

### SEMIPACK® Fast Thyristor/Diode Modules

isolated metal bases.  $V_{ISO1} = 2500 V$

### SEMIPACK® Schnelle Thyristor/Dioden- Module

### SEMIPACK® Modules à thyristors/diodes rapides

Types <sup>1)</sup> All data apply to one single valve device (thyristor or diode)	$V_{DRM}$	$V_{RRM}$	$I_{TRMS}$ $I_{FRMS}$	$I_{TAV}^{(2)}$ $I_{FAV}^{(2)}$ ( $T_{case}$ )	$I_{TSM}$ $I_{FSM}$ 25 °C 10 ms	$I^2t$ 25 °C 10 ms A <sup>2</sup> s	$(\frac{dv}{dt})_{cr}$	$V_T, V_F$ max. ( $I_T, I_F$ )	$V_{T(RO)}$ $V_{F(RO)}$	$r_T$	$t_T$ 25 °C	$t_a$ 125 °C	$V_{GT}$ min. ( $t_p = 100 \mu s$ )	$I_{GT}$ min.
	V	V	A	A	A		V/ $\mu s$	V	V	m $\Omega$	$\mu s$	$\mu s$	V	mA
SKFA <sup>9)</sup> 18/08 CP /08 CP /10 CP /11 CP /12 CP	600 800 1000 1100 1200	10	36	17 (80 °C) 50 Hz	350	610	200	2,5 (70 A)	1,4	12	0,3	5	3	200
SKFH 20/08 DS /10 DS; DT /12 DT; DU	800 1000 1200	800 1000 1200	45	20 (85 °C)	550	1500	500	2,5 (150 A) 125 °C	1,7	5,5	1	15 15;20 20;25	3	200
SKFH 30/08 DT /10 DT /12 DT	800 1000 1200	800 1000 1200	75	30 (89 °C)	1000	5000	500	2,25 (150 A) 125 °C	1,6	4	1	20	3	200
SKFH 40/08 DS; DU /10 DT; DU /12 DT; DU	800 1000 1200	800 1000 1200	110	40 (87 °C)	1300	8400	500	2,3 (200 A) 125 °C	1,8	2	2	15;25 20;25 20;25	3	200
SKFH 60/08 DS /10 DT /12 DT; DU	800 1000 1200	800 1000 1200	130	60 (81 °C)	1500	11250	500	1,75 (200 A) 125 °C	1,5	1,5	2	15 20 20;25	3	200
SKFH 110/04 DS; DT /08 DS; DT /10 DS; DT /12 DU	400 800 1000 1200	400 800 1000 1200	250	110 (85 °C)	4500	101000	500	1,85 (400 A) 125 °C	1,45	1	2	15;20 15;20 15;20 25	4	250
SKFH 150/06 DS /08 DS /09 DS /10 DS	600 800 900 1000	600 800 900 1000	385	150 (85 °C)	6500	210000	500	2,05 (1200 A)	1,4	0,5	-	15	5	250
SKAH <sup>9)</sup> 180/12 DS /14 DS	1200 1400	15	385	180 (80 °C)	8000 (8,3 ms)	265000	500	2,2 (1200 A)	1,4	0,4	-	15	5	250
SKFT 20/06 DS; DT /08 DS; DT /10 DS; DT /12 DT; DU	600 800 1000 1200	600 800 1000 1200	45	20 (85 °C)	550	1500	500	2,5 (150 A) 125 °C	1,7	5,5	-	15;20	3	200
SKFT 30/06 DS; DT /08 DS; DT /10 DS; DT /12 DT; DV	600 800 1000 1200	600 800 1000 1200	75	30 (89 °C)	1000	5000	500	2,25 (150 A) 125 °C	1,6	4	-	15;20 15;20 15;20 20;30	3	200
SKFT 40/08 DS; DU /10 DT; DU /12 DT; DU	800 1000 1200	800 1000 1200	110	40 (87 °C)	1300	8400	500	2,3 (200 A) 125 °C	1,8	2	-	15;20 20;25 20;25	3	200
SKFT 60/08 DS; DT /10 DT /12 DT; DU /14 DU	900 1000 1200 1400	800 1000 1200 1400	130	60 (81 °C)	1500	11250	500	1,75 (200 A) 125 °C	1,5	1,5	-	15;20 20 20;25 25	3	200
SKFT 110/04 DS; DT /08 DS; DT /10 DS; DT /12 DU /14 DU	400 800 1000 1200 1400	400 800 1000 1200 1400	250	110 (85 °C)	4500	101000	500	1,85 (400 A) 125 °C	1,45	1	-	15;20 15;20 15;20 25 25	4	250
SKKD 40 F04 F06 F08 F10	- - - -	400 600 800 1000	110	40 (80 °C)	1100	6000	-	2,0 (150 A)	1,2	4	0,2	-	-	-
SKKD 40 M08 M12 M14 M15	- - - -	800 1200 1400 1500	110	40 (83 °C)	800	3200	-	1,85 (150 A)	1,0	5	1	-	-	-
SKKD <sup>9)</sup> 50 E01 E03 E04	- - -	100 300 400	110	50 (81,5 °C)	800	3200	-	1,6 (120 A)	0,8	6,5	0,06	-	-	-
SKKD 160 M08 M10 M12 M14 M15	- - - - -	800 1000 1200 1400 1500	300	160 (86 °C)	7000	245000	-	1,5 (400 A)	1,25	0,5	2	-	-	-
SKLD 20 F04 F06 F08 F10	- - - -	400 600 800 1000	40	15,2 (85 °C)	450	1000	-	2,15 (50 A)	1,3	12	0,2	-	-	-

