



## SEMIPACK® 1

### Modules with Thyristor and Free-Wheeling Diode

#### SKNH 56

#### Features

- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532
- Electrical data see also data sheet SKKH 57

#### Typical Applications

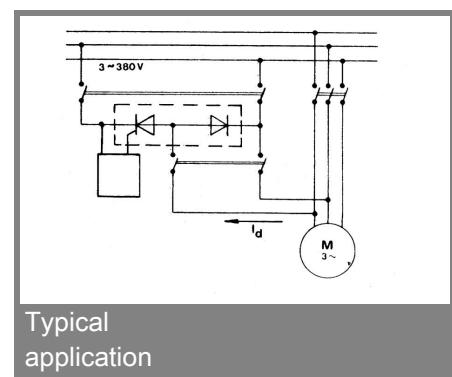
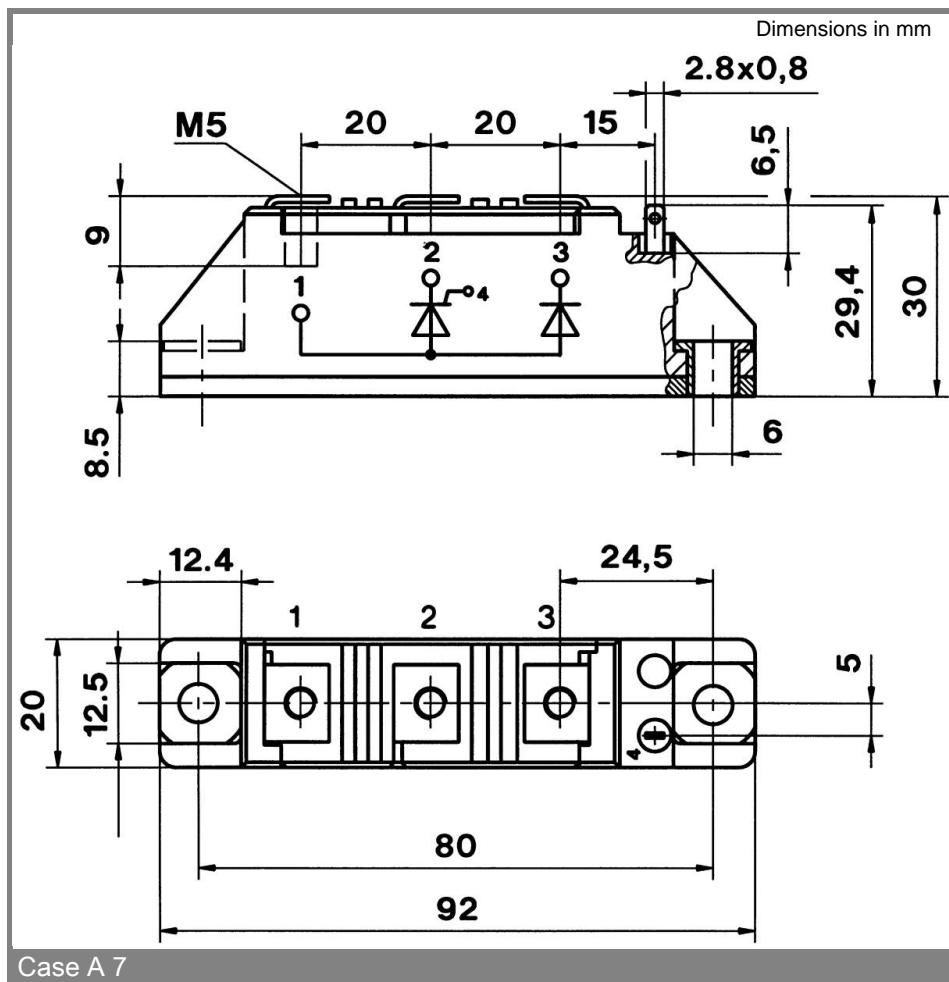
- Special modules for DC braking of AC induction motors

$V_{RSM}$ $V$	$V_{RRM}, V_{DRM}$ $V$	$I_{TRMS} = 95 \text{ A}$ (maximum value for continuous operation) $I_{TAV} = 50 \text{ A}$ (sin. 180; $T_c = 85^\circ\text{C}$ )	
1300	1200	SKNH 56/12E	
1500	1400	SKNH 56/14E	
1700	1600	SKNH 56/16E	
1900	1800	SKNH 56/18E	

Symbol	Conditions	Values	Units
$I_{TAV}$	sin. 180; $T_c = 85$ (100) $^\circ\text{C}$ ;	50 (35)	A
$I_D$	P3/120; $T_a = 45^\circ\text{C}$ ;	70	A
$I_{TSM}$	$T_{vj} = 25^\circ\text{C}$ ; 10 ms $T_{vj} = 125^\circ\text{C}$ ; 10 ms	1500 1250	A A
$i^2t$	$T_{vj} = 25^\circ\text{C}$ ; 8,3 ... 10 ms $T_{vj} = 125^\circ\text{C}$ ; 8,3 ... 10 ms	11000 8000	A <sup>2</sup> s A <sup>2</sup> s
$V_T$	$T_{vj} = 25^\circ\text{C}$ ; $I_T = 200 \text{ A}$	max. 1,65	V
$V_{T(TO)}$	$T_{vj} = 125^\circ\text{C}$	max. 0,9	V
$r_T$	$T_{vj} = 125^\circ\text{C}$	max. 3,5	mΩ
$I_{DD}; I_{RD}$	$T_{vj} = 25^\circ\text{C}$ ; $V_{RD} = V_{RRM}$ ; $V_{DD} = V_{DRM}$	max. 15	mA
$t_{gd}$	$T_{vj} = 25^\circ\text{C}$ ; $I_G = 1 \text{ A}$ ; $di_G/dt = 1 \text{ A}/\mu\text{s}$	1	μs
$t_{gr}$	$V_D = 0,67 * V_{DRM}$	2	μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ\text{C}$	max. 100	A/μs
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ\text{C}$	max. 1000	V/μs
$t_q$	$T_{vj} = 125^\circ\text{C}$	50 ... 150	μs
$I_H$	$T_{vj} = 25^\circ\text{C}$ ; typ. / max.	/ 250	mA
$I_L$	$T_{vj} = 25^\circ\text{C}$ ; $R_G = 33 \Omega$ ; typ. / max.	/ 600	mA
$V_{GT}$	$T_{vj} = 25^\circ\text{C}$ ; d.c.	min. 3	V
$I_{GT}$	$T_{vj} = 25^\circ\text{C}$ ; d.c.	min. 150	mA
$V_{GD}$	$T_{vj} = 125^\circ\text{C}$ ; d.c.	max. 0,25	V
$I_{GD}$	$T_{vj} = 125^\circ\text{C}$ ; d.c.	max. 6	mA
$R_{th(j-c)}$	cont.; per thyristor / per diode	0,57	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per diode	0,6	K/W
$R_{th(j-c)}$	sin. 180; per module	0,3	K/W
$R_{th(c-s)}$	per thyristor / per module	0,2 / 0,1	K/W
$T_{vj}$		- 40 ... + 125	°C
$T_{stg}$		- 40 ... + 125	°C
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
$M_s$	to heatsink	5 ± 15 %	Nm
$M_t$	to terminals	5 ± 15 %	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	120	g
Case		A 7	





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