 V (200 A)	1,65 V (300 A)
$V_{T(TO)}$	$T_{vj} = 125\text{ }^{\circ}\text{C}$	0,9 V	0,9 V
r_T	$T_{vj} = 125\text{ }^{\circ}\text{C}$	3,5 m Ω	2 m Ω
I_{DD} ; I_{RD}	$T_{vj} = 125\text{ }^{\circ}\text{C}$; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$; max.	15 mA	20 mA
V_F	$T_{vj} = 25\text{ }^{\circ}\text{C}$; ($I_F = \dots$); max.	1,4 V (200 A)	1,6 V (300 A)
$V_{(TO)}$	$T_{vj} = 125\text{ }^{\circ}\text{C}$	0,85 V	0,85 V
r_T	$T_{vj} = 125\text{ }^{\circ}\text{C}$	2,5 m Ω	2,5 m Ω
I_{RD}	$T_{vj} = 125\text{ }^{\circ}\text{C}$; $V_{RD} = V_{RRM}$; max.	5 mA	5 mA
V_{GT}	$T_{vj} = 25\text{ }^{\circ}\text{C}$; d. c.	3 V	
I_{GT}	$T_{vj} = 25\text{ }^{\circ}\text{C}$; d. c.	150 mA	
V_{GD}	$T_{vj} = 125\text{ }^{\circ}\text{C}$; d. c.	0,25 V	
I_{GD}	$T_{vj} = 125\text{ }^{\circ}\text{C}$; d. c.	6 mA	
R_{thjc} R_{thch}	rec. 120 } per thyristor/diode	0,64 $^{\circ}\text{C}/\text{W}$ 0,20 $^{\circ}\text{C}/\text{W}$	0,32 $^{\circ}\text{C}/\text{W}$ 0,20 $^{\circ}\text{C}/\text{W}$
T_{vj}		- 40 . . . +125 $^{\circ}\text{C}$	
T_{stg}		- 40 . . . +125 $^{\circ}\text{C}$	
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s/1 min	3000 V- /2500 V-	
M_1	Case to heatsink } SI units/ Busbars to terminals } US units	5 Nm/44 lb. in. $\pm 15\text{ }%$ ¹⁾	
M_2		3 Nm/26 lb. in. $\pm 15\text{ }%$	
a		5 · 9,81 m/s ²	
w	approx.	120 g	
Case	→ page B 1 – 85	A 6 (SKKH 56) A 9 (SKKL 56)	A 6 (SKKH 91) A 9 (SKKL 91)

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 current source inverters (inverters with auto-sequential commutation) for AC motor control (→ A – 31, A – 147)

¹⁾ See the assembly instructions

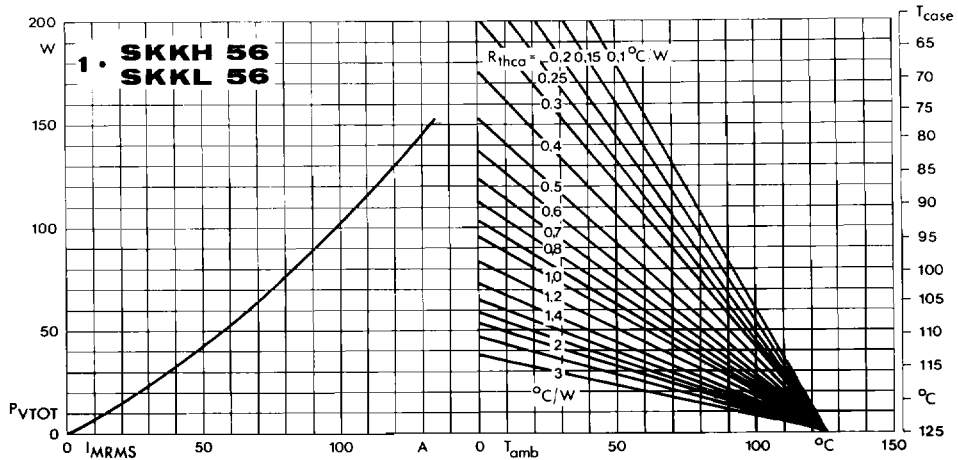


Fig. 18 a Power dissipation vs. rms motor current and case temperature

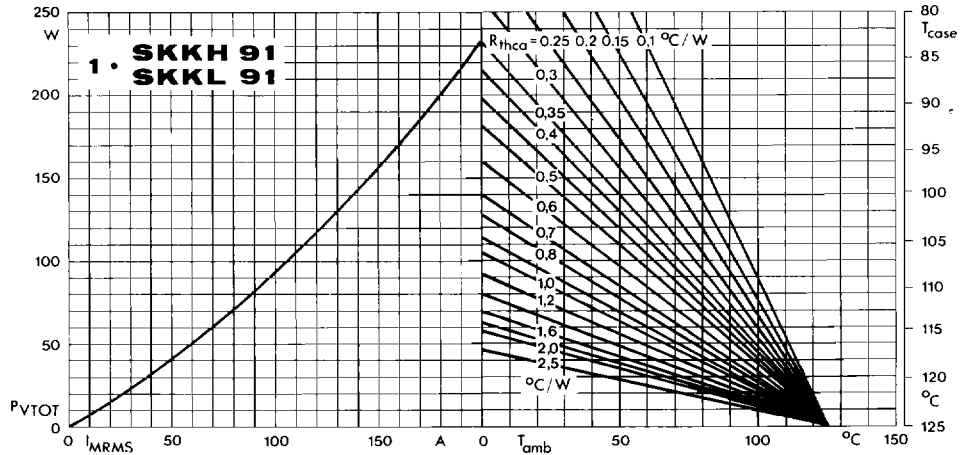


Fig. 18 b Power dissipation vs. rms motor current and case temperature

Further diagrams see with the types SKKT 56, SKKT 91