1) Second code letter appended to the type number:

P:  $t_q \leq 7 \mu s$  (gate-assisted turn-off.  $V_G = -10 V$ )

S:  $t_q \leq 15 \mu s$  · T:  $t_q \leq 20 \mu s$

U:  $t_q \leq 25 \mu s$  · V:  $t_q \leq 30 \mu s$

2)  $f \leq 500 Hz$

3) Internal insulation: beryllium oxide

4) Epitaxial diodes

5) Asymmetric thyristors

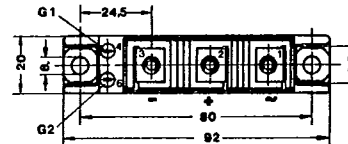
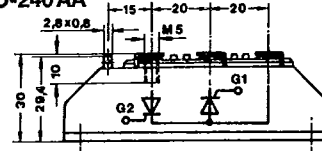
**SEMIPACK®**  
Moduli a tiristori/diodi  
veloci

**SEMIPACK®**  
Módulos de tiristores/diodos  
rápidos

**SEMIPACK®**  
Módulos de tiristores/diodos  
rápidos

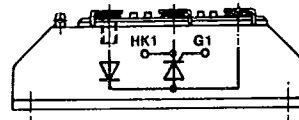
T <sub>vj</sub> max. °C	R <sub>th(jc)</sub> sin. 180 °C/W	R <sub>th(ch)</sub> °C/W	Case	Circuit
125	1,7	0,2	A 18	
			21	
125	1,00	0,20	A 8 <sup>3</sup>	2
			21	
125	0,60	0,20	A 8	
			21	
125	0,40 <sup>3)</sup>	0,20	A 8	
			21	
125	0,35 <sup>3)</sup>	0,20	A 8	
			21	
125	0,20 <sup>3)</sup>	0,06	A 14	
			21	
125	0,15 <sup>3)</sup>	0,06	A 32	
			21	
125	0,15 <sup>3)</sup>	0,06	A 32	
			21	
125	1,00	0,20	A 5	
			21	
125	0,60	0,20	A 5	
			21	
125	0,40 <sup>3)</sup>	0,20	A 5	
			21	
125	0,35 <sup>3)</sup>	0,20	A 5	
			21	
125	0,20 <sup>3)</sup>	0,06	A 13	
			21	
125	0,70	0,20	A 10	
			21	
125	0,70	0,20	A 10	
			21	
150	0,85	0,20	A 20	
			21	
130	0,19 <sup>3)</sup>	0,06	A 16	
			21	
125	1,5	0,30	E 23	
			23	

**Case A5 SEMIPACK® 1**  
TO-240 AA



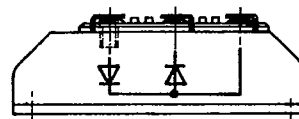
M<sub>1</sub> = 5 Nm ± 15%      UL approved  
M<sub>2</sub> = 3 Nm ± 15%      No. E 63532  
SKFT 20...60              w = 120 g

**Case A 8**



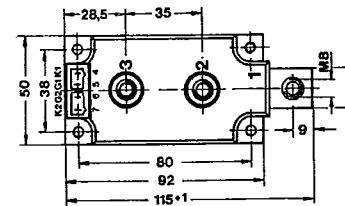
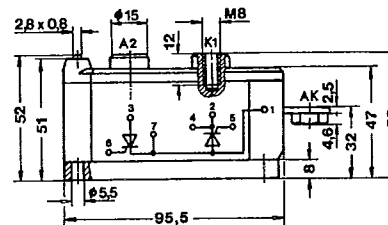
SKFH 20...60

**Case A 10**



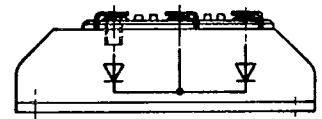
SKKD 40 F, SKKD 40 M

**Case A 13 SEMIPACK® 3**



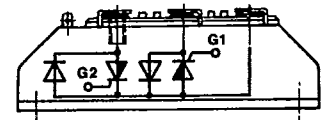
M<sub>1</sub> = 5 Nm ± 15%      UL approved  
M<sub>2</sub> = 9 Nm ± 15%      No. E 63532  
SKFT 110                  w = 820 g

**Case A 11**



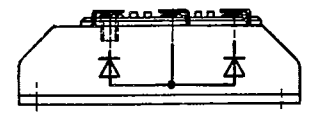
SKMD 40 F

**Case A 18**



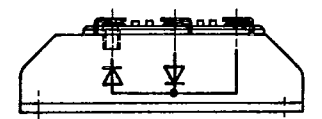
SKFA 18

**Case A 19**



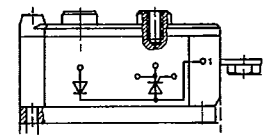
SKND 50 E

**Case A 20**



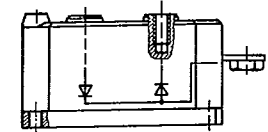
SKKD 50 E

**Case A 14**



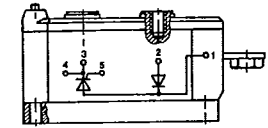
SKFH 110

**Case A 16**



SKKD 160 M

**Case A 32**



SKAH 180  
SKFH 150